MARCH 2016 GROUNDWATER SAMPLING DATA SUMMARY REPORT

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP)
SITE 1 OU2
BETHPAGE, NY

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Atlantic
9324 Virginia Avenue
Building Z-144
Norfolk, Virginia 23511

July 2016

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List of Acronyms and Abbreviations

DOT	Department of Transportation
IDW	Investigation Derived Waste
Katahdin	Katahdin Analytical Services
NG	Northrop Grumman
NWIRP	Naval Weapons Industrial Reserve Plant
ONCT	Onsite Containment System
OU	Operable Unit
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QC	Quality Control
SAP	Sampling and Analysis Plan
UFP	Uniform Federal Policy
VOC	Volatile Organic Compounds

1.0 PROJECT BACKGROUND

Resolution Consultants has prepared this Groundwater Sampling Data Summary Report for the Naval Facilities Engineering Command, Mid-Atlantic under contract task order WE15 Contract N62470-11-D-8013. The report describes quarterly sampling activities in March 2016, which is part of the Navy's ongoing Environmental Restoration Program 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).

This data summary report provides information on quarterly sampling of 35 Navy-owned monitoring wells by Resolution Consultants on behalf of the Navy, and by ARCADIS on behalf of the Navy at the direction of Northrop Grumman (NG) as part of an agreement between the Navy and NG. The purpose of this sampling is to provide information on the extent and magnitude of volatile organic compounds (VOCs) located in a narrow area immediately south of the Onsite Containment System (ONCT) in the western offsite plume, which could represent contamination that has bypassed the ONCT, to evaluate the southernmost extent of the OU2 plume, and to evaluate outpost wells intended to provide early warning of plume migration to public water supply wells. The locations of monitoring wells sampled as part of this effort are shown in Figure 2. Well construction information and sampling responsibility are listed in Table 1.

2.0 FIELD PROGRAM

Field tasks were conducted in March of 2016 in accordance with the Uniform Federal Policy (UFP) Sampling and Analysis Plan (SAP) Addendum: *Groundwater Sampling Using Low Stress (Low Flow) Purging and Sampling Protocol* (Resolution Consultants, 2013). The field investigation included purging and sampling of monitoring wells in the quarterly groundwater sampling network.

The March 2016 quarterly sampling round consisted of a total of 35 wells (Table 1). Of these, 22 groundwater wells were sampled by Resolution Consultants and 13 were sampled by ARCADIS, the NG consultant.

2.1 Sampling

Resolution Consultants purged monitoring wells using a bladder pump with the intake placed at the approximate midpoint of the screened interval. The following field water quality parameters were continuously measured during purging: water temperature, pH, conductivity, oxidation-reduction potential, dissolved oxygen and turbidity. Groundwater analytical samples were collected when field water quality parameters stabilized. Samples were analyzed for VOCs via Method 8260C and 1,4-dioxane via Method 8270D SIM by Katahdin Analytical Services (Katahdin). All purge water was managed as investigation derived waste (IDW). Quality assurance (QA) and quality control (QC) samples were collected during the sampling effort.

Analytical results and stabilized field parameters for wells sampled by Resolution Consultants are summarized in Table 2 and Table 3, respectively. Groundwater sample forms and data validation packages for wells sampled by Resolution Consultants are included in Appendix A and B, respectively.

Results for ARCADIS-sampled wells are provided in Table 4 and Table 5; data validation packages are included in Appendix C. Samples were analyzed for VOCs via Method 524.2 and 1,4-dioxane via Method 8270D SIM by Accutest Laboratories.

Additional Navy-owned wells are sampled by ARCADIS as part of separate and ongoing OU2 monitoring programs, as summarized in the sampling schedule in Appendix D. ARCADIS will document these activities and results in their 2016 Annual Groundwater Monitoring Report,

scheduled for submission to New York State Department of Environmental Conservation in the summer of 2017.

2.2 Investigation Derived Waste

Resolution Consultants utilized dedicated and disposable sampling equipment when possible to avoid the potential for cross-contamination of samples. The sampling equipment included dedicated disposable polyethylene tubing, disposable gloves, and laboratory supplied sample bottles. Hand held equipment was decontaminated using a luminox or micro 90 water wash, a potable water rinse, followed by a distilled water rinse. Purge water was collected in 5-gallon pails or 55-gallon drums.

Resolution Consultants transported purge water from point of generation to the designated staging area at NWIRP in Department of Transportation (DOT) approved 5-gallon pails. Purge water was then containerized in a frac tank and stored at NWIRP Bethpage for characterization and ultimate disposal to the Nassau County Publicly Owned Treatment Works (POTW) in accordance with the facility's existing discharge permit. A representative water sample was collected from each of the frac tanks and submitted to Katahdin for analysis of VOCs via Method SW 624, pH via Method SW 9040B, PCBs via Method 8082 and Total Metals via Method SW 846. All analytical criteria were met for disposal of water. No solid waste was generated during sampling.

3.0 SUMMARY

Well construction information for all wells sampled by Resolution Consultants and ARCADIS is summarized in Table 1.

Analytical results and stabilized field water quality parameters for wells sampled by Resolution Consultants are summarized in Tables 2 and 3, respectively. Groundwater sample forms and data validation packages for wells sampled by Resolution Consultants are included in Appendix A and B, respectively.

Analytical results for wells sampled by ARCADIS are summarized in Tables 4 and Table 5. Data validation packages for wells sampled by ARCADIS are included in Appendix C.

The sampling schedule of additional Navy-owned wells by ARCADIS, as part of separate and ongoing OU2 monitoring programs, is summarized in Appendix D.

4.0 REFERENCES

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

Tables

TABLE 1
MONITORING WELL CONSTRUCTION SUMMARY
2016 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

Well	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Mid-screen (ft bgs)	Sump Length (ft)	VPB Affiliation	Sampled By
RE103D1	645	625	640	630	5	VPB137	Resolution
RE103D2	673	653	673	663	0	VPB137	Resolution
RE103D3	735	715	730	720	5	VPB137	Resolution
RE104D1	375	350	370	360	5	VPB138	Resolution
RE104D2	735	710	730	720	5	VPB138	Resolution
RE104D3	785	760	780	770	5	VPB138	Resolution
RE105D1	555	530	550	540	5	VPB139	Resolution
RE105D2	755	730	750	740	5	VPB139	Resolution
RE108D1	555	530	550	540	5	VPB142	Resolution
RE108D2	655	630	650	640	5	VPB142	Resolution
RE120D1	655	630	650	640	5	VPB154	Resolution
RE120D2	713	690	710	700	3	VPB154	Resolution
RE120D3	765	740	760	750	5	VPB154	Resolution
RE122D1	545	520	540	530	5	VPB156	Resolution
RE122D2	615	590	610	600	5	VPB156	Resolution
RE122D3	740	715	735	725	5	VPB156	Resolution
RE123D1	505	480	500	490	5	VPB157	Resolution
RE123D2	660	635	655	645	5	VPB157	Resolution
RE123D3	840	815	835	825	5	VPB157	Resolution
TT101D	350	325	345	335	5	VPB129	Resolution
TT101D1	595	570	590	580	5	VPB129	Resolution
TT101D2	765	740	760	750	5	VPB129	Resolution
BPOW5-1	515	480	510	495	5	VPB132	ARCADIS
BPOW5-2	585	540	580	560	5	VPB132	ARCADIS
BPOW5-3	665	620	660	640	5	VPB132	ARCADIS
BPOW5-4	575	545	570	557.5	5	VPB151	ARCADIS
BPOW5-5	545	515	540	527.5	5	VPB152	ARCADIS
BPOW5-6	615	585	610	597.5	5	VPB152	ARCADIS
BPOW5-7	555	525	550	537.5	5	VPB153	ARCADIS
BPOW6-1	580	550	575	562.5	5	VPB145	ARCADIS
BPOW6-2	785	755	780	767.5	5	VPB145	ARCADIS
BPOW6-3	780	750	775	762.5	5	VPB146	ARCADIS
BPOW6-4	575	545	570	557.5	5	VPB146	ARCADIS
BPOW6-5	555	525	550	537.5	5	VPB147	ARCADIS
BPOW6-6	800	770	795	782.5	5	VPB147	ARCADIS

ft bgs - feet below ground surface

TABLE 2. ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE122D1	RE122D2	RE122D3	RE108D1
Sample Date		3/15/2016	3/15/2016	3/15/2016	3/14/2016
Sample ID		RE122D1-GW-031516	RE122D2-GW-031516	RE122D3-GW-031516	RE108D1-GW-031416
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	**0.62 J**	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**4.1**	**20**	<0.50 U	**0.97 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	**3.1**	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	**1.2**	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	**0.80 J**	**8.4**	<0.50 U	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.8 J**	**5.0**	<1.0 U	**0.37 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**6.0**	**12**	<0.17 U	**5.0**
2-BUTANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
2-HEXANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	**0.55 J**	**2.8**	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	**0.52 J**	**2.4**	<0.50 U	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.8**	**5.0**	<0.50 U	**0.37 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**1.1 J**	**3.1 J**	<0.50 U	**1.8 J**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**610**	**5300**	**2.1**	**120**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2. ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE108D2	RE103D1	RE103D2	RE103D3
Sample Date		3/14/2016	3/14/2016	3/14/2016	3/14/2016
Sample ID		RE108D2-GW-031416	RE103D1-GW-031416	RE103D2-GW-031416	RE103D3-GW-031416
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	**1.0**	**0.48 J**	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**6.4**	**15**	**4.3**	**2.3**
1,1,2-TRICHLOROETHANE	1	**1.9**	**0.75 J**	**0.55 J**	**0.33 J**
1,1-DICHLOROETHANE	5	**5.1**	**1.2**	**0.78 J**	<0.50 U
1,1-DICHLOROETHENE	5	**7.4**	**9.0**	**1.6**	**0.59 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**8.3**	**4.2**	**1.8 J**	**0.92 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**8.3**	**18**	**2.4**	**1.1**
2-BUTANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
2-HEXANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	**2.0**	**0.61 J**	**0.38 J**	**0.30 J**
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	**3.5**	**0.86 J**	**0.95 J**	**0.76 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**8.3**	**4.2**	**1.8**	**0.92 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	**0.29 J**	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**1.6 J**	**6.2 J**	**0.98 J**	<0.50 UJ
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**3800**	**1200**	**860**	**520**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2. ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE104D1	RE104D2	RE104D3	RE120D1
Sample Date		3/15/2016	3/15/2016	3/15/2016	3/16/2016
Sample ID		RE104D1-GW-031516	RE104D2-GW-031516	RE104D3-GW-031516	RE120D1-GW-031616
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**3.4**	<0.50 U	<0.50 U	**29 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	**1.3 J**
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	**2.4**
1,1-DICHLOROETHENE	5	**0.63 J**	<0.50 U	<0.50 U	**17**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<1.5 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,2-DICHLOROETHENE, TOTAL	5	**1.0 J**	**2.9**	<1.0 U	**3.6 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<1.0 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<1.0 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**6.8**	<0.17 U	<0.17 U	**19**
2-BUTANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<5.0 U
2-HEXANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<5.0 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<5.0 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<5.0 U
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<1.0 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<1.0 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<1.0 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<2.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<1.0 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<2.0 UJ
CHLOROFORM	7	<0.50 U	**0.52 J**	<0.50 U	<1.0 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<2.0 U
CIS-1,2-DICHLOROETHENE	5	**1.0**	**2.9**	<0.50 U	**3.6**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<1.0 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<1.0 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<2.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<2.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<1.5 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<1.0 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<1.0 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<5.0 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<1.0 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
TETRACHLOROETHENE	5	**1.8**	<0.50 U	<0.50 U	**2.3**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<1.0 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<1.0 U***
TRICHLOROETHENE	5	**100**	**8.4**	<0.50 U	**1200**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<2.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<2.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<3.0 U

TABLE 2. ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE120D2	RE120D3	TT101D	TT101D1
Sample Date		3/16/2016	3/16/2016	3/16/2016	3/16/2016
Sample ID		RE120D2-GW-031616	RE120D3-GW-031616	TT101D-GW-031616	TT101D1-GW-031616
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**16 J**	**1.3 J**	**14 J**	**14 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	**1.0**	<0.50 U	**0.67 J**	<0.50 U
1,1-DICHLOROETHENE	5	**4.8**	<0.50 U	**2.8**	**4.7**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**3.4**	<1.0 U	**2.7**	**1.8 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**9.5**	<0.17 U	**6.4**	**9.9**
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	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	**1.6**
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	<0.50 U	<0.50 U	<0.50 U	**0.85 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**3.4**	<0.50 U	**2.7**	**1.8**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	**1.9 J**	**1.7 J**
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**2.0**	<0.50 U	<0.50 U	<0.50 U
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**780**	**55**	**67**	**180**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2. ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	TT101D2	DUPLICATE	RE123D1	RE123D2
Sample Date		3/16/2016	3/16/2016	3/17/2016	3/17/2016
Sample ID		TT101D2-GW-031616	DUPLICATE-GW-031616	RE123D1-GW-031716	RE123D2-GW-031716
Sample type code		N	FD	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**16 J**	**16 J**	<0.50 UJ	<0.50 UJ
1,1,2-TRICHLOROETHANE	1	**0.49 J**	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	**0.72 J**	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	**3.8**	**3.6**	<0.50 U	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.9 J**	**2.0**	<1.0 U	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**2.3 J**	**2.4**	**5.3**	**0.63**
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	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	**1.1**	**1.1**	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.9**	**2.0**	<0.50 U	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 UJ	<0.75 UJ
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**0.84 J**	<0.50 U	<0.50 U	**0.81 J**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**590**	**590**	**6.6**	**1.9**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2. ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE123D3	RE105D1	RE105D2
Sample Date		3/17/2016	3/17/2016	3/17/2016
Sample ID		RE123D3-GW-031716	RE105D1-GW-031716	RE105D2-GW-031716
Sample type code		N	N	N
VOC 8260C (ug/L)				
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 UJ	**5.6 J**	**18 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	**1.2**
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	**1.4**
1,1-DICHLOROETHENE	5	<0.50 U	**0.80 J**	**6.4**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**1.4 J**	**3.7**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 UJ	<0.50 UJ	<0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**0.21 J**	**6.7**	**7.5**
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 U	<2.5 U	<2.5 U
BENZENE	1	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	**3.0**
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	<0.50 U	<0.50 U	**1.8**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**1.4**	**3.7**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 UJ	<0.75 UJ	<0.75 UJ
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	**0.41 J**	**2.0**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	<0.50 U	**130**	**1800**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 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 = Nondetected result. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte.

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

M = the matrix spike or matrix spike duplicate did not meet recovery or precision requirements.

TABLE 3
STABILIZED FIELD PARAMETERS FOR WELLS SAMPLED
BY RESOLUTION CONSULTANTS
2016 OU2 GROUNDWATER INVESTIGATION

Well	Date	Temperature (°C)	pH	Specific Conductance (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Depth to water (ft bgs)	Flow rate (ml/min)
TT101D	3/16/2016	15.28	4.70	0.093	0.46	160.3	1.42	32.92	900
TT101D1	3/16/2016	15.24	6.16	0.098	0.67	-11.40	0.59	34.18	900
TT101D2	3/16/2016	15.09	6.04	0.053	6.45	-142.6	1.34	34.74	900
RE103D1	3/14/2016	13.80	5.10	0.087	4.75	121.3	0.22	39.69	400
RE103D2	3/14/2016	13.11	4.92	0.057	8.86	205.4	0.20	39.40	600
RE103D3	3/14/2016	13.81	4.31	0.035	5.08	361.9		40.40	500
RE104D1	3/15/2016	13.41	5.21	0.076	4.51	154.7	0.83	36.20	525
RE104D2	3/15/2016	13.90	4.73	0.032	6.80	183.2	3.01	38.75	700
RE104D3	3/15/2016	14.16	5.10	0.022	5.25	124.5	28.9	39.02	475
RE105D1	3/17/2016	14.70	5.05	0.108	4.19	100.0	1.08	37.33	700
RE105D2	3/17/2016	14.68	6.27	0.085	6.48	-144.1	0.65	37.88	600
RE108D1	3/14/2016	13.96	5.04	0.682	7.85	116.3	0.47	41.00	400
RE108D2	3/14/2016	13.49	4.89	0.117	5.23	291.6	0.31	41.30	600
RE120D1	3/16/2016	15.40	7.23	0.116	2.31	4.800	0.79	36.74	500
RE120D2	3/16/2016	15.07	5.19	0.077	4.78	137.0	3.25	36.42	450
RE120D3	3/16/2016	15.38	5.58	0.033	3.57	-132.1	4.34	36.58	600
RE122D1	3/15/2016	14.40	6.03	0.102	3.71	54.60	2.03	42.20	500
RE122D2	3/15/2016	14.57	5.13	0.101	4.93	129.5	0.52	42.48	500
RE122D3	3/15/2016	14.53	4.51	0.034	3.01	-204.0	11.3	42.92	600
RE123D1	3/17/2016	12.35	7.35	0.139	9.64	159.4	0.82	47.74	500
RE123D2	3/17/2016	12.58	5.03	0.036	8.60	170.1	3.52	49.05	600
RE123D3	3/17/2016	13.96	5.87	0.054	0.64	43.00	9.23	48.62	600

°C - degrees Celsius
µS/cm - Microsiemens per Centimeter
mg/L - milligrams per liter
mV - Millivolts
NTU - Nephelometric Turbidity Unit
ft bgs - feet below ground surface
ml/min - mililiters per minute

Table 4.
Concentrations of Volatile Organic Compounds
and 1,4-Dioxane in Monitoring Wells BPOW 5-1 through BPOW 5-7, First Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Well:	BPOW 5-1	BPOW 5-2	BPOW 5-3	BPOW 5-4	BPOW 5-5	BPOW 5-6	BPOW 5-7
Sample ID:	BPOW 5-1	BPOW 5-2	BPOW 5-3	BPOW 5-4	BPOW 5-5	BPOW 5-6	BPOW 5-7
CONSTITUENT Date:	3/1/2016	3/1/2016	2/29/2016	2/26/2016	2/17/2016	2/17/2016	2/18/2016
Units (ug/L)							
Volatile Organic Compounds (VOCs) (1)							
1,1,1-Trichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-trichloro-1,2,2-trifluroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Butanone (MEK)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4-methyl-2-pentanone (MIK)	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbon Disulfide	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbon tetrachloride	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,2-dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-dichloropropene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibromochloromethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ethylbenzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene Chloride	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Styrene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**0.13 J**
trans-1,2-dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-dichloropropene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethylene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl Chloride	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylene-o	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylenes - m,p	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total VOCs (2)	0	0	0	0	0	0	**0.13**
1,4-Dioxane (3)	< 0.11	< 0.11	< 0.10	**0.53**	**0.42**	< 0.11	< 0.11

See last page for Notes and Abbreviations

Table 4.
Concentrations of Volatile Organic Compounds
and 1,4-Dioxane in Monitoring Wells BPOW 5-1 through BPOW 5-7, First Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Notes and Abbreviations:

(1)	Samples were analyzed for the TCL VOCs using USEPA Method 524.2.
(2)	Total VOCs are rounded to two significant figures.
(3)	Samples were analyzed for 1,4-Dioxane using USEPA Method 8270D SIM.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2014).

Bold	Constituent detected
TCL	Target Compound List
VOC	Volatile Organic Compound
USEPA	United States Environmental Protection Agency
SIM	Selected Ion Monitoring
µg/L	Micrograms per liter
J	Constituent value is estimated
<0.50	Constituent not detected above its laboratory detection limit

Table 5.
Concentrations of Volatile Organic Compounds
and 1,4-Dioxane in Monitoring Wells BPOW 6-1 through BPOW 6-6, First Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Well:	BPOW 6-1	BPOW 6-2	BPOW 6-3	BPOW 6-4	BPOW 6-5	BPOW 6-5	BPOW 6-6
Sample ID:	BPOW 6-1	BPOW 6-2	BPOW 6-3	BPOW 6-4	BPOW 6-5	REP022516	BPOW 6-6
CONSTITUENT Date:	2/22/2016	2/22/2016	2/24/2016	2/24/2016	2/25/2016	2/25/2016	2/25/2016
Units (ug/L)							
Volatile Organic Compounds (VOCs) (1)							
1,1,1-Trichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-trichloro-1,2,2-trifluroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Butanone (MEK)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4-methyl-2-pentanone (MIK)	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbon Disulfide	< 0.50	< 0.50	< 0.50	< 0.50	**1.0**	**0.97**	**0.34 J**
Carbon tetrachloride	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,2-dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-dichloropropene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibromochloromethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ethylbenzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene Chloride	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Styrene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,2-dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-dichloropropene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethylene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl Chloride	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylene-o	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylenes - m,p	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total VOCs (2)	0	0	0	0	**1**	**0.97**	**0.34**
1,4-Dioxane (3)	< 0.11	< 0.11	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11

See last page for Notes and Abbreviations.

Table 5.
Concentrations of Volatile Organic Compounds
and 1,4-Dioxane in Monitoring Wells BPOW 6-1 through BPOW 6-6, First Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Notes and Abbreviations:

(1)	Samples were analyzed for the TCL VOCs using USEPA Method 524.2.
(2)	Total VOCs are rounded to two significant figures.
(3)	Samples were analyzed for 1,4-Dioxane using USEPA Method 8270D SIM.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2014).

Bold	Constituent detected
TCL	Target Compound List
VOC	Volatile Organic Compound
USEPA	United States Environmental Protection Agency
REP	Blind duplicate sample
SIM	Selected Ion Monitoring
µg/L	Micrograms per liter
J	Constituent value is estimated
<0.50	Constituent not detected above its laboratory detection limit

Figures

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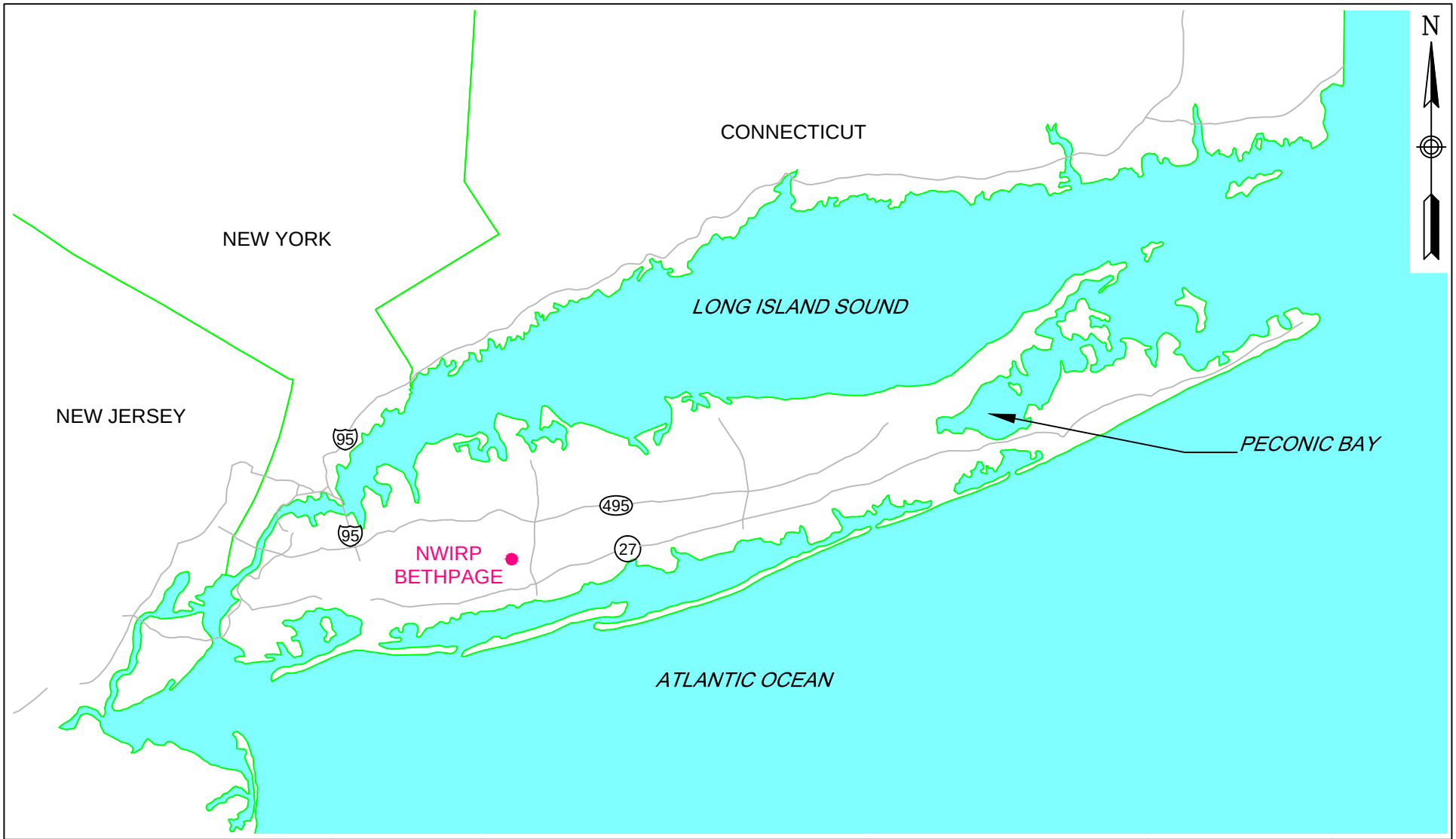
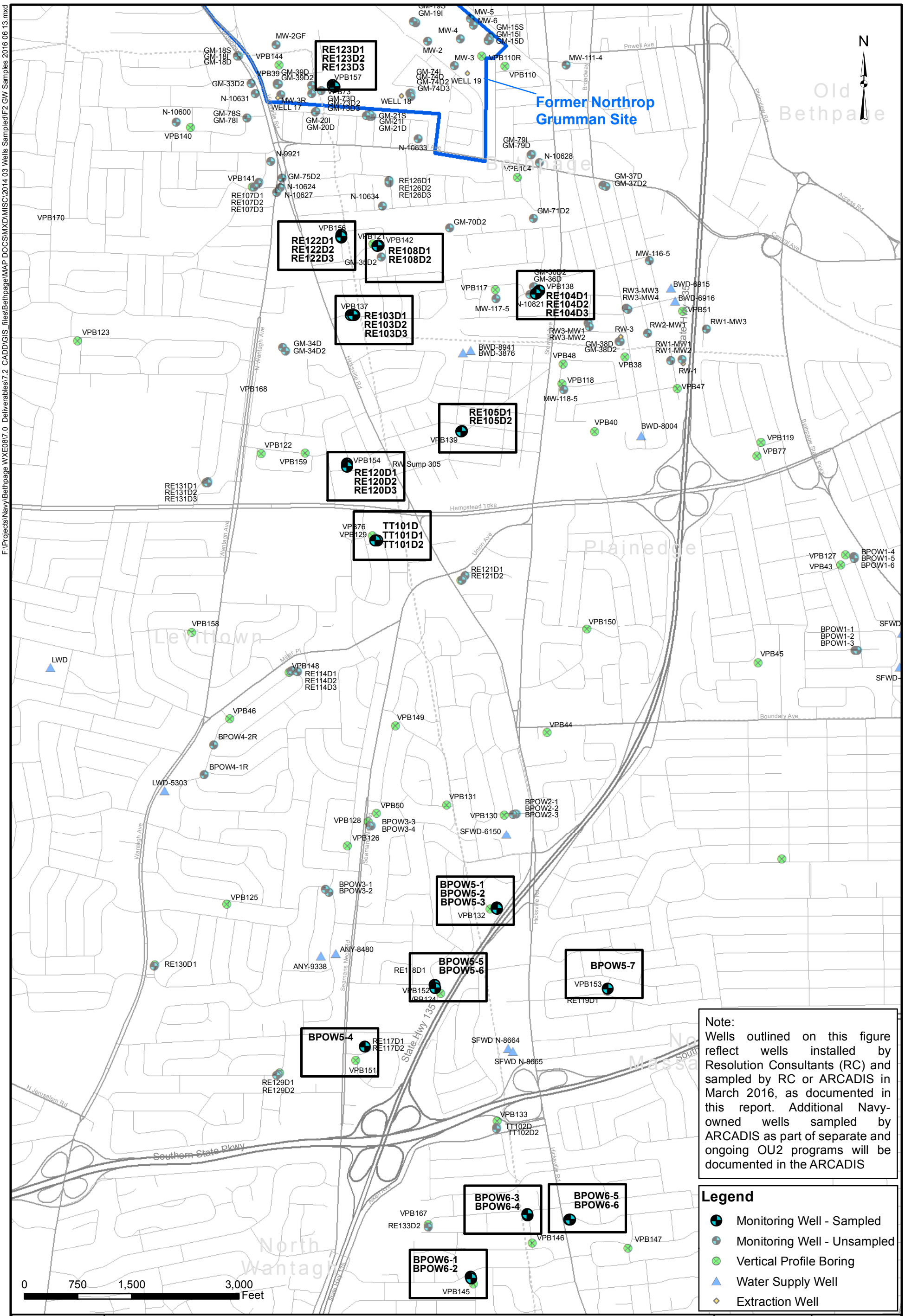


0 15 30
SCALE IN MILES

NAVFAC

GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

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



Note:
Wells outlined on this figure reflect wells installed by Resolution Consultants (RC) and sampled by RC or ARCADIS in March 2016, as documented in this report. Additional Navy-owned wells sampled by ARCADIS as part of separate and ongoing OU2 programs will be documented in the ARCADIS

Legend

- Monitoring Well - Sampled
- Monitoring Well - Unsampled
- Vertical Profile Boring
- Water Supply Well
- Extraction Well

NAVFAC

LOCATION MAP
MARCH 2016 GROUNDWATER SAMPLING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: EV	DATE: 6/13/2016
APPROVED BY: —	DATE: —
FIGURE NO. 2	REV 0

F:\Projects\Navy\Bethpage WXE08\7.0 Deliverables\7.2 CADD\GIS_files\Bethpage\MAP DOCS\MXD\MISC\2014 03 Wells Sampled\F2 GW Samples 2016 06 13.mxd

Appendices

Appendix A

Groundwater Sampling Forms – Resolution Consultants

Well ID: MW-108 D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/14/16 Time: Start 830 am/pm
Project No: 60266526 Finish ____ am/pm
Site Location: Cornwall Coil
Weather Conds: ____ Collector(s): ____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 555 c. Length of Water Column 514.58 (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 40.42 d. Calculated System Volume (see back) 13.1gal / 49.4L

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	082098X
Hanna	98703	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0920	–	13.50	9.41	83	8.40	47.2	–	400	40.61	Clear
0940	–	13.41	6.35	0.081	7.96	89.4	0.71	400	40.76	–
0945	–	13.49	6.06	0.081	8.02	91.0	–	450	40.76	–
0950	–	13.53	5.92	0.082	7.94	92.4	.63	450	–	–
1000	–	13.56	5.56	0.082	8.04	98.8	–	450	40.76	–
1010	5 Gal	13.52	5.38	0.081	8.08	107.1	.70	450	40.91	–

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

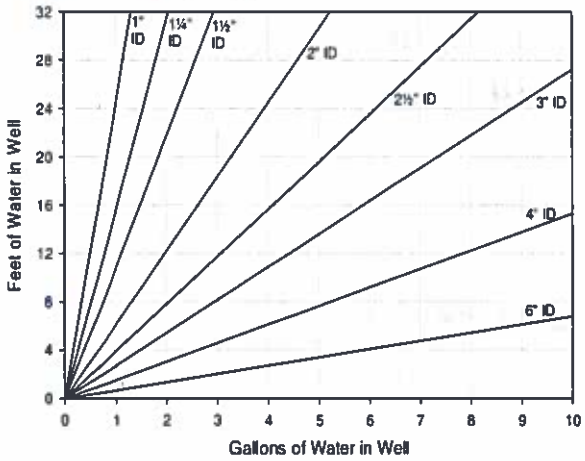
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108-D1-GW-031416	40-mL vials	3	HCl	VOCs	1110
RE108D1-GW-031416	1-L amber	2	none	1,4-Dioxane	

Comments: Low flow GW Sampling RE108D1

Signature ____ Date ____

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
10:20	–	13.80	5.24	0.082	7.93	112.4	0.43	400	40.92	–
10:30	–	13.92	5.17	0.082	7.96	113.5	0.37	400	40.93	–
10:35	–	13.93	5.15	0.082	7.98	114.4	–	400	–	
10:45	10 Gal	13.95	5.10	0.083	8.01	115.2		400	40.94	–
10:55	–	13.97	5.05	0.082	7.80	116.9	.41	400	40.94	–
11:00	–	13.95	5.05	0.082	7.87	117.0	.46	400	40.94	–
11:10	13.5	13.96	5.04	0.082	7.85	116.3	.47	400	41.00	
1110										Sample
1127										Remove Transducer

Well ID: RE108 D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/ /16 Time: Start 830 am/pm
Project No: 60266526 Finish 1100 am/pm
Site Location: Corona & Ceil
Weather Conds: 45° rain Collector(s): PKareth, R. Papagian

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 655 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 40.94 d. Calculated System Volume (see back) 13.1gal / 49.4L

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3% - Turbidity ± 10% - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit - ORP ± 10mV
- Sp. Cond. ± 3% - Drawdown < 0.3' Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	07H100384
Hanna	98203	U615BX

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
830900 start										
0916		13.10	5.56	.120	16.53	188.2	0.76	500	40.97	
915		13.39	5.04	0.093	4.95	253.4	.75	600		
920		13.29	4.95	0.091	5.05	264.3	.51	600	41.07	
0930	5gal	13.31	4.93	.116	5.12	275.5	.50		41.01	
935		13.33	4.92	0.090	5.08	278.8			41.23	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

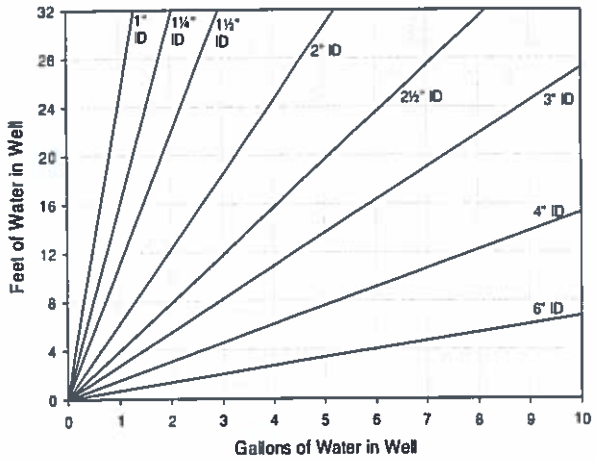
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108D2-GW-031416	40-mL vials	3	HCl	VOCs	1015
"	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kareth Date 3/14/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
940		13.29	4.93	.116	4.99	291.6	1.41			
0945		13.45	4.92	.116	5.05	286.1	.40	600	41.23	
0955		13.48	4.90	.117	5.14	290				
1000	10 gal	13.48	4.89	.116	5.15	289.9	.37	600		
1005		13.47	4.90	.117	5.24	291.5	.51	600	41.3	
1010	13.5 gal	13.49	4.89	0.117	5.23	291.6				
1										
1015										Sample

Well ID: RE103 ~~03~~ 01

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/14/16 Time: Start 1330 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Avoca
Weather Conds: rain 40° Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 735 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 39.60 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3% - Turbidity ± 10% - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit - ORP ± 10mV
- Sp. Cond. ± 3% - Drawdown < 0.3' Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	
Hanna		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1510	problems	with	MP.10	controller				450		ON
1520		13.83	5.64	0.085	2.69	111.6				
1525		13.92	5.54	~~0.080~~ 0.084	2.95	113.8			39.62	
1530		13.95	5.36	0.089	3.65	118.2				
1535		13.93	5.31	0.089	3.66	117.7				
1540		13.85	5.28	0.089		118.2			39.70	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

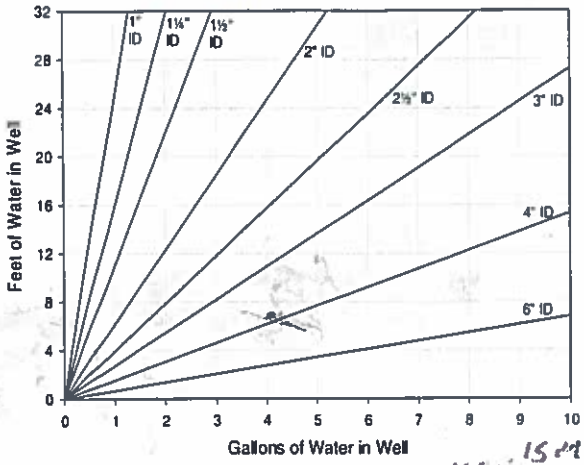
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D1-GW-031415	40-mL vials	3	HCl	VOCs	1200
"	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Karoff Date 3/14/15

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

YSI 1549 100637

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1545	5 gal	13.65	5.24	0.089	~~5.34~~	119.0	2.05	400	39.71	
1550		13.90	5.19	0.090	4.19	120.2				
1555		13.78	5.18	0.090	4.31	120.4				
1600		14.00	5.16	0.091	4.38	120.8	0.12	400		
1605		13.92	5.16	0.091	4.45	121.0				
1610		13.87	5.15	0.091	4.54	121.5			39.70	
1615		13.88	5.13	0.090	4.68	119.7				
1620	10 gal	13.86	5.13	0.090	4.69	120.7				
1625		13.85	5.13	0.088	4.76	121.9	0.22	400	39.71	
1630		13.86	5.13	0.088	4.77	123.3				
1635		13.74	5.13	0.089	4.74	122.5				
1640		13.84	5.12	0.088	4.78	122.7			39.69	
1645		13.85	5.12	0.088	4.75	123.0	0.22			
1650	13 gal	13.80	5.10	0.087		121.5				
1700										Sample

Well ID: RE10302

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3 / 14 / 16 Time: Start 1230 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Avoca
Weather Conds: rain 40° Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 673 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth _____ d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	
Hanna		

Time (24hr)	Volume Removed (s)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1245		12.77	5.38	0.64	23.79	175.3		600		
13040	5 gal	13.17	4.94	0.050	10.12	192.1	17	600	39.4 45	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

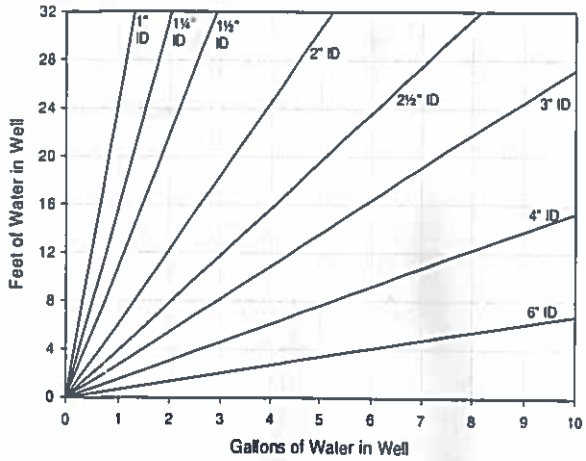
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	40-mL vials	3	HCl	VOCs	1520
	1-L amber	2	none	1,4-Dioxane	

Comments back of readings due to pump trouble shooting
D3

Signature _____ Date _____

LowFlow-GWa - Mar 2016.xlsx

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: meter # 0581278

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1315		13.21	4.92	0.030	10.11	193.7	.95	600	39.44	
1320		13.12	4.91	0.050	9.81	186.6	.63	600	39.42	
1325		13.09	4.89	0.050	9.55	89.6	.49	600	39.45	
1335		13.23	4.91	0.052	9.21	201.8	.37	600	39.42	
1340	10	13.04	4.92	0.056	9.01	203.3	.30	600	39.40	
1345		13.11	4.92	0.057	8.[illegible]	205.4	.20			
1500		sample								
						meter				
						#				

p 1 of 2

Well ID: RE1030B

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3 / 14 / 16
Time: Start 14:00 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: Avoca
Weather Conds: Rainy
Collector(s): FB, PK

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 64.5
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC

b. Water Table Depth 40.40
d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	
Hanna		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1400									40.40	Start
1420	–	15.12	4.12	0.046	7.11	269.9	–			

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

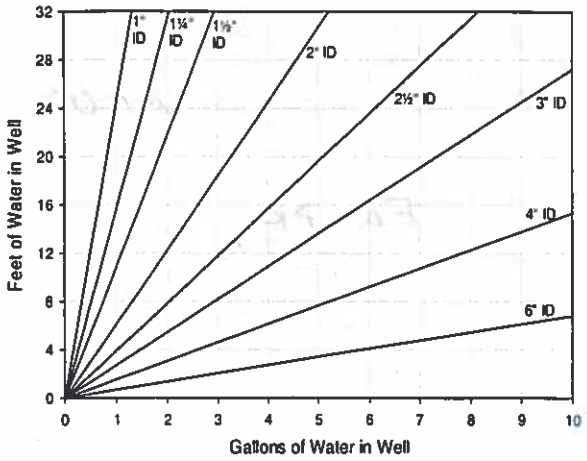
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE1030B-GW-03/14/16	40-mL vials	3	HCl	VOCs	1530
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature _____ Date _____

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: _____

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor

p 2 of 2

Well ID: RS10303 (cont)

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3 / / 16 Time: Start _____ am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: _____
Weather Conds: _____ Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____ c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth _____ d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	
Hanna		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
14:45	Sm	13.65	4.39	0.035	5.11	341.8	.8	500	40.24	Clear
14:50		13.64	4.43	0.035	5.09	351.8	0.72	500	40.12	
15:00	—	13.72	4.42	0.035	5.09	352.0	—	500	40.24	
15:05	—	13.73	4.33	0.035	5.05	355.1	—	500	40.30	
15:10	—	13.80	4.31	0.035	5.01	356.2		500	40.28	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

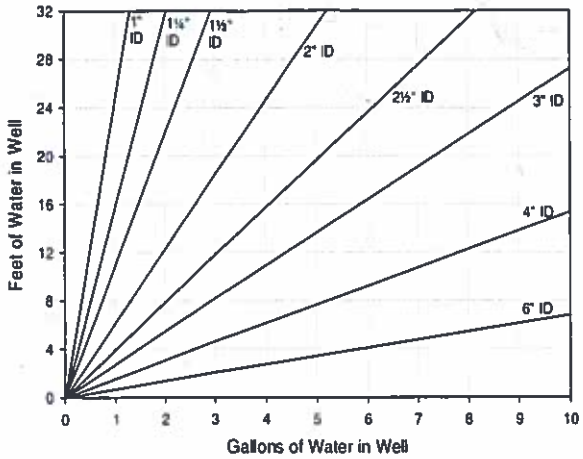
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RS10303 GW 031416	40-mL vials	3	HCl	VOCs	1530
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kaufty Date 3/14/15

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume
(4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
15:15	[illegible]	13.01	4.31	0.055	5.09	361.9		500		
15:25		11.43	[illegible]	[illegible]	5.03	[illegible]				
										[illegible]

Well ID: RE104D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/15/16 Time: Start 830 am/pm
Project No: 60266526 Finish 1100 am/pm
Site Location: Hilltop
Weather Conds: cloudy, 45, drizzle Collector(s): F.B. Paul K

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 375 c. Length of Water Column 339.22 (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 35.78 d. Calculated System Volume (see back) 222 gallons

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	54577
Hanna		U61518X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0900	-	13.11	5.44	0.080	4.79	206.6	1.31	550	35.84	Clear
0910	-	13.19	5.19	0.082	5.44	241.9	-	525	35.89	
0915	-	13.22	5.18	0.081	5.46	244.0	1.41	525	35.90	
0925	-	13.36	4.89	0.079	5.14	242.7	-	525	35.96	
0935	5Gal	13.33	5.12	0.077	4.62	150.3	1.29	525	36.02	
0940	-	13.31	5.21	0.077	4.57	144.4	-	500	36.09	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

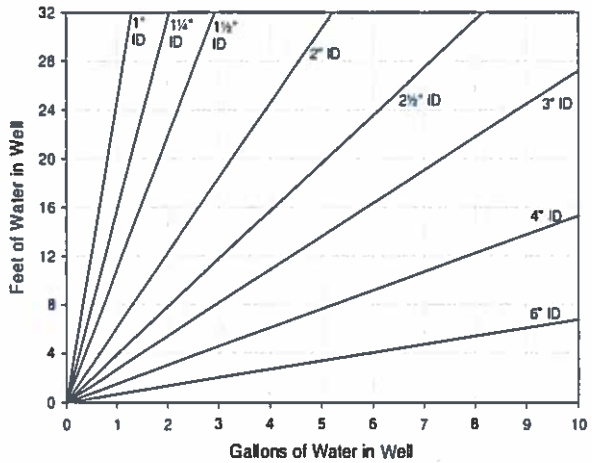
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D1-GW-031516	40-mL vials	3	HCl	VOCs	1045
RE104D1-GW-031516	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaneth Date 3/15/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0950	–	13.28	5.21	0.077	4.57	141.3	–	500	36.08	–
0955	–	13.30	5.21	0.077	4.55	140.2	1.02	525	36.10	–
1000	–	13.34	5.20	0.076	4.57	141.0	–	525	36.10	
1005	–	13.36	5.19	0.077	4.57	141.7	.98	525	36.11	
1010	–	13.45	5.15	0.076	4.54	150.0	.81	525	36.12	
1015	10 Gal	13.40	5.17	0.077	4.55	153.6	–	525	36.16	
1020	–	13.39	5.17	0.076	4.51	154.7	–	525	36.19	
1025	–	13.44	5.17	0.076 ~~0.077~~	4.47	154.1	.91	525	36.19	
1030	–	13.40	5.21	0.077	4.50	152.4	–	525	36.19	
1035	13 Gal	13.41	5.21	0.076	4.51	154.7	.83	525	36.20	
Sample Time			10:45							

Well ID: RE10402

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3 / 15 / 16 Time: Start 830 am/pm
Project No: 60266526 Finish 1100 am/pm
Site Location: Hilltop
Weather Conds: cloudy, 45°; drizzle Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 735 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 39.23 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	49024
Hanna	98703	4815 18x

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
855										ON
910		13.74	4.17	0.037	6.10	223.6		700	39.18	
915		13.78	4.26	0.037	6.05	218.2	1.82			
920		13.81	4.60	0.035	6.68	195.1		700	39.12	
925	5gal	13.85	4.65	0.034	6.83	192.1				
930		13.88	4.69	0.033	6.83	190.7				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

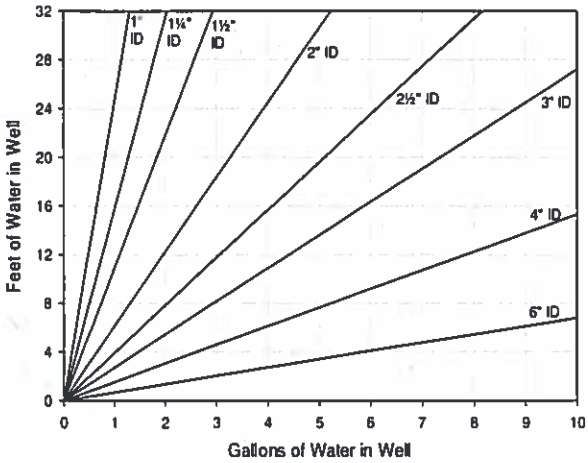
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	40-mL vials	3	HCl	VOCs	1010
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Haeffle Date 3/15/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE104D2 2855

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
935		13.86	4.70	~~181.0~~ 0.032	6.85	189.9	1.41	700	38.95	
940		13.88	4.71	0.032	6.86	186.4				
945		13.88	4.72	0.032	6.82	184.7				
950	10gal	13.88	4.75	0.032	6.71	182.2				
955		13.89	4.76	0.032	6.73	182.9	3.01		38.75	
1000	12gal	13.91	4.74	0.032	6.78	181.6		700		
1005	13gal	13.90	4.73	0.032	6.80	183.2				
1010										sample

Well ID: RE10403

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3 / 15 / 16
Time: Start 830 am/pm
Finish 1215 am/pm
Project No: 60266526
Site Location: Hillsboro
Weather Conds: cloudy, 45° drizzle
Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 785
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 39.08
d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	100687
Hanna	98703	4 615198

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1015								500		ON
1025		13.76	6.44	0.025	6.71	113.6			39.08	
1035		13.87	5.31	0.022	5.79	123.2				
1040		13.91	5.25	0.022	5.82	122.6				
1045		13.98	5.16	0.022	5.87	121.9	11.9	500	39.02	
1050	5 gal	13.89	5.14	0.022	5.91	122.1				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

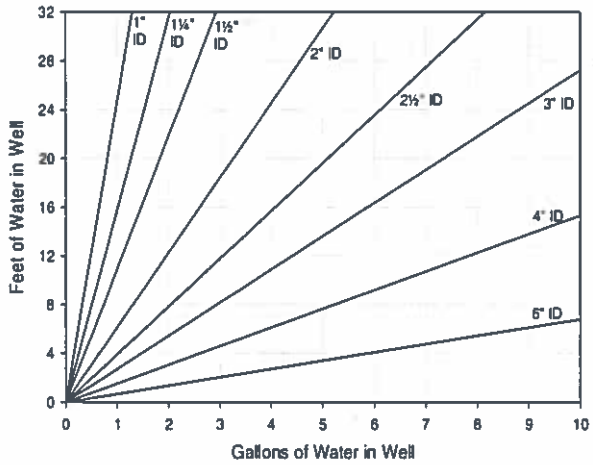
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10403-GW-031516	40-mL vials	3	HCl	VOCs	1155
	1-L amber	2	none	1,4-Dioxane	1155

Comments: MP-10 malfunction, did DI & D2 then swapped out equipment
removed level logger @ 0830

Signature: [signature]
Date: 3-15-16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE104D3 @ 1015

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1055		14.00	5.14	0.022	5.86	121.3				
1100		14.04	5.12	0.022	5.61	123.6	19.3	475	39.02	Clear
1105		14.08	5.12	0.022	5.50	122.3	26.5	–	–	
1110		14.12	5.11	0.022	5.32	121.0	20.4	–	–	
1115		14.10	5.11	0.022	5.26	122.3	23.3	–	–	
1120		14.14	5.11	0.022	5.21	121.6	31.3	475	39.02	Clear
1125		14.11	5.11	0.022	5.24	122.1	35.2	–	–	
1130		14.15	5.10	0.022	5.10	119.7	29.1	–	–	
1135		14.13	5.10	0.022	5.16	120.2	27.4	–	–	
1140		14.14	5.10	0.022	5.19	123.1	32.1	475	39.02	Clear
1145		14.15	5.10	0.022	5.22	123.8	29.8		–	
1150	13.5	14.16	5.10	0.022	5.25	124.5	28.9	475	39.02	Clear

Well ID: RE12201

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3 / 15 / 16
Time: Start 1330 am/pm
Finish 1520 am/pm
Project No: 60266526
Site Location: Curtis
Weather Conds: mostly cloudy 50°
Collector(s): F. B / P. K

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 545
c. Length of Water Column 503 (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 42.22
d. Calculated System Volume (see back) 328 = .6528 × 503

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	54577
Hanna		U615188

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1340 ~~1540~~	–	14.59	5.66	0.101	5.69	109.3	1.09	575	42.25	Clear
1350 ~~1550~~	–	14.56	5.98	0.101	4.35	65.2	–	500	42.24	Clear
1400 ~~1600~~	5 Gal	14.59	6.00	0.101	4.30	61.4	2.80	500	42.25	Clear
1410 ~~1610~~	–	14.57	6.10	0.101	4.21	55.7	–	500	42.24	Clear
1420	–	14.46	6.06	0.101	4.09	51.4	–	500	42.22	Clear
1425	–	14.37	6.14	0.107	4.03	49.8	2.35	500	42.21	Clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

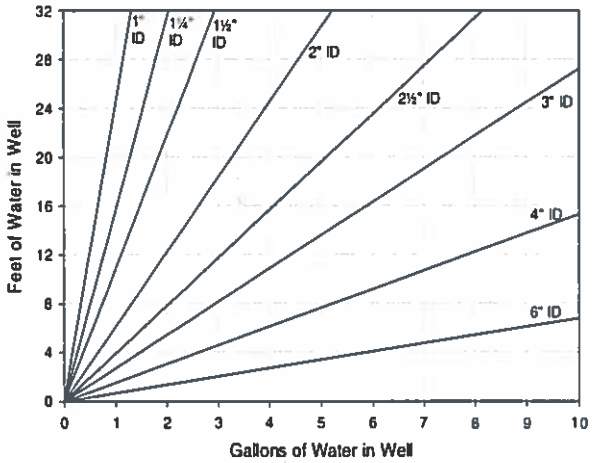
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12201GW-031516	40-mL vials	3	HCl	VOCs	1500
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kneeth
Date 3/15/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
14:30	10 Gal	14.33	6.09	0.101	3.93	52.7	2.31	500	42.22	clear
14:35	–	14.36	6.04	0.101	3.90	55.5	–	500	42.21	clear
14:40	–	14.35	6.02	0.101	3.84	57.1	–	500	42.21	
14:45	–	14.36	6.02	0.102	3.74	56.8	–	500	42.20	
14:50	–	14.40	6.03	0.102	3.71	54.6	2.09	500	42.20	clear
Sample time 1500										

Well ID: RE122D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3 / 15 / 16 Time: Start 1300 am/pm
Project No: 60266526 Finish 1530 am/pm
Site Location: Curtis
Weather Conds: mostly cloudy 50° Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 615 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 45.48 d. Calculated System Volume (see back) 13.1

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15M100687
Hanna		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1315										ON
1325		15.02	5.32	0.104	4.93	131.1		500	42.54	
~~1330~~		~~14.79~~	~~4.59~~	~~0.036~~	~~4.15~~	~~34.4~~				
1330		15.09	5.24	0.103	4.00	128.6				
1335		15.04	5.22	0.102	4.02	127.8	4.70	500		
1340		15.02	5.16	0.102	4.78	128.3				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

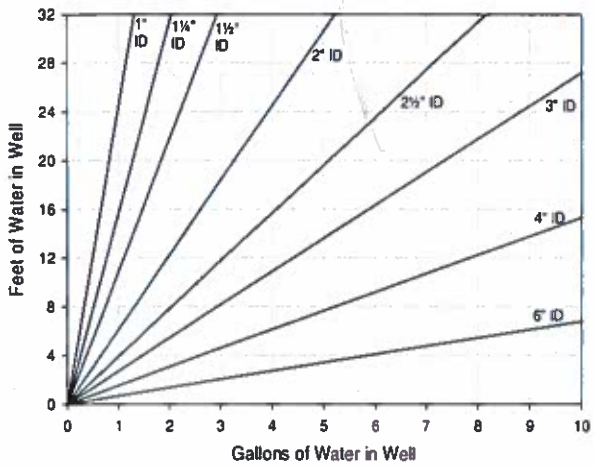
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D2-GW-031516	40-mL vials	3	HCl	VOCs	1440
RE122D2-GW-031516	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaneth Date 3/15/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: R~~103~~122D2 @ 1315

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1345	15 ~~22~~	~~14.91~~	~~4.48~~	~~0.0~~						
1345	5gal	15.23	5.16	0.102	4.64	127.8	3.02	500	42.51	
1350		15.22	5.15	0.102	4.62	127.6				
1355		15.17	5.16	0.102	4.63	127.2			~~42.48~~	
1400		15.08	5.14	0.102	4.66	127.8			42.48	
1405		15.10	5.14	0.102	4.58	127.8	0.81			
1410		15.01	5.13	0.102	4.66	127.9				
1415	10gal	14.85	5.14	0.101	4.65	128.0			42.50	
1420		14.75	5.13	0.102	4.69	128.7		500		
1425	12gal	14.59	5.14	0.101	4.73	126.7				
1430	13gal	14.57	5.13	0.101	4.93	129.5	0.52		42.48	
1440										sample

Well ID: RE12203

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/ 15 /16 Time: Start 1300 am/pm
Project No: 60266526 Finish 1530 am/pm
Site Location: Curtis
Weather Conds: mostly cloudy 50° Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 740 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 42.90 d. Calculated System Volume (see back) 13.1

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3% - Turbidity ± 10% - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit - ORP ± 10mV
- Sp. Cond. ± 3% - Drawdown < 0.3' Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	49024
Hanna		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1310										OK
1320		14.90	4.68	0.040	4.19	57.3		600	42.92	
1325		14.88	4.63	0.038	3.47	47.1				
1330		14.80	4.61	0.036	4.11	33.2				
1335	5 gal	14.86	4.50	0.034	4.01	31.8	6.78	600		
1340		14.76	4.45	0.034	3.48	15.3				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

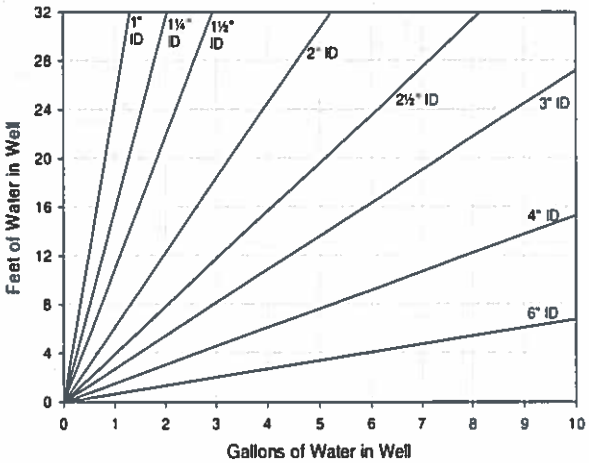
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12203-GW-031516	40-mL vials	3	HCl	VOCs	1420
"	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaiser Date 3/15/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: ~~RE1031~~ RE12203 @ 1310

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1345		14.96	4.49	0.034	3.31	11.1	7.41		42.92	
1350		15.05	4.48	0.034	3.19	-3.3				
1355		14.98	4.50	0.034	3.17	-3.9				
1400	10 gal	14.91	4.49	0.034	3.12	-7.3			42.91	
1405	~~10 gal~~	14.84	4.52	0.034	5.01	-13.4	9.28	600		
1410		14.75	4.51	0.034	3.08	-17.3				
1415	12 gal	14.60	4.50	0.034	3.06	-18.2	11.9		42.92	
1420	13 gal	14.53	4.51	0.034	3.01	-20.4	11.3			
1430										Sample

MNA

Well ID: RE120D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3/16/16
Time: Start 0925 am/pm
Finish 1200 am/pm
Project No: 60266526
Site Location: Shelly
Weather Conds: sunny 45°
Collector(s): Farrell Bell

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 655
c. Length of Water Column 619 Gal (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 36.02
d. Calculated System Volume (see back) (619 × 0.6528) = 404 Gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	54577
Hanna		U615188

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
925									~~36.35~~	ON
0935	–	15.17	5.73	0.120	3.34	100.7	–	600	36.85	
0940	–	15.04	5.53	0.118	2.30	116.3	–	400	36.32	
0945	–	15.30	5.39	0.119	2.24	128.4	.61	525	36.34	
0950	–	15.32	5.35	0.116	2.21	131.2	–	525	36.34	
1000	–	15.30	5.30	0.116	2.59	134.9	–	500	36.38	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

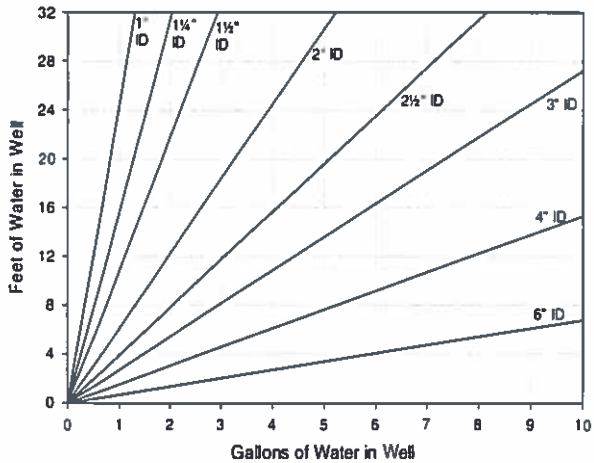
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120-D1-GW-031616	40-mL vials	3	HCl	VOCs	11:45
RE120D1-GW-031616	1-L amber	2	none	1,4-Dioxane	11:45
RE120D1-GW-031616				MNA parameters	11:45

Comments: Tested MNA (COD, Ammonia, Total pH, Cyanide, Metals, Hg, TOC, BOD, Sulfide, Dissolved metals, TDS, TSS, Cl, SO4, ALK, NO2, NO3)

Signature

Date 03/16/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1005	–	15.20	5.45	0.144	2.48	118.9	2.88	500	36.41	
1010	5Gal	15.38	5.34	0.117	2.14	110.3	–	500	36.48	clear
1015	–	15.30	5.28	0.116	2.21	109.2	–	500	36.53	
1020	–	15.41	5.37	0.116	2.10	106.0	–	500	36.55	
1025	–	15.51	5.61	0.117	3.18	96.3	1.03	500	36.58	clear
1030	–	15.51	5.66	0.116	2.13	90.9	–	500	36.58	
1035	–	15.53	5.65	0.116	2.01	84.7	–	500	36.60	
1045	10Gal	15.43	5.87	0.116	1.94	74.9	–	500	36.62	
1050	–	15.66	6.46	0.116	2.26	66.1	.97	500	36.64	
1055	–	15.56	7.33	0.116	2.63	31.9	–	500	36.64	
1100	–	15.47	7.41	0.116	2.53	27.6	–	500	36.66	
1105	–	15.43	7.46	0.116	2.59	14.3	.91	500	36.69	
1110	–	15.40	7.54	0.116	2.46	9.9	.87	500	36.70	clear
1115	–	15.36	7.26	0.115	2.40	7.0	.85	500	36.71	clear
1120	–	15.41	7.23	0.116	2.36	5.2	.81	500	36.73	clear
1125	15Gal	15.40	7.25	0.116	2.31	4.8	.79	500	36.74	
Sample time 1145										

Well ID: RE12002

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/ 16 /16 Time: Start 800 am/pm
Project No: 60266526 Finish 1130 am/pm
Site Location: Shelley
Weather Conds: sunny 45° Collector(s): PK, RP

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 715 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 35.82 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15M 100687
Hanna	98703	6151

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
905										ON
0930		14.73	6.62	0.071	6.05	133		500	36.09	
0935		14.72	6.03	0.074	5.81	139.8				
940		14.72	5.57	0.076	5.53	137.8	9.89			
945		14.75	5.45	0.075	5.15	137.7			36.19	
950	5gal	14.81	5.36	0.075	4.90	139.5		500		

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

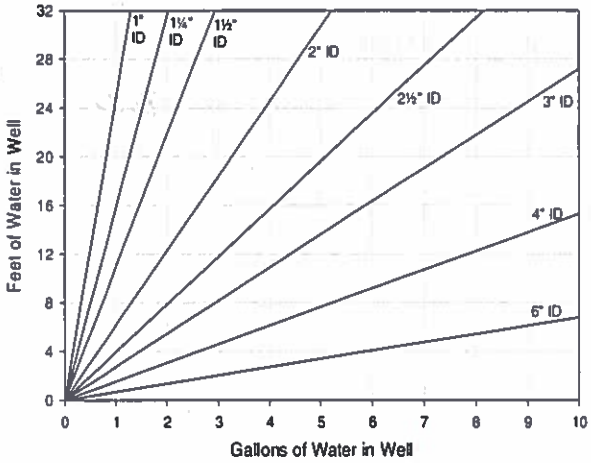
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12002-GW-031616	40-mL vials	3	HCl	VOCs	1045
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaneth Date 3/16/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: REI20 02 at 905

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
955		14.79	5.32	0.075	4.86	139.2	7.49	500	36.24	
1000		14.84	5.28	0.075	4.83	138.0				
1005		14.90	5.24	0.076	4.78	136.4				
1010		14.96	5.20	0.076	4.75	134.9	5.14		36.38	
1015	10 gal	14.98	5.21	0.076	4.71	136.8		450		
1020		14.98	5.21	0.076	4.69	136.4	4.17			
1025		15.03	5.21	0.076	4.68	136.5			36.42	
1030		15.04	5.20	0.076	4.63	136.6				
1035		15.08	5.19	0.077	4.67	136.7	~~4.34~~	3.25		
1040	13 gal	15.07	5.19	0.077	4.78	137.0				
										Sample
1045										

Well ID: RE120D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/16/16 Time: Start 800 am/pm
Project No: 60266526 Finish 1130 am/pm
Site Location: Skelly
Weather Conds: sunny 45° Collector(s): Paul Kraeth

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 765 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 36.29 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	49024
Hanna	98703	61518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
915										OK
925		14.97	7.13	0.035	7.97	-139.9	9.87	550		
930		15.04	6.02	0.034	5.02	-149.0				
935		15.07	5.94	0.035	4.58	-147.4			36.38	
940		15.15	5.82	0.034	4.07	-153.1		600		
945		15.15	5.76	0.034	4.02	-152.6				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

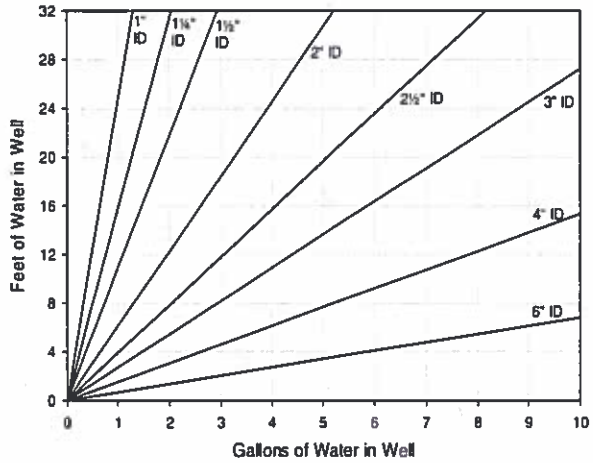
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D3-GW-031616	40-mL vials	3	HCl	VOCs	1050
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kraeth Date 3/16/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE120D3 @ 915

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
950		15.16	5.70	0.036	3.98	-149.0	6.19		36.41	
955	5gal	15.15	5.73	0.036	3.88	-148.2		600		
1000		15.33	5.71	0.036	3.76	-148.1				
1005		15.38	5.67	0.035	3.71	-148.3				
1010		15.31	5.81	0.035	3.72	-150.4	4.10		36.49	
1015		15.28	5.79	0.034	3.73	-148.0		600		
1020		15.36	5.75	0.034	3.70	-143.5				
1025	10gal	15.32	5.78	0.034	3.68	-150.9	3.66		36.58	
1030		15.32	5.69	0.034	3.94	-132.0				
1035		15.31	5.64	0.033	3.62	-136.6	4.34			
1040		15.30	5.64	0.033	3.65	-134.7				
1045	13gal	15.38	5.58	0.033	3.57	-132.1		600		
1050										Sample

Well ID: TT 101D

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3 / 16 / 16 Time: Start 1300 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Wadsworth
Weather Conds: Sunny 60° Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 350 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 34.46 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	
Hanna	98703	61518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1320										on
~~1334~~								600		
1335		15.47	4.68	0.093	0.87	176.8		600	32.95	
1340		15.37	4.70	0.092	0.42	168.1	0.88	800	32.98	
1345		15.35	4.76	0.092	0.33	162.0				
1350	5 gal	15.34	4.76	0.092	0.27	161.3				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

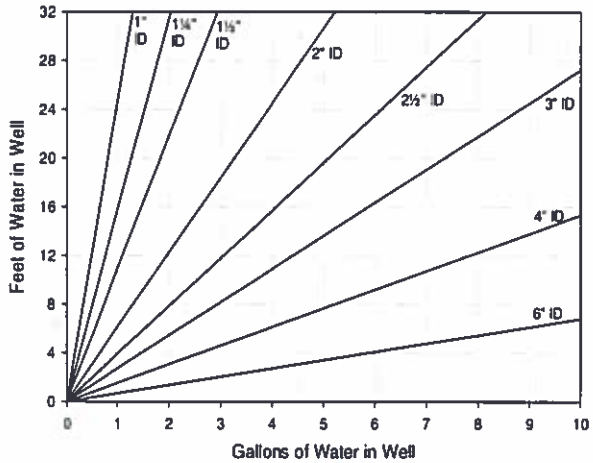
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D-GW-031616	40-mL vials	3	HCl	VOCs	1430
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Knoth Date 3/16/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: TT1010 at 1320

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1355		15.53	4.76	0.092	0.27	160.1		900	32.95	
1400		15.34	4.73	0.092	0.57	157.6	6.51			
1405		15.33	4.74	0.092	0.82	158.8	1.42			
1410	10gal	15.30	4.72	0.093	0.31	159.5				
1415		15.29	4.71	0.093	0.43	160.1				
1420	13gal	15.28	4.70	0.093	0.46	160.3		900	32.92	
1430										Sample

Well ID: TT10101

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3 / 16 / 16
Time: Start 13:30 am/pm
Finish 1530 am/pm
Project No: 60266526
Site Location: Bethpage, NY
Weather Conds: Sunny 40°
Collector(s): F. Bell, Paul K.

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 595
c. Length of Water Column 561 (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 34.17
d. Calculated System Volume (see back) 561 x 0.6528 = 366

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	545 77
Hanna		U615182C

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
Start 13:30								1000		Clear
13:40	–	15.25	5.04	0.097	0.26	72.5	–	500	34.15	clear
13:45	–	15.29	5.29	0.097	0.27	44.4	.35	900	34.17	clear
13:50	–	15.27	5.28	0.096	0.22	37.3	–	900	34.18	
13:55	5 Gal	15.23	5.38	0.098	0.43	24.1	–	900	34.19	
14:00	–	15.25	5.41	0.098	0.63	24.4	1.21	900	34.16	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

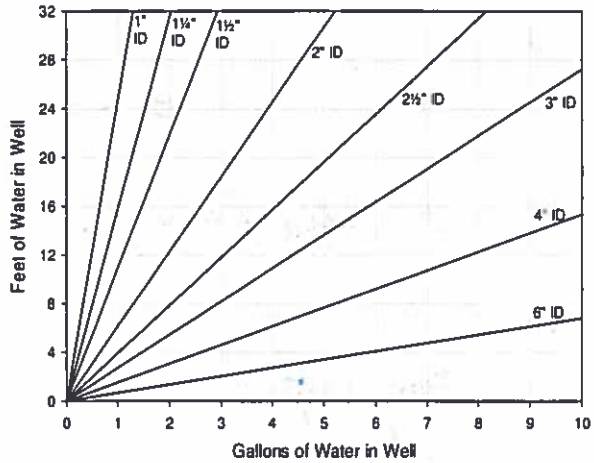
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT10101-GW-031616	40-mL vials	3	HCl	VOCs	1445
TT10101-GW-031616	1-L amber	2	none	1,4-Dioxane	1415

Comments

Signature Paul Kanetto
Date 3/16/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1405	–	15.24	5.74	0.098	0.66	7.1	–	900	34.19	Clear
1410	–	15.23	5.70	0.098	0.66	7.3	.98	900	34.18	
1415	1.0Gal	15.23	5.72	0.098	0.68	6.6	–	900	34.18	
1420	–	15.20	5.82	0.098	0.68	-1.5	.58	900	34.20	
1425	–	15.23	6.04	0.098	0.67	-7.7	.62	900	34.18	
1430	1.5Gal	15.24	6.16	0.098	0.67	-11.4	.59	900	34.18	
Sampling time 1445										

Well ID: TT10102

MNA

Low Flow Ground Water Sample Collection Record

RESOLUTION CONSULTANTS

Client:	Navy NWIRP Bethpage	Date: 3 / 16 / 16	Time: Start 1300 am/pm
Project No:	60266526		Finish 1530 am/pm
Site Location:	Wadsworth		
Weather Conds:	Sunny 60°	Collector(s):	

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 765 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 34.69 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	49024
Hanna		

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1325								900	34.69	start
1330		15.21	2.49	0.053	3.74	-0.9				
1335		15.20	4.02	0.054	3.32	-76.8				
1340		15.19	4.85	0.054	3.48	-105.9	2.14		34.72	
1345	5gal	15.18	5.49	0.054	4.10	-128.7				
1350		15.16	5.58	0.053	4.49	-135.4				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

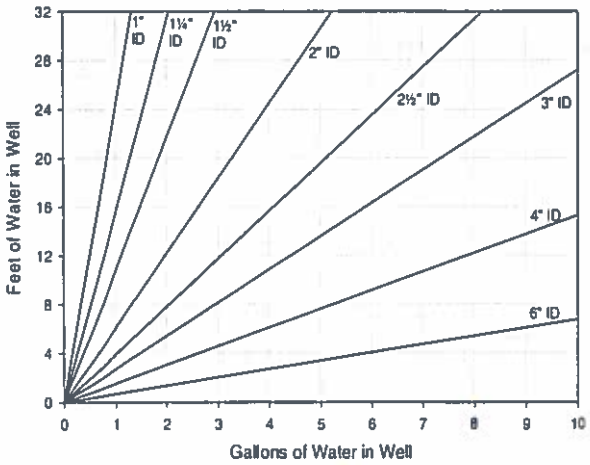
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT10102-GW-031616	40-mL vials	3	HCl	VOCs	1450 MS/MSD
	1-L amber	2	none	1,4-Dioxane	
DUPLICATE				MNA	1500

Comments Sample Time does not match purge to avoid conflict with TT10101

Signature Paul Kenoffs Date 3/16/16

Duplicate and MS/MSD

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: TT101D2 @ 1325

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1355		15.16	5.80	0.053	5.42	-144.3	8.0	900	34.72	
1400		15.15	5.88	0.053	5.98	-142.9				
1405		15.15	5.90	0.053	6.17	-141.2	3.95			
1410	10gal	15.12	5.96	0.053	6.43	-141.5				
1415		15.14	5.98	0.053	6.39	-140.9				
1420		15.10	6.03	0.053	6.44	-142.4	1.34	900	34.74	
1425	12gal	15.09	6.04	0.053	6.45	-142.6				

LowFlow-GWa - Mar 2016.xlsx

MNA

Well ID: RE123 - D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3/17/16
Time: Start 0900 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: Bethpage, NY
Weather Conds: Sunny, 50°F
Collector(s): FB & PK

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth ~~48.~~ 47.72
d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	05B1078A5
Hanna	98703	U615182

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0900		Start							~~48.~~ 47.82	
0910	–	11.54	7.46	0.144	12.02	-154.0	–	550	47.72	clear
0915	–	11.60	6.94	0.143	10.18	-161.4	3.26	500	47.74	clear
0920	–	11.82	6.23	0.141	10.14	-150.7	3.87	500	47.74	clear
0925	–	11.86	6.14	0.141	10.12	-149.7	–	500	47.75	clear
0930	–	11.89	6.09	0.141	10.09	-150.1	–	500	47.72	clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

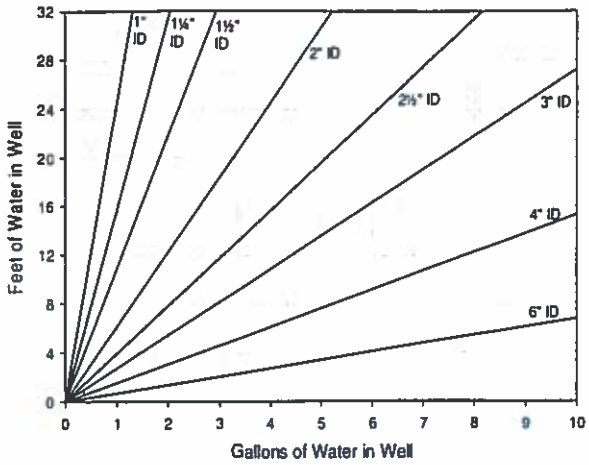
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D1-GW-031716	40-mL vials	3	HCl	VOCs	10:30
RE123D1-GW-031716	1-L amber	2	none	1,4-Dioxane	10:30

Comments

Signature Paul Kneeth
Date 3/17/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0935	5 Gal	11.96	6.33	0.141	9.87	-151.4	3.53	500	47.73	
0945	–	12.09	6.68	0.141	9.77	-160.6	–	500	47.73	clear
0950	–	12.15	6.75	0.140	9.71	-160.9	1.35	500	47.72	
0955	–	12.13	6.74	0.140	9.65	-161.0	–	500	–	
10 00	–	12.17	6.74	0.140	9.69	-161.1	–	500	47.72	
1010	10 Gal	12.21	6.88	0.140	9.64	-160.5	1.42	500	47.73	
1015	–	12.24	7.39	0.140	9.69	-163.7	1.37	500	47.75	
1020	–	12.29	7.04	0.140	9.70	-160.1	0.99	500	47.74	
1025	–	12.33	7.39	0.139	9.60	-160.0	0.87	500	47.74	
10:30	13 Gal	12.35	7.35	0.139	9.64	-159.4	0.82	500	47.74	
Sample time					1030					

Well ID: RE123D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3/17/16
Time: Start 815 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: GTRR
Weather Conds: sunny 50°
Collector(s): Rita Pagagian, Paul Karetta

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____ c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 49.05 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	14100384
Hanna	98703	61518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0850										cn
0900		11.19	6.13	0.062	9.09	15.18	10.1	600	49.05	
0910		11.78	5.60	0.035	5.62	160.4	1.27	600	49.05	
0915		11.82	5.39	0.041	7.09	166.8	1.20	600	49.05	
0920		11.93	5.11	0.036	8.78	180.4	2.60	600	49.05	
0930		12.14	5.06	0.036	8.79	183.7	3.76	600	49.05	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

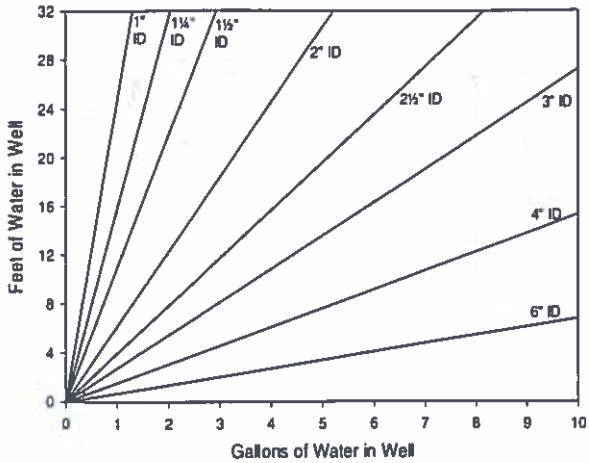
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D2-GW-031716	40-mL vials	3	HCl	VOCs	1015
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Karetta Date 3/17/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0935		12.20	5.07	0.036	8.73	181.0	3.76	600	49.05	
0940	10 gal	12.23	5.05	0.036	8.75	177.8	3.23	600	49.05	
0950		12.44	5.04	0.036	8.71	176.3	3.51	600		
0955		12.33	5.04	0.035	8.62	174.2	3.5	600	49.05	
1005		12.58	5.03	0.036	8.60	170.1	3.52	600	49.05	
1010	13 gal									
1015	Sample									

Well ID: RE123D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3 / 17 / 16
Time: Start 815 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: LIRR
Weather Conds: sunny 50°
Collector(s): PK

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC

b. Water Table Depth 48.49
d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15M100687
Hanna	98703	61518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
840								450		ON
855		12.69	6.08	0.035	1.82	90.6	21.3	550	48.60	
900		13.16	5.74	0.047	1.29	77.0				
905		13.23	5.91	0.069	1.01	65.1	13.1	550	48.62	
910		13.40	5.97	0.069	0.86	57.3				
915	5 gal	13.47	6.02	0.069	0.76	49.1				

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

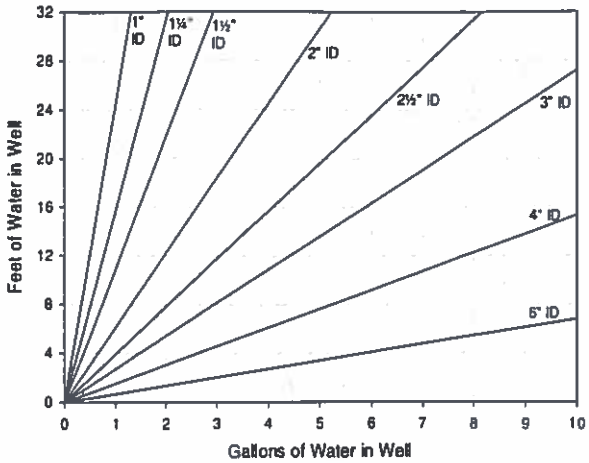
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D3-GW-031716	40-mL vials	3	HCl	VOCs	1005
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kraft
Date 3/17/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: ~~RE123D3-6~~ RE123D3 at 840

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
920		13.57	6.01	0.067	0.69	43.6	10.9	600	48.62	
925		13.66	5.99	0.065	0.65	42.9				
930		13.63	5.96	0.064	0.56	42.0				
935		13.67	5.96	0.062	0.51	41.3	9.73	600	48.64	
940	10gal	13.64	5.93	0.060	0.46	41.3	8.91			
945		13.78	5.92	0.058	0.50	41.4				
950	12gal	13.83	5.90	0.056	0.45	41.9	8.79	600	48.63	
955		13.91	5.87	0.055	0.51	41.3				
1000	13gal	13.96	5.87	0.054	0.64	43.0	9.23		48.62	
1005										Sample

Well ID: RE105D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 3/17/16
Time: Start 1250 am/pm
Finish 1450 am/pm
Project No: 60266526
Site Location: Lincoln
Weather Conds: Sunny 60°
Collector(s): E. Bell, P. Kareth

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 555
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 37.47
d. Calculated System Volume (see back) 131

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Sp. Cond. ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	521577
Hanna		U615182

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1250		Start time						600	37.43	
1255	–	14.97	5.02	0.114	5.53	146.1	1.20	600	37.40	
1300	–	14.86	4.96	0.113	5.00	120.0	–	600	37.39	
1305	–	15.18	4.93	0.111	4.74	136.5	1.97	700	37.38	
1315	5 Gal	15.03	5.03	0.110	4.46	103.7	1.98	700	37.35	
1325	-	14.96	5.11	0.110	4.38	107.3	–	700	37.33	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

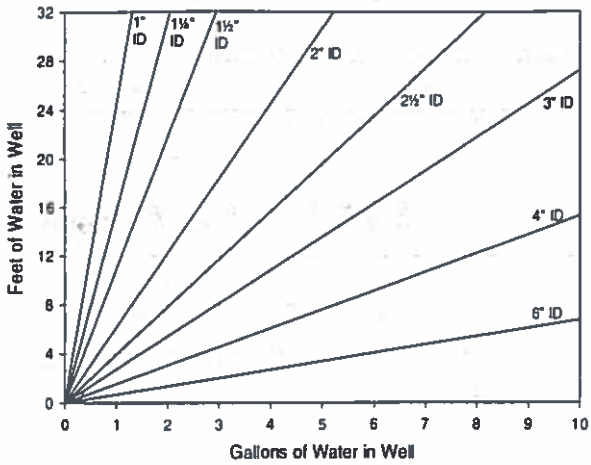
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D1-GW-031716	40-mL vials	3	HCl	VOCs	1400
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kareth
Date 3/17/16

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1335	–	14.77	5.12	0.108	4.30	89.5	–	700	37.32	Clear
1346	10 Gal	14.80	5.09	0.109	4.29	93.7	1.22	700	37.33	
1345	–	14.83	5.07	0.108	4.27	96.1	–	700	37.32	
1350	–	14.66	5.08	0.108	4.22	98.9	1.02	700	37.33	
1355	13 Gal	14.70	5.05	0.108	4.19	100.0	1.08	700	37.53	Clear
1400										
Sample Time 1400										

MNA

Well ID: RE105D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 3/17/16 Time: Start 1230 am/pm
Project No: 60266526 Finish 1430 am/pm
Site Location: Lincoln
Weather Conds: Sunny 60° Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 755 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 37.87 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3% - Turbidity ± 10% - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit - ORP ± 10mV
- Sp. Cond. ± 3% - Drawdown < 0.3' Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	49024
Hanna	98703	61518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1250								600	37.78	ON
1255		14.92	11.12	0.078	17.18	-208.1				
1300		14.95	7.14	0.077	8.26	-170.6	0.90			
1305		15.07	6.98	0.077	5.73	-189.0		600	37.82	
1310		14.95	6.74	0.078	5.19	-182.3				
1315		14.88	6.52	0.086	6.36	-164.8				

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D2-GW-031716	40-mL vials	3	HCl	VOCs	1410
	1-L amber	2	none	1,4-Dioxane	1410
				MNA	1410

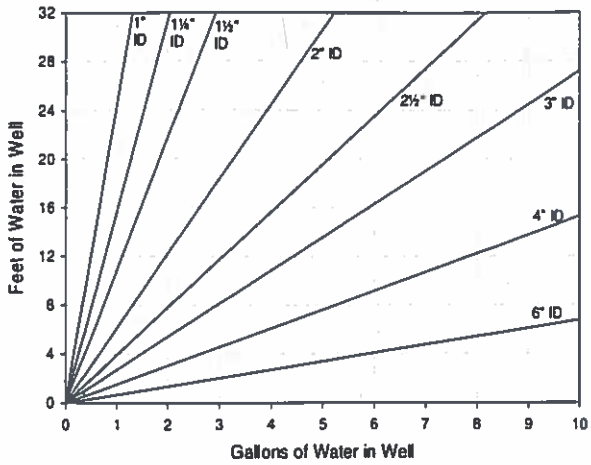
Comments

Signature Paul Kraeth Date 3/17/16

LowFlow-GWa - Mar 2016.xlsx

MNA

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume
(4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE10502-GW-031716 at 1250

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1320	.5gal	14.91	6.50	0.087	6.47	-159.2	0.65	600	37.80	
1325		14.84	6.37	0.086	6.57	-155.9				
1330		14.76	6.34	0.085	6.55	-153.9			37.84	
1335		14.78	6.32	0.085	6.53	-151.7	0.91			
1340		14.77	6.32	0.086	6.57	-149.1				
1345	1gal	14.73	6.25	0.085	6.42	-146.2				
1350		14.71	6.21	0.085	6.44	-143.3	0.78	600	37.87	
1355	1gal	14.73	6.22	0.082	6.47	-141.1				
1400		14.74	6.29	0.085	6.55	-142.9	0.68			
1405		14.68	6.27	0.085	6.48	-144.1			37.88	
~~1410~~										
1410										Sample

Appendix B

Analytical Data Validation – Resolution Consultants

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Sample Delivery Group:	BETHPAGE-5	
Analyses/Method:	Volatile Organic Compounds by U.S. EPA SW-846 Method 8260C 1,4-Dioxane by U.S. EPA SW-846 Method 8270D via Selective Ion Monitoring (SIM)	
Validation Level:	3	
Project Number:	0888812477.SA.DV	
Prepared by:	Dana Miller/Resolution Consultants	Completed on: 05/15/2016
Reviewed by:	Tina Clemmey/Resolution Consultants	File Name: BETHPAGE 5_8260C_8270D

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — NWIRP Bethpage Site on 14 to 17 March 2016 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
DUPLICATE-GW-031616	Field Duplicate of TT101D2-GW-031616	8260C/8270D_SIM
RE103D1-GW-031416	Groundwater	8260C/8270D_SIM
RE103D2-GW-031416	Groundwater	8260C/8270D_SIM
RE103D3-GW-031416	Groundwater	8260C/8270D_SIM
RE104D1-GW-031516	Groundwater	8260C/8270D_SIM
RE104D2-GW-031516	Groundwater	8260C/8270D_SIM
RE104D3-GW-031516	Groundwater	8260C/8270D_SIM
RE105D1-GW-031716	Groundwater	8260C/8270D_SIM
RE105D2-GW-031716	Groundwater	8260C/8270D_SIM
RE108D1-GW-031416	Groundwater	8260C/8270D_SIM
RE108D2-GW-031416	Groundwater	8260C/8270D_SIM
RE120D1-GW-031616	Groundwater	8260C/8270D_SIM

Sample ID	Matrix/Sample Type	Analysis
RE120D2-GW-031616	Groundwater	8260C/8270D_SIM
RE120D3-GW-031616	Groundwater	8260C/8270D_SIM
RE122D1-GW-031516	Groundwater	8260C/8270D_SIM
RE122D2-GW-031516	Groundwater	8260C/8270D_SIM
RE122D3-GW-031516	Groundwater	8260C/8270D_SIM
RE123D1-GW-031716	Groundwater	8260C/8270D_SIM
RE123D2-GW-031716	Groundwater	8260C/8270D_SIM
RE123D3-GW-031716	Groundwater	8260C/8270D_SIM
TRIP BLANK 031616	Trip Blank	8260C
TRIP BLANK 031716	Trip Blank	8260C
TRIP BLANK-031416	Trip Blank	8260C
TT101D1-GW-031616	Groundwater	8260C/8270D_SIM
TT101D2-GW-031616	Groundwater	8260C/8270D_SIM
TT101D-GW-031616	Groundwater	8260C/8270D_SIM

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* (United States Environmental Protection Agency [U.S. EPA] 2006), *SW-846 Method 8270D, Semivolatile Organic Compounds by Gas Chromatograph/Mass Spectrometry* (U.S. EPA 2007), *U.S. Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (U.S. EPA, June 2008), and *Department of Defense Quality Systems Manual 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)/sample integrity
- ✓ Holding times and sample preservation
- ✓ Gas chromatography/Mass spectrometer performance checks
- ✗ Initial calibration (ICAL) /initial calibration verification (ICV)/continuing calibration verification (CCV)
- ✗ Laboratory blanks/trip blanks/field 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 (✗) 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

ICAL, ICV and CCV non-conformances are summarized in Attachment A in Tables A-1, A-2, and A-3.

Laboratory Blanks/Equipment Blanks/ Field Blanks/Trip Blanks

Laboratory blanks, equipment 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:

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

For common lab contaminants (methylene chloride, acetone, 2-butanone):			
Blank type	**Blank result**	**Sample result**	**Action for samples**
	> 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**			

For all other compounds:			
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

Lab blank non-conformances are summarized in Attachment A in Table's A-4.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

MS/MSDs are generated to provide information about the effect of each sample matrix on the sample preparation and the measurement methodology. MS/MSD percent recoveries (%Rs) assess the effect of the sample matrix on the accuracy of the analytical results and %Rs above the laboratory control limit could indicate a potential high result bias while %Rs below QC limits could indicate a potential low result bias. The relative percent differences (RPDs) between the MS and MSD results are evaluated to assess sample precision. The MS/MSD %Rs and RPDs were reviewed for conformance with the QC acceptance criteria. Data qualification to the analytes associated with the specific MS/MSD non-conformances were as follows:

MS/MSD Non-conformances Chart:

Criteria	Action	
	Detected Compounds	Non-detected Compounds
%R>Upper Limit	J	No qualification
20% ≤ %R < Lower Limit	J	UJ
%R <20%	J	Rejected

Notes:

%R	=	Percent recovery
RPD	=	Relative percent difference
J	=	Estimated
UJ	=	Undetected and estimated

MS/MSD non-conformances are summarized in Attachment A in Table A-5 and A-6.

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 B and Attachment C. Attachment D provides final results after data review. Attachment E provides Katahdin Analytical Corrective Actions Report.

ATTACHMENTS

Attachment A: Non-Conformance Summary Tables
Attachment B: Qualifier Codes and Explanations
Attachment C: Reason Codes and Explanations
Attachment D: Final Results after Data Review
Attachment E: Katahdin Analytical Corrective Action Report

Attachment A

Non-Conformance Summary Table

Table A-1 Initial Calibration Non-Conformance							
Method	Analyte	Instrument ID/ Date	%RSD	Limit	Associated Samples	Lab ID	Qualifier
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	TRIP BLANK 031616	SJ1829-1	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE120D3-GW-031616	SJ1829-5	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	TT101D-GW-031616	SJ1829-6	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	TT101D1-GW-031616	SJ1829-7	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE120D1-GW-031616	SJ1829-2DL	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE120D1-GW-031616	SJ1829-2DL2	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE120D2-GW-031616	SJ1829-4	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE120D2-GW-031616	SJ1829-4DL	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	TT101D2-GW-031616	SJ1829-8	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	TT101D2-GW-031616	SJ1829-8DL	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	DUPLICATE-GW-031616	SJ1829-10	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	DUPLICATE-GW-031616	SJ1829-10DL	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ
8260C	Bromomethane	GCMS-C 03/14/2016	34.39423	<15%	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	TRIP BLANK 031616	SJ1829-1	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE120D3-GW-031616	SJ1829-5	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	TT101D-GW-031616	SJ1829-6	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	TT101D1-GW-031616	SJ1829-7	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE120D1-GW-031616	SJ1829-2DL	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE120D1-GW-031616	SJ1829-2DL2	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE120D2-GW-031616	SJ1829-4	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE120D2-GW-031616	SJ1829-4DL	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	TT101D2-GW-031616	SJ1829-8	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	TT101D2-GW-031616	SJ1829-8DL	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	DUPLICATE-GW-031616	SJ1829-10	Detects: J Non-detects: UJ

Table A-1 Initial Calibration Non-Conformance							
Method	Analyte	Instrument ID/ Date	%RSD	Limit	Associated Samples	Lab ID	Qualifier
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	DUPLICATE-GW-031616	SJ1829-10DL	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ
8260C	1,4-Dichlorobenzene	GCMS-C 03/14/2016	15.14931	<15%	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	TRIP BLANK 031616	SJ1829-1	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE120D3-GW-031616	SJ1829-5	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	TT101D-GW-031616	SJ1829-6	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	TT101D1-GW-031616	SJ1829-7	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE120D1-GW-031616	SJ1829-2DL	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE120D1-GW-031616	SJ1829-2DL2	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE120D2-GW-031616	SJ1829-4	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE120D2-GW-031616	SJ1829-4DL	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	TT101D2-GW-031616	SJ1829-8	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	TT101D2-GW-031616	SJ1829-8DL	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	DUPLICATE-GW-031616	SJ1829-10	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	DUPLICATE-GW-031616	SJ1829-10DL	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ
8260C	Chloroethane	GCMS-C 03/14/2016	19.43471	<15%	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ

Notes:

%RSD = Relative standard deviation
UJ = Non-detect estimated value
J = Estimated value

Table A-2
Initial Calibration Verification Non-Conformance

Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifier
8260C	Carbon Disulfide	C7727A	147.5	80-120	TRIP BLANK 031616	SJ1829-1	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE120D3-GW-031616	SJ1829-5	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	TT101D-GW-031616	SJ1829-6	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	TT101D1-GW-031616	SJ1829-7	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE120D1-GW-031616	SJ1829-2DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE120D1-GW-031616	SJ1829-2DL2	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE120D2-GW-031616	SJ1829-4	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE120D2-GW-031616	SJ1829-4DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	TT101D2-GW-031616	SJ1829-8	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	TT101D2-GW-031616	SJ1829-8DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	DUPLICATE-GW-031616	SJ1829-10	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	DUPLICATE-GW-031616	SJ1829-10DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	C7727A	147.5	80-120	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	TRIP BLANK-031416	SJ1789-1	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE108D1-GW-031416	SJ1789-2	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE108D2-GW-031416	SJ1789-3	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE103D1-GW-031416	SJ1789-4	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE103D2-GW-031416	SJ1789-5	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE103D3-GW-031416	SJ1789-6	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE122D1-GW-031516	SJ1789-10	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE122D2-GW-031516	SJ1789-11	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE108D2-GW-031416	SJ1789-3DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE103D1-GW-031416	SJ1789-4DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE103D2-GW-031416	SJ1789-5DL	Detects: J Non-detects: UJ

Table A-2 Initial Calibration Verification Non-Conformance							
Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifier
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE103D3-GW-031416	SJ1789-6DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE104D1-GW-031516	SJ1789-7RA	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE104D2-GW-031516	SJ1789-8RA	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE104D3-GW-031516	SJ1789-9RA	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE122D1-GW-031516	SJ1789-10DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE122D2-GW-031516	SJ1789-11DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	T6559A	135.88	80-120	RE122D3-GW-031516	SJ1789-12RA	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	TRIP BLANK-031416	SJ1789-1	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE108D1-GW-031416	SJ1789-2	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE108D2-GW-031416	SJ1789-3	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE103D1-GW-031416	SJ1789-4	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE103D2-GW-031416	SJ1789-5	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE103D3-GW-031416	SJ1789-6	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE122D1-GW-031516	SJ1789-10	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE122D2-GW-031516	SJ1789-11	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE108D2-GW-031416	SJ1789-3DL	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE103D1-GW-031416	SJ1789-4DL	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE103D2-GW-031416	SJ1789-5DL	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE103D3-GW-031416	SJ1789-6DL	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE104D1-GW-031516	SJ1789-7RA	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE104D2-GW-031516	SJ1789-8RA	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE104D3-GW-031516	SJ1789-9RA	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE122D1-GW-031516	SJ1789-10DL	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE122D2-GW-031516	SJ1789-11DL	Detects: J Non-detects: UJ
8260C	Acetone	T6559A	139.76	80-120	RE122D3-GW-031516	SJ1789-12RA	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	TRIP BLANK-031416	SJ1789-1	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE108D1-GW-031416	SJ1789-2	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE108D2-GW-031416	SJ1789-3	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE103D1-GW-031416	SJ1789-4	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE103D2-GW-031416	SJ1789-5	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE103D3-GW-031416	SJ1789-6	Detects: J Non-detects: UJ

Table A-2
Initial Calibration Verification Non-Conformance

Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifier
8260C	2-Butanone	T6559A	131.52	80-120	RE122D1-GW-031516	SJ1789-10	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE122D2-GW-031516	SJ1789-11	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE108D2-GW-031416	SJ1789-3DL	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE103D1-GW-031416	SJ1789-4DL	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE103D2-GW-031416	SJ1789-5DL	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE103D3-GW-031416	SJ1789-6DL	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE104D1-GW-031516	SJ1789-7RA	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE104D2-GW-031516	SJ1789-8RA	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE104D3-GW-031516	SJ1789-9RA	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE122D1-GW-031516	SJ1789-10DL	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE122D2-GW-031516	SJ1789-11DL	Detects: J Non-detects: UJ
8260C	2-Butanone	T6559A	131.52	80-120	RE122D3-GW-031516	SJ1789-12RA	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	TRIP BLANK-031416	SJ1789-1	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE108D1-GW-031416	SJ1789-2	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE108D2-GW-031416	SJ1789-3	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE103D1-GW-031416	SJ1789-4	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE103D2-GW-031416	SJ1789-5	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE103D3-GW-031416	SJ1789-6	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE122D1-GW-031516	SJ1789-10	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE122D2-GW-031516	SJ1789-11	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE108D2-GW-031416	SJ1789-3DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE103D1-GW-031416	SJ1789-4DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE103D2-GW-031416	SJ1789-5DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE103D3-GW-031416	SJ1789-6DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE104D1-GW-031516	SJ1789-7RA	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE104D2-GW-031516	SJ1789-8RA	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE104D3-GW-031516	SJ1789-9RA	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE122D1-GW-031516	SJ1789-10DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE122D2-GW-031516	SJ1789-11DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	T6559A	128.43	80-120	RE122D3-GW-031516	SJ1789-12RA	Detects: J Non-detects: UJ

Notes:

ICV ID	=	Initial calibration verification identification	UJ	=	Non-detect estimated value
ID	=	Identification	J	=	Estimated value
%R	=	Percent recovery			

Table A-3 Continuing Calibration Verification Non-Conformance						
Lab ID/ Lab File ID	Analyte	%D	%D Limit	Associated Samples	Lab ID	Qualifier
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	TRIP BLANK 031616	SJ1829-1	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	RE120D3-GW-031616	SJ1829-5	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	TT101D-GW-031616	SJ1829-6	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	TT101D1-GW-031616	SJ1829-7	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	RE120D1-GW-031616	SJ1829-2DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	RE120D1-GW-031616	SJ1829-2DL2	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	RE120D2-GW-031616	SJ1829-4	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	RE120D2-GW-031616	SJ1829-4DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	TT101D2-GW-031616	SJ1829-8	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	TT101D2-GW-031616	SJ1829-8DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	DUPLICATE-GW-031616	SJ1829-10	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Bromomethane	-22.16014	+/- 20	DUPLICATE-GW-031616	SJ1829-10DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	TRIP BLANK 031616	SJ1829-1	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	RE120D3-GW-031616	SJ1829-5	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	TT101D-GW-031616	SJ1829-6	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	TT101D1-GW-031616	SJ1829-7	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	RE120D1-GW-031616	SJ1829-2DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	RE120D1-GW-031616	SJ1829-2DL2	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	RE120D2-GW-031616	SJ1829-4	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	RE120D2-GW-031616	SJ1829-4DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	TT101D2-GW-031616	SJ1829-8	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	TT101D2-GW-031616	SJ1829-8DL	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	DUPLICATE-GW-031616	SJ1829-10	Detects: J Non-detects: UJ
WG180423-4 C7285.D	Freon-113	-20.5556	+/- 20	DUPLICATE-GW-031616	SJ1829-10DL	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ

Table A-3 Continuing Calibration Verification Non-Conformance						
Lab ID/ Lab File ID	Analyte	%D	%D Limit	Associated Samples	Lab ID	Qualifier
WG180474-4 C7305.D	Bromomethane	-25.41734	+/- 20	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Freon-113	-26.75279	+/- 20	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	TRIP BLANK 031716	SJ1863-1	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	RE123D1-GW-031716	SJ1863-2	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	RE123D2-GW-031716	SJ1863-3	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	RE123D3-GW-031716	SJ1863-4	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	RE105D1-GW-031716	SJ1863-5	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	RE105D2-GW-031716	SJ1863-6	Detects: J Non-detects: UJ
WG180474-4 C7305.D	Methyl Acetate	-22.27292	+/- 20	RE105D2-GW-031716	SJ1863-6DL	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	TRIP BLANK-031416	SJ1789-1	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE108D1-GW-031416	SJ1789-2	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE108D2-GW-031416	SJ1789-3	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE103D1-GW-031416	SJ1789-4	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE103D2-GW-031416	SJ1789-5	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE103D3-GW-031416	SJ1789-6	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE122D1-GW-031516	SJ1789-10	Detects: J Non-detects: UJ
WG180372-4 T6612.D	Tetrachloroethene	-21.07686	+/- 20	RE122D2-GW-031516	SJ1789-11	Detects: J Non-detects: UJ

Notes:

ID	=	Identification
%D	=	Percent difference
UJ	=	Non-detect estimated value
J	=	Detected estimated value

Table A-4 Lab Blank Non-Conformance					
Blank ID / SDG	Analyte	Blank Result (ug/L)	LOQ	Associated Sample	Qualifier
WG180837	1,4-Dioxane	0.31	0.25	RE104D2-GW-031516	U
WG180460	1,4-Dioxane	0.31	0.25	RE104D3-GW-031516	U
WG180642	1,4-Dioxane	0.27	0.25	RE120D3-GW-031616	U
WG180642	1,4-Dioxane	0.30	0.25	RE122D3-GW-031516	U

Notes:

ug/L = Micrograms per liter

U = Non-detect value

Table A-5 Matrix Spike/Matrix Spike Duplicate Non-Conformance							
Spiked Sample	Analyte	Sample Result (ug/L)	Spike Added	MS %R	MSD %R	%R Limits	Qualifier
TT101D2-GW-031616	1,4-Dioxane	2.3	2.22	0.45	46.3	10-90	J

Notes:

MS	=	Matrix spike
MSD	=	Matrix spike duplicate
%R	=	Percent recovery
Bold	=	Percent recovery not within control limit
J	=	Detected analyte in associated sample qualified estimated “J” because %R is lower than the control limit.

Table A-6 Matrix Spike/Matrix Spike Duplicate Relative Percent Difference Non-Conformance				
Sample ID	Analyte	RPD	RPD Limit	Qualifier
TT101D2-GW-031616	1,4-Dioxane	36	30	J

Notes:

RPD = Relative percent difference
Bold = Not within control limit
J = Estimated value

Attachment B

Qualifier Codes and Explanations

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

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 D

Final Results after Data Review

March 2016 1st Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-1		
		Sample ID		TRIP BLANK-031416		
		Sample Date		3/14/2016		
		Sample Type		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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
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	UJ	c
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment B)
RC = Reason codes (See Attachment C)

March 2016 1st Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-10		
		Sample ID		RE122D1-GW-031516		
		Sample Date		3/15/2016		
		Sample Type		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	4.1		
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	0.8	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	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.8	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.55	J	
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	0.52	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.8		
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	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	1.1	J	c
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	610		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	6		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment B)
RC = Reason codes (See Attachment C)

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

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-11		
		Sample ID		RE122D2-GW-031516		
		Sample Date		3/15/2016		
		Sample Type		Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.62	J	
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	20		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	3.1		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.2		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	8.4		
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	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	2.8		
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	2.4		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	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	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	3.1	J	c
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	5300		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	12		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment B)
RC = Reason codes (See Attachment C)

March 2016 1st Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-12RA		
		Sample ID		RE122D3-GW-031516		
		Sample Date		3/15/2016		
		Sample Type		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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
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	2.1		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	bl

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment B)
RC = Reason codes (See Attachment C)

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

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-2		
		Sample ID		RE108D1-GW-031416		
		Sample Date		3/14/2016		
		Sample Type		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	0.97	J	
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	0.37	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
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	0.37	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	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	1.8	J	c
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	120		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	5		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-3		
		Sample ID		RE108D2-GW-031416		
		Sample Date		3/14/2016		
		Sample Type		Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1		
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	6.4		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.9		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	5.1		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	7.4		
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	8.3		
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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	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	3.5		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	8.3		
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	1.6	J	c
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	3800		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	8.3		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-4		
		Sample ID		RE103D1-GW-031416		
		Sample Date		3/14/2016		
		Sample Type		Groundwater		
Method	Analyte	CAS No	Units	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.48	J	
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	15		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.75	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.2		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	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	4.2		
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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.61	J	
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	4.2		
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	0.29	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	6.2	J	c
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	1200		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	18		

Notes:

UG_L = Micrograms per liter
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-5		
		Sample ID		RE103D2-GW-031416		
		Sample Date		3/14/2016		
		Sample Type		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	4.3		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.55	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.78	J	
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	1.8	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.38	J	
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	1.8		
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	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	0.98	J	c
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	860		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.4		

Notes:

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

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-6		
		Sample ID		RE103D3-GW-031416		
		Sample Date		3/14/2016		
		Sample Type		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	2.3		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.33	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.59	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	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.92	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.3	J	
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	0.76	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.92	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	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	UJ	c
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	520		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1.1		

Notes:

UG_L = Micrograms per liter
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March 2016 1st Quarter
Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-7RA		
		Sample ID		RE104D1-GW-031516		
		Sample Date		3/15/2016		
		Sample Type		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	0.63	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	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
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		
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	1.8		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	6.8		

Notes:

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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-8RA		
		Sample ID		RE104D2-GW-031516		
		Sample Date		3/15/2016		
		Sample Type		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	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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
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	0.52	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	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	8.4		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	bl

Notes:

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March 2016 1st Quarter
Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1789-9RA		
		Sample ID		RE104D3-GW-031516		
		Sample Date		3/15/2016		
		Sample Type		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	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
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	UJ	c
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	bl

Notes:

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March 2016 1st Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1829-1		
		Sample ID		TRIP BLANK 031616		
		Sample Date		3/16/2016		
		Sample Type		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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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RC = Reason codes (See Attachment C)

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

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1829-10		
		Sample ID		DUPLICATE-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		Field Duplicate of TT101D2		
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	16	J	c
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.72	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	3.6		
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		
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	UJ	c
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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.1		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
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		
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	590		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.4		

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		BETHPAGE-5		
		Lab ID		SJ1829-2DL		
		Sample ID		RE120D1-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		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	29	J	c
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.3	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	2.4		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	17		
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	3.6	J	
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	UJ	c
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	UJ	c
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	UJ	c
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	3.6		
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	2.3		
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	1200		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	19		

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		BETHPAGE-5		
		Lab ID		SJ1829-4		
		Sample ID		RE120D2-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		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	16	J	c
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	4.8		
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	UJ	c
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	UJ	c
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	UJ	c
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	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	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	2		
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	780		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	9.5		

Notes:

UG_L = Micrograms per liter
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March 2016 1st Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1829-5		
		Sample ID		RE120D3-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		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	1.3	J	c
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	UJ	c
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	UJ	c
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	UJ	c
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	55		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	bl

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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RC = Reason codes (See Attachment C)

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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1829-6		
		Sample ID		TT101D-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		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	14	J	c
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.67	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	2.8		
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	2.7		
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	UJ	c
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	UJ	c
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	UJ	c
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	2.7		
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	1.9	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	67		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	6.4		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1829-7		
		Sample ID		TT101D1-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		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	14	J	c
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	4.7		
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	1.8	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	UJ	c
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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.6		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.85	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.8		
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	1.7	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	180		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	9.9		

Notes:

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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1829-8		
		Sample ID		TT101D2-GW-031616		
		Sample Date		3/16/2016		
		Sample Type		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	16	J	c
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.49	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	3.8		
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	1.9	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	UJ	c
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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.1		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
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	1.9		
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	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	0.84	J	
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	590		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.3	J	m,md

Notes:

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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1863-1		
		Sample ID		TRIP BLANK 031716		
		Sample Date		3/17/2016		
		Sample Type		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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

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		BETHPAGE-5		
		Lab ID		SJ1863-2		
		Sample ID		RE123D1-GW-031716		
		Sample Date		3/17/2016		
		Sample Type		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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	6.6		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	5.3		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1863-3		
		Sample ID		RE123D2-GW-031716		
		Sample Date		3/17/2016		
		Sample Type		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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	0.81	J	
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	1.9		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.63		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1863-4		
		Sample ID		RE123D3-GW-031716		
		Sample Date		3/17/2016		
		Sample Type		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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.21	J	

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1863-5		
		Sample ID		RE105D1-GW-031716		
		Sample Date		3/17/2016		
		Sample Type		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	5.6	J	c
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	0.8	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	
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	UJ	c
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	UJ	c
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	UJ	c
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	UJ	c
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	0.41	J	
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	130		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	6.7		

Notes:

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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-5		
		Lab ID		SJ1863-6		
		Sample ID		RE105D2-GW-031716		
		Sample Date		3/17/2016		
		Sample Type		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	18	J	c
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.2		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.4		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	6.4		
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	3.7		
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	UJ	c
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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	3		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	1.8		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.7		
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	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	UJ	c
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		
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	1800		
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	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	7.5		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment B)
RC = Reason codes (See Attachment C)

Attachment E

Katahdin Analytical Corrective Action Report

KATAHDIN ANALYTICAL SERVICES, LLC. – CORRECTIVE ACTION REPORT

Problem Identification (Person initiating CAR) Name: Leslie Dimond Date: 03/29/2016

X Discovered by Laboratory Discovered by Client (Complaint) Other

Details of Problem: On 3/16/16 a batch of samples was extracted by CLLE for 1,4-dioxane. The samples were analyzed on 3/17/16 and the method blank had a positive detect of the target analyte at 0.31 ug/L. The LOQ for this compound is 0.25 ug/L. A second batch of 1,4-dioxane samples had already been started by this time. The method blank from this second batch had a positive detect of 0.27 ug/L. All samples from both batches had detects for 1,4-dioxane.

At this point the laboratory began to investigate the source of the 1,4-dioxane contamination.

Associated Non-Conformances: List logbook and page numbers

QAQC788, Organics Non-Conformance Report Logbook – Semivolatile Analysis, page 3

Root Cause Investigation & Determination (To be completed by Department Manager, Operations Manager and/or QA Officer)

Review the 6 "M's" below and investigate to determine whether one of them, or more than one, could be the cause of the problem.

Possible Causes	Details
Machine (Instrument)	The GC/MS instrument used for 1,4-Dioxane analysis was performing well. The tune and opening CCV standards passed method criteria.
Method (or Process)	1,4- Dioxane samples are extracted using method SW3520, continuous liquid liquid extraction with methylene chloride as the extraction solvent.
Materials	On 3/15/16 both the methylene chloride (MeCl2) cyclotainer and the nitrogen tank that pumps it had been changed. On 3/21, after the second contaminated blank, the extraction laboratory needed to set up the third batch of samples due to expiring hold times of the samples. Before they did this they scrupulously cleaned all the glassware. They also tested all working surrogate standards and stock surrogate standards prior to use. After the extraction, they used new concentrator tubes to concentrate the samples. On 3/22, the extraction lab needed to set up the forth batch of samples because of expiring hold times. They tested a water blank but did not adjust the pH or add surrogates to rule out the1:1 NaOH and also reconfirm that the standards were not the source of contamination. This blank had a positive detect for 1,4-dioxane. On 3/23, the lab tested MeCl2 from the cyclotainer which had a positive detect of 0.22 ug/L. The laboratory had a second cyclotainer of MeCl2 but it was the same lot as the first. The second tank was hooked up and tested. It also had a positive detect for 1,4-dioxane. The lab also tested bottled MeCl2, (different lot from the cyclotainers) which it had on hand in case the cyclotainer runs out before a new one arrives. This had no detection of 1,4-Dioxane. The lab still could not discern if the contamination was coming from the MeCl2 in the cyclotainer or the nitrogen used to pump it. To rule the nitrogen out, they bubbled nitrogen through 10 mL of the clean MeCl2 for 1 hour. This was concentrated to 1 mL and analyzed. There was no detect for 1,4-dioxane. The laboratory feels confident that the source of contamination was the MeCl2 from the cyclotainer. On 3/24, a fifth batch of samples was set up. These were extracted using the bottled MeCl2 and the method blank had no detection for 1,4-dioxane.
Maintenance (Is something not working correctly?)	Not Applicable
Man (training, human error)	The extractions laboratory used good judgment in trying to determine the source of contamination
Mother Nature (accidents, power issues, beyond our control)	Not Applicable

KATAHDIN ANALYTICAL SERVICES, LLC. – CORRECTIVE ACTION REPORT

Corrective Action Plan: Name: Leslie Dimond Date: 03/29/2016

Details of Corrective Action Plan – All affected samples will be reanalyzed if there is volume available. In most cases this is not the case.

In the past Katahdin has done solvent lot checks / blank analysis checks for new lots of solvents used in semivolatile analysis by 8270 scan mode only. Effective immediately all new solvent lots which are used in semivolatile analysis must be tested prior to use using SIM mode.

All extraction and GC/MS analysts have been informed of this procedure.

Katahdin is also working with our vendor to determine the root cause of the contaminated solvent and to put into place an effective redundant check.

Review & Approval of Corrective Action Plan

Supervisor Approval:	[illegible]	Date: 3-30-16
Operations Manager Approval:	Deborah J. Nadeau	Date: 3·30·16
Quality Assurance Officer:	Leslie Dimond	Date: 03.30.16
Analyst (or refer to signatory list):	—	Date: —

Additional Information:

KATAHDIN ANALYTICAL SERVICES, LLC. – CORRECTIVE ACTION REPORT

Monitoring of Corrective Action (To be completed by QA Officer and/or Operations Manager): List details of follow-up		
Corrective Action Effective	Return to Control – Yes No	Further Monitoring Needed/Additional Corrective Action
QA Approval:		Date:

Appendix C

Analytical Data Validation – ARCADIS

Northrop Grumman Corporation-
Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC15103 and JC15191

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #25295R
March 22, 2016
Review Level: Tier II
Project #NY001496.1414.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # JC15103 and JC15191 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC15103	FB022916MO1	JC15103-1	Water	02/29/2016		X	X			
	TB022916MO1	JC15103-2	Water	02/29/2016		X				
	BPOW 5-3	JC15103-3	Water	02/29/2016		X	X			
JC15191	FB030116MO1	JC15191-1	Water	03/1/2016		X	X			
	TB030116MO1	JC15191-2	Water	03/1/2016		X				
	BPOW 5-1	JC15191-3	Water	03/1/2016		X	X			
	BPOW5-2	JC15191-4	Water	03/1/2016		X	X			

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Collection Technique (grab, composite, etc.)		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form completed		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA), Methods 524.2 and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
EPA 524.2	Water	14 days from collection to analysis	Cool to < 6°C; preserved to a pH of less than 2 s.u..

s.u. Standard units

All samples were analyzed within the specified holding time and temperature criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDG JC15103 or JC15191.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location associated with SDG JC15103 or JC15191.

5. Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not collected on a sample location associated with either of the SDGs.

7. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A laboratory duplicate sample was not performed on a sample location associated with SDG JC15103 or JC15191.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were not identified in SDG JC15103.

Tentatively identified compounds (TICs) were identified in JC15191, sample location FB030116MO1. The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. TICs are qualified as estimated (JN).

Overall system performance was noted by the laboratory in the case narrative as acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 524.2	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times & Temperature		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X	X		
C. Trip blanks		X		X	
Surrogate (%R)		X		X	
Laboratory Control Sample (%R)		X		X	
Laboratory Control Sample Duplicate(LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)					X
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Dilution Factor		X		X	
Moisture Content					X

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D SIM	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location associated with SDG JC15103 or JC15191.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not collected on a sample location associated with either of the SDGs.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: March 22, 2016

PEER REVIEW BY: Dennis Capria

DATE: March 24, 2016

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC15103

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail
Phone #: 631-291-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI Mike Ordona Phone #: 516 287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	FB022916MO1		2/29/16	1000	MO/PP	FB	5	3				2				3	2	
2	TB022916MO1		2/29/16	1000	—	TB	2	2								2		E34
3	BPOW 5-3		2/29/16	1410	MO	GW	5	3				2				3	2	V594

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

INITIAL ASESSMENT NLOB
LABEL VERIFICATION

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)

For VOCs V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	2/29/16 1845	1 Robert chambers Date Time: 3-1-16 10:10	2 Robert chambers	3-1-16 13:29	2 [signature]
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☒ Cooler Temp. I.G 2.5°C

5.1
5

JC15103: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	FB022916MO1		
Lab Sample ID:	JC15103-1	**Date Sampled:**	02/29/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102375.D	1	03/02/16	BK	n/a	n/a	V1B4858
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.6	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022916MO1		
Lab Sample ID:	JC15103-1	**Date Sampled:**	02/29/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	90%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022916MO1		
Lab Sample ID:	JC15103-2	**Date Sampled:**	02/29/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102376.D	1	03/02/16	BK	n/a	n/a	V1B4858
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022916MO1		
Lab Sample ID:	JC15103-2	**Date Sampled:**	02/29/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	89%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-3		
Lab Sample ID:	JC15103-3	**Date Sampled:**	02/29/16
Matrix:	AQ - Ground Water	**Date Received:**	03/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102377.D	1	03/02/16	BK	n/a	n/a	V1B4858
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-3		
Lab Sample ID:	JC15103-3	**Date Sampled:**	02/29/16
Matrix:	AQ - Ground Water	**Date Received:**	03/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	91%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022916MO1		
Lab Sample ID:	JC15103-1	**Date Sampled:**	02/29/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/01/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M64077.D	1	03/15/16	LK	03/03/16	OP91733A	E4M2841
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		24-125%
321-60-8	2-Fluorobiphenyl	52%		19-127%
1718-51-0	Terphenyl-d14	71%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-3		
Lab Sample ID:	JC15103-3	**Date Sampled:**	02/29/16
Matrix:	AQ - Ground Water	**Date Received:**	03/01/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M64078.D	1	03/15/16	LK	03/03/16	OP91733A	E4M2841
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.055	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		24-125%
321-60-8	2-Fluorobiphenyl	54%		19-127%
1718-51-0	Terphenyl-d14	69%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ACCUTEST LABORATORIES

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FB
LTB

CHAIN OF CUSTODY

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2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC15191

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI Mike Orabona Phone #: 516-287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)
Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	FB030116M01		3/1/16	1145	MO	FB	5	3				2				3	2	E24
2	TB030116M01		3/1/16	1100	—	TB	2	2								2		V608
3	BPOW 5-1		3/1/16	1515	PP	GW	5	3				2				3	2	
4	BPOW 5-2		3/1/16	1545	MO	GW	5	3				2				3	2	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT AM 1A
LABEL VERIFICATION AMO

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)

For VOCs - V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	3/1/16 1930	1 Robert Chambers Date 3-2-16 Time 10:00	2 Robert Chambers	3-2-16 15:41	2 [signature]
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☒ Cooler Temp. 3.5°C I.G

JC15191: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	FB030116MO1		
Lab Sample ID:	JC15191-1	**Date Sampled:**	03/01/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102420.D	1	03/04/16	BK	n/a	n/a	V1B4860
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.1	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB030116MO1		
Lab Sample ID:	JC15191-1	**Date Sampled:**	03/01/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	84%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	cycloalkane	8.19	4.3	ug/l	J N
109-99-9	Furan, tetrahydro-	10.35	1.1	ug/l	JN
	Total TIC, Volatile		5.4	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB0301163MO1		
Lab Sample ID:	JC15191-2	**Date Sampled:**	03/01/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102421.D	1	03/04/16	BK	n/a	n/a	V1B4860
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB0301163MO1		
Lab Sample ID:	JC15191-2	**Date Sampled:**	03/01/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	86%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC15191-3	**Date Sampled:**	03/01/16
Matrix:	AQ - Ground Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102416.D	1	03/04/16	BK	n/a	n/a	V1B4860
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC15191-3	**Date Sampled:**	03/01/16
Matrix:	AQ - Ground Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	85%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC15191-4	**Date Sampled:**	03/01/16
Matrix:	AQ - Ground Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102417.D	1	03/04/16	BK	n/a	n/a	V1B4860
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC15191-4	**Date Sampled:**	03/01/16
Matrix:	AQ - Ground Water	**Date Received:**	03/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	85%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB030116MO1		
Lab Sample ID:	JC15191-1	**Date Sampled:**	03/01/16
Matrix:	AQ - Field Blank Water	**Date Received:**	03/02/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63946.D	1	03/08/16	LK	03/07/16	OP91803A	E4M2835
Run #2							

	Initial Volume	Final Volume
Run #1	875 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.061	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		24-125%
321-60-8	2-Fluorobiphenyl	72%		19-127%
1718-51-0	Terphenyl-d14	65%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC15191-3	**Date Sampled:**	03/01/16
Matrix:	AQ - Ground Water	**Date Received:**	03/02/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63947.D	1	03/08/16	LK	03/07/16	OP91803A	E4M2835
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.056	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	97%		24-125%
321-60-8	2-Fluorobiphenyl	91%		19-127%
1718-51-0	Terphenyl-d14	67%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC15191-4	**Date Sampled:**	03/01/16
Matrix:	AQ - Ground Water	**Date Received:**	03/02/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63948.D	1	03/08/16	LK	03/07/16	OP91803A	E4M2835
Run #2							

	Initial Volume	Final Volume
Run #1	925 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		24-125%
321-60-8	2-Fluorobiphenyl	73%		19-127%
1718-51-0	Terphenyl-d14	66%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Northrop Grumman Corporation-
Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC14422, JC14563 and JC14981

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #25294R
March 17, 2016
Review Level: Tier II
Project #NY001496.1414.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC14422, JC14563 and JC14981 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC14422	TB021716PP1	JC14422-1	Water	02/17/2016		X				
	FB021716PP1	JC14422-2	Water	02/17/2016		X	X			
	BPOW 5-6	JC14422-3	Water	02/17/2016		X	X			
	BPOW 5-5	JC14422-4	Water	02/17/2016		X	X			
JC14563	TB021816PP1	JC14563-1	Water	02/18/2016		X				
	FB021816PP1	JC14563-2	Water	02/18/2016		X	X			
	BPOW 5-7	JC14563-3	Water	02/18/2016		X	X			
JC14981	FB022616MO1	JC14981-1	Water	02/26/2016		X	X			
	TB022616MO1	JC14981-2	Water	02/26/2016		X				
	BPOW5-4	JC14981-3	Water	02/26/2016		X	X			

Note:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample BPOW 5-7 for VOC and SVOC analysis.

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Collection Technique (grab, composite, etc.)		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form completed		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA), Methods 524.2 and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
EPA 524.2	Water	14 days from collection to analysis	Cool to < 6°C; preserved to a pH of less than 2 s.u..

s.u. Standard units

All samples were analyzed within the specified holding time and temperature criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDGs JC14422, JC14563 or JC14981.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location associated with SDGs JC14422 and JC14981.

The MS/MSD exhibited acceptable recoveries in SDG JC14563.

5. Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not collected on a sample location associated with any of the SDGs.

7. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A laboratory duplicate sample was not performed on a sample location associated with SDGs JC14422, JC14563 OR JC14981.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were identified in SDG JC14422, sample location FB021716PP1; in SDG JC14563, sample location FB021816PP1; and, in SDG JC14981, sample location FB02616MO1. The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. TICs are qualified as estimated (JN).

Overall system performance was noted by the laboratory in the case narrative as acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 524.2	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times & Temperature		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X	X		
C. Trip blanks		X		X	
Surrogate (%R)		X		X	
Laboratory Control Sample (%R)		X		X	
Laboratory Control Sample Duplicate(LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)					X
Dilution Factor		X		X	
Moisture Content					X

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D SIM	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location associated with SDGs JC14422 and JC14981.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC14563.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not collected on a sample location associated with any of the SDGs.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: March 17, 2016

PEER REVIEW BY: Todd Church

DATE: March 20, 2016

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC14422

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Pezorski Phone #: 516 287-6217

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)
Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	TB021716PP1		2/17/16	1300	—	TB	2	2								✓		~~E10~~
2	FB021716PP1		2/17/16	1300	PP	FB	5	3				2				✓	✓	E2
3	BPOW 5-6		2/17/16	1630	PP	GW	5	3				2				✓	✓	V508
4	BPOW 5-5		2/17/16	1635	MD	GW	5	3				2				✓	✓	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT NLIA
LABEL VERIFICATION NV

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " " for MS/MSD QA/QC Sample.
For VOCS - V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	2/18/16 0800	1 [signature] Date 2/18/16 Time 10:05	2 [signature]	2/18/16 12:2	2 [signature]
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☑ Cooler Temp. 3.8C°, 2.1C°

2 COOLERS

JC14422: Chain of Custody
Page 1 of 3

Report of Analysis

Client Sample ID:	TB021716PP1		
Lab Sample ID:	JC14422-1	**Date Sampled:**	02/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102263.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB021716PP1		
Lab Sample ID:	JC14422-1	**Date Sampled:**	02/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	90%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB021716PP1		
Lab Sample ID:	JC14422-2	**Date Sampled:**	02/17/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102264A.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.4	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB021716PP1		
Lab Sample ID:	JC14422-2	**Date Sampled:**	02/17/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	92%		78-114%
460-00-4	4-Bromofluorobenzene	96%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q	
	cycloalkane/alkene	8.18	.72	ug/l	J	N
	Total TIC, Volatile		.72	ug/l	J	N

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC14422-3	**Date Sampled:**	02/17/16
Matrix:	AQ - Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102265.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC14422-3	**Date Sampled:**	02/17/16
Matrix:	AQ - Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	89%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC14422-4	**Date Sampled:**	02/17/16
Matrix:	AQ - Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102266.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC14422-4	**Date Sampled:**	02/17/16
Matrix:	AQ - Water	**Date Received:**	02/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	90%		78-114%
460-00-4	4-Bromofluorobenzene	96%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB021716PP1		
Lab Sample ID:	JC14422-2	**Date Sampled:**	02/17/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/18/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15220.D	1	02/22/16	LK	02/19/16	OP91338A	E4P781
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		24-125%
321-60-8	2-Fluorobiphenyl	85%		19-127%
1718-51-0	Terphenyl-d14	80%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC14422-3	**Date Sampled:**	02/17/16
Matrix:	AQ - Water	**Date Received:**	02/18/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15221.D	1	02/22/16	LK	02/19/16	OP91338A	E4P781
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		24-125%
321-60-8	2-Fluorobiphenyl	82%		19-127%
1718-51-0	Terphenyl-d14	80%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC14422-4	**Date Sampled:**	02/17/16
Matrix:	AQ - Water	**Date Received:**	02/18/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15222.D	1	02/22/16	LK	02/19/16	OP91338A	E4P781
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.418	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		24-125%
321-60-8	2-Fluorobiphenyl	94%		19-127%
1718-51-0	Terphenyl-d14	81%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC14563

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Prezorski Phone #: 516 287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)
Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	TB021816PP1		2/18/16	1145	—	TB	2	2								✓		E82
2	FB021816PP1		2/18/16	1145	MO/PP	FB	5	3				2				✓	✓	V523
3	BPOW 5-7	*	2/18/16	1515	MO/PP	GW	15	9				6				9	6	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT ZAX
LABEL VERIFICATION D-6

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " BPOW 5-7 " for MS/MSD QA/QC Sample. Patient
For VOCS - V524SL4+40, VMS+F113
QC EXT 2/19/16
* Extra Amber samples for Lab required 1,4-Dioxane QA/QC

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Pat Prezorski	2/18/16 2100	1 Chris Laul Date 2/19/16 Time 10:30	2 Chris Laul	2/19/16 16:50	2 [signature]
3		3	4		4
5		5			

Custody Seal # [x] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [x] Cooler Temp. 1.4°, 1.8°, 1.1°, 1.3° CIP

JC14563: Chain of Custody
Page 1 of 3

Report of Analysis

Client Sample ID:	TB021816PP1		
Lab Sample ID:	JC14563-1	**Date Sampled:**	02/18/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102261.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB021816PP1		
Lab Sample ID:	JC14563-1	**Date Sampled:**	02/18/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	91%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB021816PP1		
Lab Sample ID:	JC14563-2	**Date Sampled:**	02/18/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102262.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	2.3	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB021816PP1		
Lab Sample ID:	JC14563-2	**Date Sampled:**	02/18/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	93%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	cycloalkane/alkene	8.19	3.7	ug/l	J N
	Total TIC, Volatile		3.7	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW5-7		
Lab Sample ID:	JC14563-3	**Date Sampled:**	02/18/16
Matrix:	AQ - Ground Water	**Date Received:**	02/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102257.D	1	02/23/16	BK	n/a	n/a	V1B4852
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	0.13	0.50	0.044	ug/l	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW5-7		
Lab Sample ID:	JC14563-3	**Date Sampled:**	02/18/16
Matrix:	AQ - Ground Water	**Date Received:**	02/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	92%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB021816PP1		
Lab Sample ID:	JC14563-2	**Date Sampled:**	02/18/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/19/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15275.D	1	02/24/16	AD	02/23/16	OP91451A	E4P784
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		24-125%
321-60-8	2-Fluorobiphenyl	66%		19-127%
1718-51-0	Terphenyl-d14	82%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW5-7		
Lab Sample ID:	JC14563-3	**Date Sampled:**	02/18/16
Matrix:	AQ - Ground Water	**Date Received:**	02/19/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15276.D	1	02/24/16	AD	02/23/16	OP91451A	E4P784
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		24-125%
321-60-8	2-Fluorobiphenyl	64%		19-127%
1718-51-0	Terphenyl-d14	76%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ACCUTEST LABORATORIES

GW WFB WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC14981

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Cabana 516-661-7000 Phone #:

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (If different from Report to)

Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	FB022616MO1		2/26/16	1020	MO	FB	5	3				2				3	2	
2	TB022616MO1		2/26/16	1000	—	TB	2	2								2		
3	BPOW 5-4		2/26/16	1310	MO	GW	5	3				2				3	2	

INITIAL ASESSMENT JB AMO
LABEL VERIFICATION AMO

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)

Please use " " for MS/MSD QA/QC Sample.

For VOCs - V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2/26/16	1 Chris Lau 2/26/16 13:35	2 Chris Lau	2/26/16 16:45	2
3		3	4		4
5		5			

Custody Seal # [ ] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [x]
Cooler Temp. 1.6° C IG

JC14981: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	FB022616MO1		
Lab Sample ID:	JC14981-1	**Date Sampled:**	02/26/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102349.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.0	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022616MO1		
Lab Sample ID:	JC14981-1	**Date Sampled:**	02/26/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	94%		78-114%
460-00-4	4-Bromofluorobenzene	96%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
287-92-3	Cyclopentane	8.20	6.4	ug/l	JN
	Total TIC, Volatile		6.4	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022616MO1		
Lab Sample ID:	JC14981-2	**Date Sampled:**	02/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102350.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022616MO1		
Lab Sample ID:	JC14981-2	**Date Sampled:**	02/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	92%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC14981-3	**Date Sampled:**	02/26/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102351.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC14981-3	**Date Sampled:**	02/26/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	94%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022616MO1		
Lab Sample ID:	JC14981-1	**Date Sampled:**	02/26/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/26/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63883.D	1	03/03/16	LK	03/01/16	OP91633A	E4M2832
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		24-125%
321-60-8	2-Fluorobiphenyl	63%		19-127%
1718-51-0	Terphenyl-d14	74%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC14981-3	**Date Sampled:**	02/26/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63884.D	1	03/03/16	LK	03/01/16	OP91633A	E4M2832
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.528	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		24-125%
321-60-8	2-Fluorobiphenyl	72%		19-127%
1718-51-0	Terphenyl-d14	76%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Northrop Grumman Corporation-
Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC14697, JC14842 and JC14976

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #25293R
March 17, 2016
Review Level: Tier II
Project #NY001496.1414.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC14697, JC14842 and JC14976 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC14697	TB022216PP1	JC14697-1	Water	02/22/2016		X				
	FB022216PP1	JC14697-2	Water	02/22/2016		X	X			
	BPOW6-1	JC14697-3	Water	02/22/2016		X	X			
	BPOW6-2	JC14697-4	Water	02/22/2016		X	X			
JC14842	FB022416PP1	JC14842-1	Water	02/24/2016		X	X			
	TB022416PP1	JC14842-2	Water	02/24/2016		X				
	BPOW 6-4	JC14842-3	Water	02/24/2016		X	X			
	BPOW 6-3	JC14842-4	Water	02/24/2016		X	X			
JC14976	FB022516PP1	JC14976-1	Water	02/25/2016		X	X			
	TB022516PP1	JC14976-2	Water	02/25/2016		X				
	BPOW 6-6	JC14976-3	Water	02/25/2016		X	X			
	BPOW 6-5	JC14976-4	Water	02/25/2016		X	X			
	REP022516PP1	JC14976-5	Water	02/25/2016	BPOW 6-5	X	X			

Notes:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample FB022416PP1 for SVOC analysis.
2. MS analysis was performed on sample BPOW 6-6 for VOC analysis.

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Collection Technique (grab, composite, etc.)		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form completed		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA), Methods 524.2 and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
EPA 524.2	Water	14 days from collection to analysis	Cool to < 6°C; preserved to a pH of less than 2 s.u..

s.u. Standard units

All samples were analyzed within the specified holding time and temperature criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDGs JC14697, JC14842 or JC14976.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS was not performed on a sample location associated with SDGs JC14697 and JC14842.

The MS exhibited acceptable recoveries in SDG JC14976.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not collected on a sample location associated with SDGs JC14697 and JC14842.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC14976:				
BPOW 6-5/ REP022516PP1	Carbon disulfide	1.0	0.97	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A laboratory duplicate sample was not performed on a sample location associated with SDGs JC14697 and JC14842.

All compounds associated with the laboratory duplicate analysis exhibited recoveries within the control limits in SDG JC14976.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were identified in SDG JC14697, sample location FB022216PP1; in SDG JC14842, sample location FB022416PP1; and, in SDG JC14976, sample location FB022516PP1. The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative

identification. TICs are qualified as estimated (JN).

Overall system performance was noted by the laboratory in the case narrative as acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: 524.2	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times & Temperature		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X	X		
C. Trip blanks		X		X	
Surrogate (%R)		X		X	
Laboratory Control Sample (%R)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D SIM	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled to <6°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS was not performed on a sample location associated with SDGs JC14697 and JC14976.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC14842.

5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 30% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not collected on a sample location associated with SDGs JC14697 and JC14842.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC14976:				
BPOW 6-5/ REP022516PP1	1,4-Dioxane	U	U	0.0%

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					
LCS/LCSD Precision (RPD)					
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: March 17, 2016

PEER REVIEW BY: Todd Church

DATE: March 20, 2016

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC14697

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Grabowa, Pat Prezoski Phone #: 516 267-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	TB022216PP1		2/22/16	1100	—	TB	2	2								2		
2	FB022216PP1		2/22/16	1105	PP	FB	5	3				2				3	2	E4
3	BPOW 6-1		2/22/16	1415	MO	GW	5	3				2				3	2	V541
4	BPOW 6-2		2/22/16	1425	PP	GW	5	3				2				3	2	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

INITIAL ASESSMENT 2/B OB
LABEL VERIFICATION AN

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " PP " for MS/MSD QA/QC Sample.
For VOCS - V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Pat Prezoski	2/22/16 1815	1 Chris Lau Date 2/23/16 Time: 10:25	2 Chris Lau	2/23/16 17:15	2
3		3	4		4
5		5			

Custody Seal # [x] Intact [ ] Not intact
Preserved where applicable [ ]
Office: A
Cooler Temp: 1.6°, 1.8°C IG

5.1
5

JC14697: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	TB022216PP1		
Lab Sample ID:	JC14697-1	**Date Sampled:**	02/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B102286.D	1	02/24/16	BK	n/a	n/a	V1B4854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022216PP1		
Lab Sample ID:	JC14697-1	**Date Sampled:**	02/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	89%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022216PP1		
Lab Sample ID:	JC14697-2	**Date Sampled:**	02/22/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B102287.D	1	02/24/16	BK	n/a	n/a	V1B4854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.1	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022216PP1		
Lab Sample ID:	JC14697-2	**Date Sampled:**	02/22/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	91%		78-114%
460-00-4	4-Bromofluorobenzene	98%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	cycloalkane/alkene	8.22	11	ug/l	J N
	Total TIC, Volatile		11	ug/l	J N

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW6-1		
Lab Sample ID:	JC14697-3	**Date Sampled:**	02/22/16
Matrix:	AQ - Ground Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B102288.D	1	02/24/16	BK	n/a	n/a	V1B4854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW6-1		
Lab Sample ID:	JC14697-3	**Date Sampled:**	02/22/16
Matrix:	AQ - Ground Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	88%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW6-2		
Lab Sample ID:	JC14697-4	**Date Sampled:**	02/22/16
Matrix:	AQ - Ground Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B102289.D	1	02/24/16	BK	n/a	n/a	V1B4854
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW6-2		
Lab Sample ID:	JC14697-4	**Date Sampled:**	02/22/16
Matrix:	AQ - Ground Water	**Date Received:**	02/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	90%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022216PP1		
Lab Sample ID:	JC14697-2	**Date Sampled:**	02/22/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/23/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63826.D	1	03/01/16	LK	02/24/16	OP91493A	E4M2829
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	111%		24-125%
321-60-8	2-Fluorobiphenyl	97%		19-127%
1718-51-0	Terphenyl-d14	83%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW6-1		
Lab Sample ID:	JC14697-3	**Date Sampled:**	02/22/16
Matrix:	AQ - Ground Water	**Date Received:**	02/23/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63827.D	1	03/01/16	LK	02/24/16	OP91493A	E4M2829
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.056	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	110%		24-125%
321-60-8	2-Fluorobiphenyl	97%		19-127%
1718-51-0	Terphenyl-d14	62%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW6-2		
Lab Sample ID:	JC14697-4	**Date Sampled:**	02/22/16
Matrix:	AQ - Ground Water	**Date Received:**	02/23/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M63828.D	1	03/01/16	LK	02/24/16	OP91493A	E4M2829
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.056	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	104%		24-125%
321-60-8	2-Fluorobiphenyl	91%		19-127%
1718-51-0	Terphenyl-d14	69%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ACCUTEST LABORATORIES

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FB
MB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC14842

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Pizzoch 516-287-6247 Phone #:

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
1	FB022416PP1		2/24/16	1010	MW	FB	5	3				2				3	2	E30
2	TB022416PP1		2/24/16	1000	—	TB	2	2								2		V558
3	BPOW G-4		2/24/16	1320	MW	GW	5	3				2				3	2	
4	BPOW G-3		2/24/16	1315	AP	GW	5	3				2				3	2	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
~~INITIAL ASSESSMENT~~ 3A JK
~~LABEL~~ VERIFICATION AMD

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " " for MS/MSD QA/QC Sample.
For VOCS - V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished By Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2/24/16	1	2	2/25/16 12:15	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [✓] Cooler Temp. 4.4°, 4.8°

2 COOLERS

JC14842: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	FB022416PP1		
Lab Sample ID:	JC14842-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102317.D	1	02/26/16	BK	n/a	n/a	V1B4856
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.9	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022416PP1		
Lab Sample ID:	JC14842-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	92%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	cycloalkane	8.20	.63	ug/l	J N
	Total TIC, Volatile		.63	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022416PP1		
Lab Sample ID:	JC14842-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102320.D	1	02/26/16	BK	n/a	n/a	V1B4856
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022416PP1		
Lab Sample ID:	JC14842-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	93%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC14842-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102321.D	1	02/26/16	BK	n/a	n/a	V1B4856
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC14842-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	94%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC14842-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102322.D	1	02/26/16	BK	n/a	n/a	V1B4856
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC14842-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	93%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022416PP1		
Lab Sample ID:	JC14842-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/25/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M59822.D	1	03/02/16	LK	02/28/16	OP91581A	E3M2803
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	42%		24-125%
321-60-8	2-Fluorobiphenyl	43%		19-127%
1718-51-0	Terphenyl-d14	69%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC14842-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M59841.D	1	03/03/16	LK	02/28/16	OP91581A	E3M2805
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		24-125%
321-60-8	2-Fluorobiphenyl	55%		19-127%
1718-51-0	Terphenyl-d14	76%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC14842-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M59842.D	1	03/03/16	LK	02/28/16	OP91581A	E3M2805
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		24-125%
321-60-8	2-Fluorobiphenyl	59%		19-127%
1718-51-0	Terphenyl-d14	76%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ACCUTEST LABORATORIES

GW WFB WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC14976

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Orabona Pat Prezorski Phone #: 516-287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1414.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Street Address: 630 Plaza Drive, Suite 600
City: Highlands Ranch, State: CO Zip: 80129
Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
-1	FB022516PP1		2/25/16	0922	MO	FB	5	3				2				3	2	E88
2	TB022516PP1		2/25/16	0900	—	TB	3	2								2		V577
3	BPOW 6-6		2/25/16	1408	MO	GW	5	3				2				3	2	
4	BPOW 6-5		2/25/16	1405	PP	GW	5	3				2				3	2	
5	REP022516PP1		2/25/16	—	—	GW	5	3				2				3	2	

INITIAL ASSESSMENT MOB
LABEL VERIFICATION AMO

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMC+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " " for MS/MSD QA/QC Sample.
For VOCs - V524SL4+40, VMS+F113

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2/25/16 1830	1 Chris Faul	2 Chris Faul	2/26/16 16:45	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[x] Intact [ ] Not intact	Preserved where applicable [ ] On Ice [x] Cooler Temp 1.0°, 1.5°C

JC14976: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	FB022516PP1		
Lab Sample ID:	JC14976-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102346.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.5	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022516PP1		
Lab Sample ID:	JC14976-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
287-92-3	Cyclopentane	8.21	6.9	ug/l	JN
	Total TIC, Volatile		6.9	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.

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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022516PP1		
Lab Sample ID:	JC14976-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102347.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB022516PP1		
Lab Sample ID:	JC14976-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	94%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-6		
Lab Sample ID:	JC14976-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102341.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	0.34	0.50	0.028	ug/l	J
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-6		
Lab Sample ID:	JC14976-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		78-114%
460-00-4	4-Bromofluorobenzene	95%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-5		
Lab Sample ID:	JC14976-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102342.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	1.0	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-5		
Lab Sample ID:	JC14976-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	97%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	REP022516PP1		
Lab Sample ID:	JC14976-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B102343.D	1	02/29/16	BK	n/a	n/a	V1B4857
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	0.97	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	REP022516PP1		
Lab Sample ID:	JC14976-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.024	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.032	ug/l	
	m,p-Xylene	ND	0.50	0.13	ug/l	
95-47-6	o-Xylene	ND	0.50	0.029	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) EPA 524.2 is not a certified method for non-potable water samples.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB022516PP1		
Lab Sample ID:	JC14976-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Field Blank Water	**Date Received:**	02/26/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15381.D	1	03/01/16	AD	03/01/16	OP91631A	E4P789
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.056	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		24-125%
321-60-8	2-Fluorobiphenyl	55%		19-127%
1718-51-0	Terphenyl-d14	86%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-6		
Lab Sample ID:	JC14976-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15382.D	1	03/01/16	AD	03/01/16	OP91631A	E4P789
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.056	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		24-125%
321-60-8	2-Fluorobiphenyl	55%		19-127%
1718-51-0	Terphenyl-d14	75%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW 6-5		
Lab Sample ID:	JC14976-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15383.D	1	03/01/16	AD	03/01/16	OP91631A	E4P789
Run #2							

	Initial Volume	Final Volume
Run #1	975 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.054	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		24-125%
321-60-8	2-Fluorobiphenyl	56%		19-127%
1718-51-0	Terphenyl-d14	84%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	REP022516PP1		
Lab Sample ID:	JC14976-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Water	**Date Received:**	02/26/16
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P15384.D	1	03/01/16	AD	03/01/16	OP91631A	E4P789
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		24-125%
321-60-8	2-Fluorobiphenyl	61%		19-127%
1718-51-0	Terphenyl-d14	89%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Appendix D

ARCADIS Separate and Ongoing OU2 Monitoring of Navy Wells

Appendis D. Schedule of ARCADIS Ongoing OU2 Monitoring of Navy wells

Well	Well Owner	1st Q	2nd Q	3rd Q	4th Q	VOC Analysis Method
Outpost wells						
BPOW1-1	Navy		X		X	524.2
BPOW1-2	Navy		X		X	524.2
BPOW1-3	Navy		X		X	524.2
BPOW1-4	Navy		X		X	524.2
BPOW1-5	Navy		X		X	524.2
BPOW1-6	Navy		X		X	524.2
BPOW2-1	Navy		X		X	524.2
BPOW2-2	Navy		X		X	524.2
BPOW2-3	Navy		X		X	524.2
BPOW3-1	Navy		X		X	524.2
BPOW3-2	Navy		X		X	524.2
BPOW3-3	Navy		X		X	524.2
BPOW3-4	Navy		X		X	524.2
Semi-annual and annual						
TT102D	Navy		X		X	8260C
TT102D2	Navy		X		X	8260C
FW-03	Navy		X			8260C
GM-15D	Navy		X		X	8260C
GM-15D2	Navy		X		X	8260C
GM-17D	Navy		X		X	8260C
GM-17I	Navy		X		X	8260C
GM-18D	Navy		X		X	8260C
GM-21D	Navy		X			8260C
GM-39DA	Navy		X		X	8260C
GM-39DB	Navy		X		X	8260C
GM-73D	Navy		X		X	8260C
GM-73D2	Navy		X		X	8260C
GM-74D	Navy		X		X	8260C
GM-74I	Navy		X		X	8260C
GM-75D2	Navy		X		X	8260C
GM-78I	Navy		X			8260C
GM-78S	Navy		X			8260C
GM-79D	Navy		X		X	8260C
GM-79I	Navy		X		X	8260C
HN-24I	Navy		X			8260C
HN-40I	Navy		X			8260C
HN-40S	Navy		X			8260C
HN-42I	Navy		X			8260C
HN-42S	Navy		X			8260C

Q: Quarter
VOC: volatile organic compound