JUNE 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

November 2016

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Department of the Navy
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Norfolk, Virginia 23511

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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
PCBs	Polychlorinated Biphenyls
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 June 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 55 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 June 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 June 2016 quarterly sampling round consisted of a total of 55 wells (Table 1). Of these, 30 groundwater wells were sampled by Resolution Consultants and 25 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, Table 5 and Table 6; 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, Polychlorinated Biphenyls (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 Table 4, Table 5 and Table 6. 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		Resolution
RE103D3	735	715	730	720	5		Resolution
RE104D1	375	350	370	360	5	VPB138	Resolution
RE104D2	735	710	730	720	5		Resolution
RE104D3	785	760	780	770	5		Resolution
RE105D1	555	530	550	540	5	VPB139	Resolution
RE105D2	755	730	750	740	5		Resolution
RE107D1	530	505	525	515	5	VPB141	ARCADIS
RE107D2	585	560	580	570	5		ARCADIS
RE107D3	670	645	665	655	5		ARCADIS
RE108D1	555	530	550	540	5	VPB142	Resolution
RE108D2	655	630	650	640	5	VPB142	Resolution
RE114D1	560	535	555	545	5	VPB148	ARCADIS
RE114D2	635	610	630	620	5		ARCADIS
RE114D3	725	700	720	710	5		ARCADIS
RE117D1	760	730	755	742.5	5	VPB151	ARCADIS
RE117D2	810	780	805	792.5	5		ARCADIS
RE118D1	795	765	790	777.5	5	VPB152	ARCADIS
RE119D1	745	715	740	727.5	5		ARCADIS
RE120D1	655	630	650	640	5	VPB154	Resolution
RE120D2	713	690	710	700	3		Resolution
RE120D3	765	740	760	750	5		Resolution
RE121D1	575	550	570	560	5	VPB155	ARCADIS
RE121D2	755	730	750	740	5		ARCADIS
RE122D1	545	520	540	530	5	VPB156	Resolution
RE122D2	615	590	610	600	5		Resolution
RE122D3	740	715	735	725	5		Resolution
RE123D1	505	480	500	490	5	VPB157	Resolution
RE123D2	660	635	655	645	5		Resolution
RE123D3	840	815	835	825	5		Resolution
RE126D1	525	500	520	510	5	VPB160	Resolution
RE126D2	580	555	575	565	5		Resolution
RE126D3	665	640	660	650	5		Resolution
RE129D1	715	690	710	700	5	VPB163	Resolution
RE129D2	830	805	825	815	5		Resolution

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
RE131D1	455	430	450	440	5	VPB165	Resolution
RE131D2	595	565	590	577.5	5		Resolution
RE131D3	685	660	680	670	5		Resolution
TT101D	350	325	345	335	5	VPB129	Resolution
TT101D1	595	570	590	580	5		Resolution
TT101D2	765	740	760	750	5		Resolution
BPOW5-1	515	480	510	495	5	VPB132	ARCADIS
BPOW5-2	585	540	580	560	5		ARCADIS
BPOW5-3	665	620	660	640	5		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		ARCADIS
BPOW5-7	555	525	550	537.5	5		ARCADIS
BPOW6-1	580	550	575	562.5	5	VPB145	ARCADIS
BPOW6-2	785	755	780	767.5	5		ARCADIS
BPOW6-3	780	750	775	762.5	5	VPB146	ARCADIS
BPOW6-4	575	545	570	557.5	5		ARCADIS
BPOW6-5	555	525	550	537.5	5	VPB147	ARCADIS
BPOW6-6	800	770	795	782.5	5		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)	RE104D1	RE104D2	RE104D3	TT101D
Sample Date		6/21/2016	6/21/2016	6/21/2016	6/21/2016
Sample ID		RE104D1-GW-062116	RE104D2-GW-062116	RE104D3-GW-062116	TT101D-GW-062116
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	**0.29 J**
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	**2.8**	<0.50 U	<0.50 U	**14**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	**0.55 J**	<0.50 U	<0.50 U	**3.1**
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	**0.96 J**	**3.7**	<1.0 U	**2.9**
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	**8.5**	**0.48**	<0.18 U	**11**
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 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 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	**0.76 J**	<0.50 U	**0.44 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**0.96 J**	**3.7**	<0.50 U	**2.9**
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	**1.6 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	**1.9**	<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	**92**	**9.0**	<0.50 U	**73**
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)	TT101D1	TT101D1	TT101D2	RE123D1
Sample Date		6/21/2016	6/21/2016	6/21/2016	6/20/2016 (Note 2)
Sample ID		TT101D1-GW-062116	DUP1-GW-062116	TT101D2-GW-062116	RE123D1-GW-062016
Sample type code		N	FD	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	**0.61 J**	**0.62 J**	**0.41 J**	<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	**14**	**14**	**21**	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	**0.40 J**	**0.42 J**	<0.50 U
1,1-DICHLOROETHANE	5	**0.88 J**	**0.90 J**	**0.90 J**	<0.50 U
1,1-DICHLOROETHENE	5	**4.8**	**5.0**	**5.2**	<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	**2.0**	**2.0**	**2.0**	<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	**9.4**	**15**	**3.9 J**	**3.9**
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 UJ	<2.5 UJ	<2.5 UJ	**4.1 J**
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	**1.6**	**1.6**	**1.1**	<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	**0.82 J**	**0.92 J**	**0.81 J**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**2.0**	**2.0**	**2.0**	<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	**1.2 J**	**1.3 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	<0.50 U	<0.50 U	**1.1**	<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	**190**	**200**	**690**	**7.4**
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)	RE123D2	RE123D3	RE129D1	RE129D2
Sample Date		6/20/2016 (Note 2)	6/20/2016 (Note 2)	6/20/2016 (Note 2)	6/20/2016 (Note 2)
Sample ID		RE123D2-GW-062016	RE123D3-GW-062016	RE129D1-GW-062016	RE129D2-GW-062016
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**0.77**	**0.28**	<0.17 U	<0.17 U
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	**2.8 J**	<2.5 UJ	**3.2 J**	**2.5 J**
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**0.85 J**	<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	**1.5**	<0.50 U	<0.50 U	<0.50 U
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE126D1	RE126D2	RE126D3	RE103D2
Sample Date		6/21/2016	6/21/2016	6/21/2016	6/23/2016
Sample ID		RE126D1-GW-062116	RE126D2-GW-062116	RE126D3-GW-062116	RE103D2-GW-062316
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	**0.85 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	<0.50 U	**0.81 J**	**0.45 J**	**4.3**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	**0.38 J**
1,1-DICHLOROETHANE	5	<0.50 U	**2.3**	<0.50 U	**0.87 J**
1,1-DICHLOROETHENE	5	<0.50 U	**0.88 J**	<0.50 U	**1.4**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**2.3**	<1.0 U	**1.9 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	**8.4**	**6.6**	**2.6**	**3.3**
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 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 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	**0.58 J**	<0.50 U	**0.43 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	<0.50 U	**0.61 J**	<0.50 U	**0.92 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**2.3**	<0.50 U	**1.9**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**0.60 J**	<0.50 U	**1.7**	**0.97 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	**28**	**520**	**4.0**	**890**
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)	RE103D3	RE103D3	RE131D1	RE131D2
Sample Date		6/23/2016	6/23/2016	6/23/2016	6/23/2016
Sample ID		RE103D3-GW-062316	DUP2-GW-062316	RE131D1-GW-062316	RE131D2-GW-062316
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	**2.0**	**2.1**	**4.5**	**200**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	**0.80 J**	<0.50 U
1,1-DICHLOROETHENE	5	**0.47 J**	**0.52 J**	<0.50 U	**1.5**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**0.87 J**	**4.0**	**3.8**
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 U	<0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**1.4**	**1.3**	**16**	**10**
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 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 UJ	<1.0 UJ	<1.0 U	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 UJ	<1.0 U
CHLOROFORM	7	**0.60 J**	**0.64 J**	**3.9**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**0.87 J**	**4.0**	**3.8**
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 UJ	<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	**0.39 J**	**0.34 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	**2.4**	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	<0.50 U	**7.2**	**5.5**
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	**500**	**510**	**96**	**46**
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)	RE131D3	RE122D1	RE122D2	RE122D3
Sample Date		6/23/2016	6/22/2016	6/22/2016	6/22/2016
Sample ID		RE131D3-GW-062316	RE122D1-GW-062216	RE122D2-GW-062216	RE122D3-GW-062216
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	**0.48 J**	<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	**96**	**3.8**	**17**	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	**2.0**	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	**1.3**	<0.50 U
1,1-DICHLOROETHENE	5	**0.65 J**	**0.85 J**	**7.4**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**1.7 J**	**4.8**	<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	**2.2**	**11**	**16**	<0.18 U
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U	**2.0 J**
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 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 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	**0.41 J**	**1.5**	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	**0.54 J**	**2.2**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**1.7**	**4.8**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**1.3**	**1.4**	**2.6**	<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	**6.1**	**610**	**5500**	**7.4**
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)	RE120D1	RE120D2	RE120D3	RE103D1
Sample Date		6/22/2016	6/22/2016	6/22/2016	6/23/2016
Sample ID		RE120D1-GW-062216	RE120D2-GW-062216	RE120D3-GW-062216	RE103D1-GW-062316
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	**1.3**	**0.35 J**	<0.50 U	**0.42 J**
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	**29**	**18**	**1.1**	**11**
1,1,2-TRICHLOROETHANE	1	**1.1**	**0.56 J**	<0.50 U	**0.42 J**
1,1-DICHLOROETHANE	5	**2.6**	<0.50 U	<0.50 U	**0.91 J**
1,1-DICHLOROETHENE	5	**17**	**4.9**	<0.50 U	**7.3**
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	**3.6**	**3.5**	<1.0 U	**3.4**
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	**22 J**	**14**	**0.66**	**18**
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 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 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	**0.45 J**	<0.50 U	**0.26 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	**0.77 J**	**0.61 J**	<0.50 U	**0.58 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**3.6**	**3.5**	<0.50 U	**3.4**
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	**0.25 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	**3.0**	**3.0**	<0.50 U	**4.4**
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	**1200**	**720**	**46**	**930**
TRICHLOROFLUOROMETHANE	5	**0.29 J**	<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)	RE108D1	RE108D2	RE105D1	RE105D2
Sample Date		6/27/2016	6/27/2016	6/27/2016	6/27/2016
Sample ID		RE108D1-GW-062716	RE108D2-GW-062716	RE105D1-GW-062716	RE105D2-GW-062716
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	***<20 U***	**0.35 J**	***<10 U***
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**0.61 J**	***<20 U***	**5.9**	**20 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,1-DICHLOROETHANE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,1-DICHLOROETHENE	5	<0.50 U	***<20 U***	**0.91 J**	***<10 U***
1,2,4-TRICHLOROBENZENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<30 U***	***<0.75 U***	***<15 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<20 U	<0.50 U	<10 U
1,2-DICHLOROBENZENE	3	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,2-DICHLOROETHANE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,2-DICHLOROETHENE, TOTAL	5	**0.33 J**	***<40 U***	**1.5 J**	***<20 U***
1,2-DICHLOROPROPANE	1	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,3-DICHLOROBENZENE	3	<0.50 U	***<20 U***	<0.50 U	***<10 U***
1,4-DICHLOROBENZENE	3	<0.50 UJ	***<20 UJ***	<0.50 UJ	***<10 UJ***
1,4-DIOXANE (Method 8270D_SIM)	NL	**7.7**	**5.8**	**9.8**	**7.0**
2-BUTANONE	50	<2.5 U	***<100 U***	<2.5 U	<50 U
2-HEXANONE	50	<2.5 U	***<100 U***	<2.5 U	<50 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<100 U	<2.5 U	<50 U
ACETONE	50	<2.5 UJ	***<100 UJ***	<2.5 UJ	<50 UJ
BENZENE	1	<0.50 U	***<20 U***	<0.50 U	***<10 U***
BROMODICHLOROMETHANE	50	<0.50 U	<20 U	<0.50 U	<10 U
BROMOFORM	50	<0.50 U	<20 U	<0.50 U	<10 U
BROMOMETHANE	5	<1.0 UJ	***<40 UJ***	<1.0 UJ	***<20 UJ***
CARBON DISULFIDE	60	<0.50 UJ	<20 UJ	<0.50 UJ	<10 UJ
CARBON TETRACHLORIDE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
CHLOROBENZENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
CHLOROETHANE	5	<1.0 U	***<40 U***	<1.0 U	***<20 U***
CHLOROFORM	7	<0.50 U	***<20 U***	<0.50 U	***<10 U***
CHLOROMETHANE	5	<1.0 U	***<40 U***	<1.0 U	***<20 U***
CIS-1,2-DICHLOROETHENE	5	**0.33 J**	***<20 U***	**1.5**	***<10 U***
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<20 U***	***<0.50 U***	***<10 U***
CYCLOHEXANE	NL	<0.50 U	<20 U	<0.50 U	<10 U
DIBROMOCHLOROMETHANE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
DICHLORODIFLUOROMETHANE	5	<1.0 U	***<40 U***	**0.38 J**	***<20 U***
ETHYLBENZENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
ISOPROPYLBENZENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
M- AND P-XYLENE	NL	<1.0 U	<40 U	<1.0 U	<20 U
METHYL ACETATE	NL	<0.75 U	<30 U	<0.75 U	<15 U
METHYL CYCLOHEXANE	NL	<0.50 U	<20 U	<0.50 U	<10 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	***<20 U***	<0.50 U	<10 U
METHYLENE CHLORIDE	5	<2.5 U	***<100 U***	<2.5 U	***<50 U***
O-XYLENE	NL	<0.50 U	<20 U	<0.50 U	<10 U
STYRENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
TETRACHLOROETHENE	5	**1.1**	***<20 U***	<0.50 U	***<10 U***
TOLUENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	***<20 U***	<0.50 U	***<10 U***
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<20 U***	***<0.50 U***	***<10 U***
TRICHLOROETHENE	5	**82**	**3000**	**110**	**1800**
TRICHLOROFLUOROMETHANE	5	<1.0 U	***<40 U***	<1.0 U	***<20 U***
VINYL CHLORIDE	2	<1.0 U	***<40 U***	<1.0 U	***<20 U***
XYLENES, TOTAL	5	<1.5 U	***<60 U***	<1.5 U	***<30 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

2 1,4-Dioxane was resampled on 6/24/16 at RE123D1, RE123D2, RE123D3, RE129D1 and RE129D2 due to loss of cooler by courier.

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	6/21/2016	15.84	4.32	0.074	0.28	292.00	2.67	34.82	900
TT101D1	6/21/2016	16.29	5.01	0.073	0.94	105.00	0.48	36.78	700
TT101D2	6/21/2016	15.94	4.86	0.032	4.15	665.8	0.87	37.42	800
RE103D1	6/23/2016	15.74	4.53	0.078	2.20	159.9	0.38	41.86	600
RE103D2	6/23/2016	16.72	6.22	0.030	6.12	112.1	0.71	38.64	450
RE103D3	6/23/2016	15.54	3.58	0.023	2.85	194.6	0.84	42.07	800
RE104D1	6/21/2016	15.54	4.63	0.058	3.00	181.1	4.43	37.67	650
RE104D2	6/21/2016	15.00	5.53	0.018	6.40	126.8	6.57	NM	600
RE104D3	6/21/2016	15.67	4.48	0.016	5.84	285.5	12.7	41.47	650
RE105D1	6/27/2016	15.49	4.75	0.093	2.50	117.9	0.91	39.60	600
RE105D2	6/27/2016	16.15	3.68	0.057	2.56	151.3	0.79	41.20	675
RE108D1	6/27/2016	16.61	4.80	0.084	6.21	164.0	0.89	42.76	650
RE108D2	6/27/2016	16.61	3.84	0.067	2.53	168.7	0.71	42.62	700
RE120D1	6/22/2016	17.81	4.53	0.088	2.12	303.2	0.67	38.78	600
RE120D2	6/22/2016	17.78	5.09	0.062	4.64	147.4	0.55	38.58	500
RE120D3	6/22/2016	16.98	4.29	0.021	4.15	182.0	1.82	39.18	700
RE122D1	6/22/2016	15.85	5.44	0.073	3.95	125.2	0.92	43.93	700
RE122D2	6/22/2016	17.60	4.65	0.076	5.32	294.9	2.03	43.54	650
RE122D3	6/22/2016	23.50	4.67	0.022	1.62	168.2	12.1	44.87	300
RE123D1	6/24/2016	15.83	5.57	0.094	4.53	180.8	0.079	49.17	700
RE123D2	6/24/2016	18.13	5.29	0.026	7.14	166.8	1.99	50.21	600
RE123D3	6/24/2016	16.85	5.05	0.036	0.37	106.1	11.9	50.68	650
RE126D1	6/21/2016	15.23	5.68	0.070	6.95	127.0	2.31	46.37	600
RE126D2	6/21/2016	14.92	5.53	0.088	2.13	196.8	2.38	47.92	600
RE126D3	6/21/2016	15.92	5.07	0.030	3.99	163.4	4.54	47.49	600
RE129D1	6/24/2016	17.64	5.04	0.030	0.72	95.3	6.06	26.34	650
RE129D2	6/24/2016	16.36	3.70	0.024	0.34	123.9	11.7	26.38	725
RE131D1	6/23/2016	16.67	4.81	0.097	4.02	331.6	1.73	38.60	650
RE131D2	6/23/2016	15.76	4.98	0.058	1.84	141.0	1.84	39.40	500
RE131D3	6/23/2016	16.38	6.23	0.030	5.98	142.1	0.96	NM	800

°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
NM - not measured

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

Well: / Sample ID: / CONSTITUENT / Date: / Units (ug/L)	BPOW 5-1 / BPOW 5-1 / 6/9/2016	BPOW 5-2 / BPOW 5-2 / 6/9/2016	BPOW 5-3 / BPOW 5-3 / 6/27/2016	BPOW 5-4 / BPOW 5-4 / 6/10/2016	BPOW 5-5 / BPOW 5-5 / 6/2/2016	BPOW 5-6 / BPOW 5-6 / 6/2/2016	BPOW 5-7 / BPOW 5-7 / 6/13/2016
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	**1.7 J**
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	**2.1 J**	< 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	**0.11 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]	**2.1**	0	0	0	0	0	**1.8**
1,4-Dioxane [2] [3]	< 0.11	< 0.11	**1.6**	**1.2**	**1.2**	< 0.11	**0.08 J**

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,
Second 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 and 1,4-Dioxane are rounded to two significant figures.
(3)	Samples were analyzed for 1,4-Dioxane using USEPA Method 522.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2016).

Bold	Constituent detected
TCL	Target Compound List
VOC	Volatile Organic Compound
USEPA	United States Environmental Protection Agency
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, Second Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Well: / Sample ID: / Date: / CONSTITUENT / Units (ug/L)	BPOW 6-1 / BPOW 6-1 / 6/3/2016	BPOW 6-2 / BPOW 6-2 / 6/3/2016	BPOW 6-3 / BPOW 6-3 / 6/7/2016	BPOW 6-4 / BPOW 6-4 / 6/7/2016	BPOW 6-5 / BPOW 6-5 / 6/8/2016	BPOW 6-6 / BPOW 6-6 / 6/8/2016	BPOW 6-6 / REP060816AR1 / 6/8/2016
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	**0.27 J**	**0.14 J**	**0.14 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	**0.27**	**0.14**	**0.14**
1,4-Dioxane [2] [3]	< 0.11	< 0.11	< 0.10	**0.09 J**	< 0.10	**0.04 J**	**0.04 J**

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, Second 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 and 1,4-dioxane are rounded to two significant figures.
(3)	Samples were analyzed for 1,4-Dioxane using USEPA Method 522.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2016).

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

Table 6
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2016, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (units in µg/L)	Well: Sample ID: Date:	RE107D1 RE107D1 5/23/2016	RE107D2 RE107D2 5/23/2016	RE107D3 RE107D3 5/24/2016	RE114D1 RE114D1 5/26/2016
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	**0.52 J**
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluroethane		<5.0	**17.0**	**1.6 J**	**19.5**
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	**1.5**
1,1-Dichloroethane		<1.0	<1.0	<1.0	**1.2**
1,1-Dichloroethene		<1.0	**0.40 J**	<1.0	**3.5**
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
2-Hexanone		<5.0	<5.0	<5.0	<5.0
4-methyl-2-pentanone (MIK)		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride		<1.0	<1.0	<1.0	**2.6**
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	**0.25 J**	<1.0	**2.7**
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene		<1.0	**3.4**	<1.0	**4.6**
cis-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0
Dibromochloromethane		<1.0	<1.0	<1.0	<1.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
Methylene Chloride		<2.0	<2.0	<2.0	<2.0
Styrene		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		**0.70 J**	**3.7**	<1.0	<1.0
Toluene		**0.37 J**	<1.0	**0.35 J**	**0.28 J**
trans-1,2-dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethylene		**11.6**	**162**	<1.0	**339 D**
Vinyl Chloride		<1.0	<1.0	<1.0	<1.0
Xylene-o		<1.0	<1.0	<1.0	<1.0
Xylenes - m,p		<1.0	<1.0	<1.0	<1.0
Total VOCs (2)		**13**	**187**	**2.0**	**375**
1,4-Dioxane (2)(3)		**4.8**	**9.7**	<0.11 J	**4.6**

Notes and Abbreviations on last page.

Table 6
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2016, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (units in µg/L)	Well: Sample ID: Date:	RE114D1 REP052616AR1 5/26/2016	RE114D2 RE114D2 5/26/2016	RE114D3 RE114D3 5/26/2016	RE117D1 RE117D1 5/16/2016
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		**0.56 J**	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluroethane		**18.8**	**6.1**	**10.3**	<5.0
1,1,2-Trichloroethane		**1.5**	**0.35 J**	<1.0	<1.0
1,1-Dichloroethane		**1.3**	**0.50 J**	<1.0	<1.0
1,1-Dichloroethene		**3.7**	**0.63 J**	**0.76 J**	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
2-Hexanone		<5.0	<5.0	<5.0	<5.0
4-methyl-2-pentanone (MIK)		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride		**2.7**	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		**3.0**	**0.32 J**	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene		**4.8**	**0.90 J**	**0.67 J**	<1.0
cis-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0
Dibromochloromethane		<1.0	<1.0	<1.0	<1.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
Methylene Chloride		<2.0	<2.0	<2.0	<2.0
Styrene		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	<1.0	<1.0	<1.0
Toluene		**0.28 J**	<1.0	<1.0	<1.0
trans-1,2-dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethylene		**353 D**	**52.3**	**34.0**	**21.3**
Vinyl Chloride		<1.0	<1.0	<1.0	<1.0
Xylene-o		<1.0	<1.0	<1.0	<1.0
Xylenes - m,p		<1.0	<1.0	<1.0	<1.0
Total VOCs (2)		**390**	**61**	**46**	**21**
1,4-Dioxane (2)(3)		**4.8**	**3.5**	**2.6**	<0.10

Notes and Abbreviations on last page.

Table 6
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2016, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (units in µg/L)	Well: Sample ID: Date:	RE117D2 RE117D2 5/16/2016	RE118D1 RE118D1 5/18/2016	RE119D1 RE119D1 5/17/2016	RE121D1 RE121D1 6/1/2016
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	**0.28 J**
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluroethane		<5.0	<5.0	<5.0	**6.0**
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	**1.4**
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
2-Hexanone		<5.0	<5.0	<5.0	<5.0
4-methyl-2-pentanone (MIK)		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	**0.31 J**
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene		<1.0	<1.0	<1.0	**0.88 J**
cis-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0
Dibromochloromethane		<1.0	<1.0	<1.0	<1.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
Methylene Chloride		<2.0	<2.0	<2.0	<2.0
Styrene		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	<1.0	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethylene		<1.0	<1.0	<1.0	**18.9**
Vinyl Chloride		<1.0	<1.0	<1.0	<1.0
Xylene-o		<1.0	<1.0	<1.0	<1.0
Xylenes - m,p		<1.0	<1.0	<1.0	<1.0
Total VOCs (2)		**0**	0	**0**	**28**
1,4-Dioxane (2)(3)		<0.10	<0.11	<0.11 J	**3.6**

Notes and Abbreviations on last page.

Table 6
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2016, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (units in µg/L)	Well: Sample ID: Date:	RE121D2 RE121D2 6/1/2016
Volatile Organic Compounds (VOCs) [1]		
1,1,1-Trichloroethane		**0.38 J**
1,1,2,2-Tetrachloroethane		<1.0
1,1,2-trichloro-1,2,2-trifluroethane		**12.7**
1,1,2-Trichloroethane		**0.51 J**
1,1-Dichloroethane		**0.62 J**
1,1-Dichloroethene		**2.8**
1,2-Dichloroethane		<1.0
1,2-Dichloropropane		<1.0
2-Butanone (MEK)		<10
2-Hexanone		<5.0
4-methyl-2-pentanone (MIK)		<5.0
Acetone		<10
Benzene		<0.50
Bromodichloromethane		<1.0
Bromoform		<1.0
Bromomethane		<2.0
Carbon Disulfide		<2.0
Carbon tetrachloride		**2.9**
Chlorobenzene		<1.0
Chloroethane		<1.0
Chloroform		**1.5**
Chloromethane		<1.0
cis-1,2-dichloroethene		**1.8**
cis-1,3-dichloropropene		<1.0
Dibromochloromethane		<1.0
Ethylbenzene		<1.0
Methylene Chloride		<2.0
Styrene		<1.0
Tetrachloroethene		<1.0
Toluene		<1.0
trans-1,2-dichloroethene		<1.0
trans-1,3-dichloropropene		<1.0
Trichloroethylene		**422 D**
Vinyl Chloride		<1.0
Xylene-o		<1.0
Xylenes - m,p		<1.0
Total VOCs [2]		**445**
1,4-Dioxane [2][3]		**2.8**

Notes and Abbreviations on last page.

Table 6
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second 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 and 1,4-Dioxane 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 2016).

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

Figures

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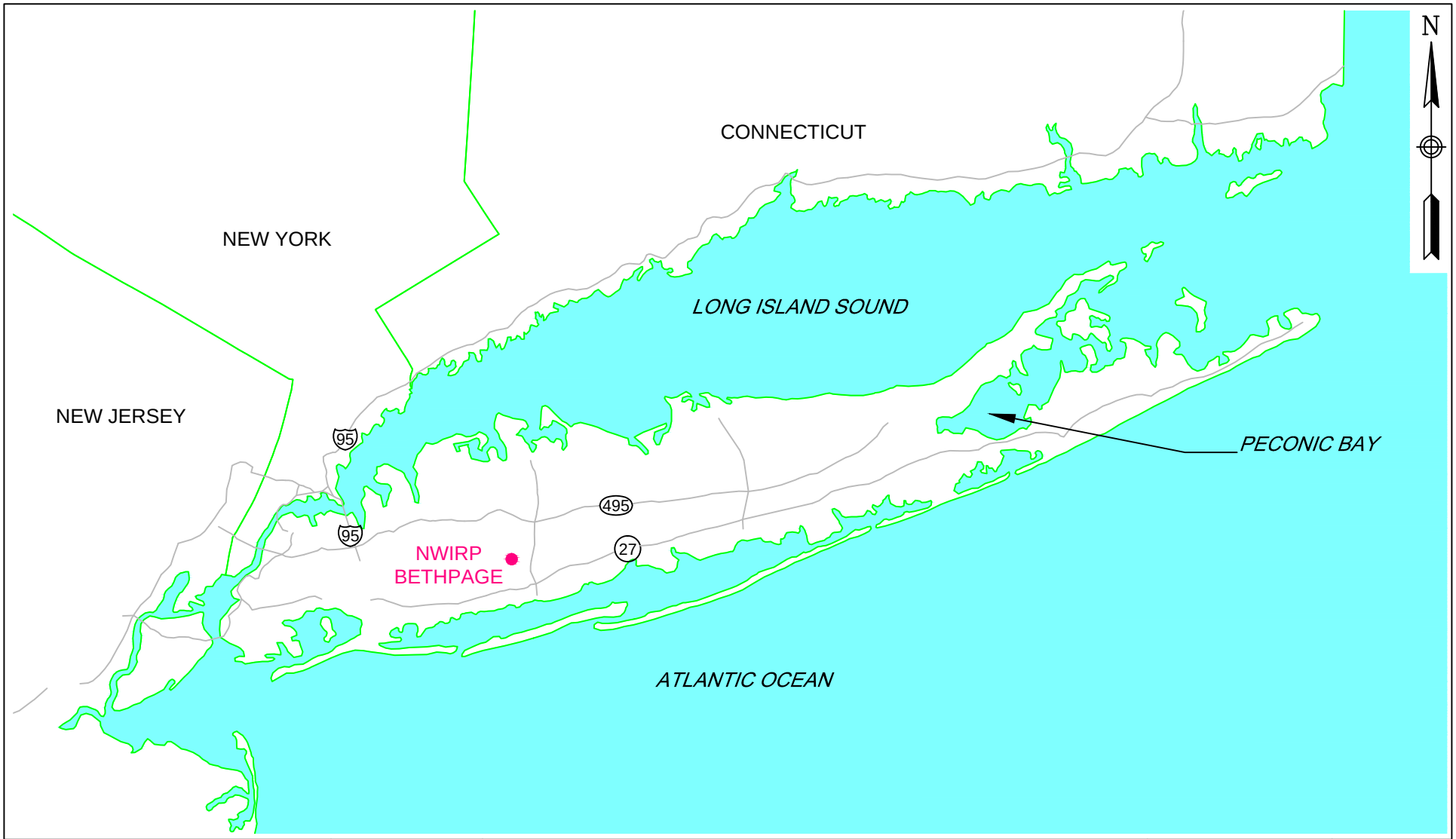
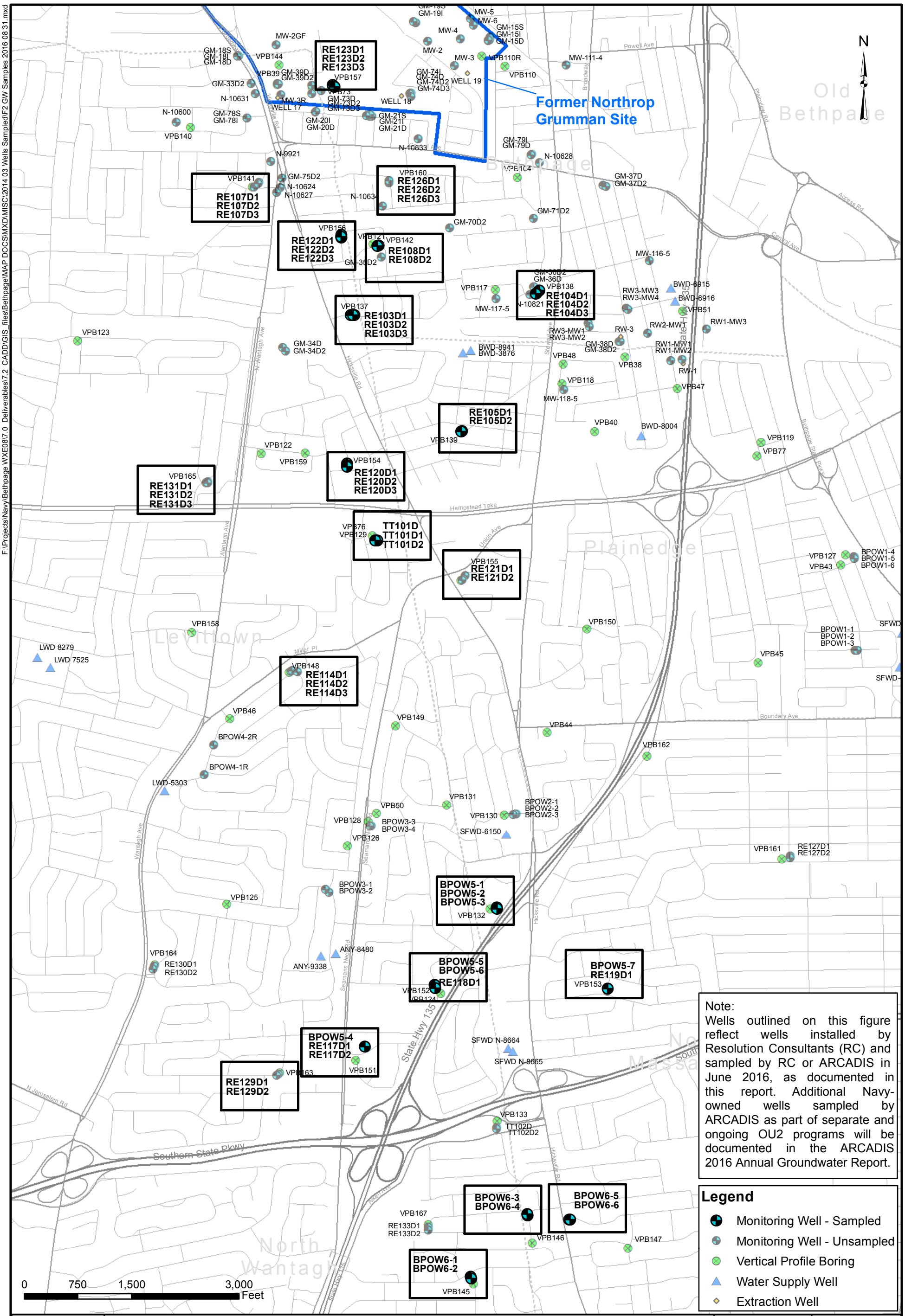


0 15 30
SCALE IN MILES

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 June 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 2016 Annual Groundwater Report.

Legend

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

NAVFAC

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

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: EV	DATE: 9/6/2016
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 08 31.mxd

Appendices

Appendix A

Groundwater Sampling Forms – Resolution Consultants

1,4-Dioxane samples associated with this sample collection record (6/20/16) were lost by the currier. The well was resampled for 1,4-Dioxane on 6/24/16.

Well ID: RE 123 D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 20 / 16
Time: Start 800 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: LIRR yard
Weather Conds: Sunny 80°
Collector(s):

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

a. Total Well Length 505
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 49.00
d. Calculated System Volume (see back) 13.1 gal - 20ft screen

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	82546
LaMotte ~~Hanna~~	2020WE	63616

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
800									49.00	
855	ON									
900		16.59	6.12	0.093	20.87	163.1	2.41	600	49.05	clear/None
905		15.81	5.53	0.096	9.23	174.0	1.88	600	49.05	"
910		15.71	5.32	0.096	8.49	188.0			49.08	
915		15.66	4.91	0.100	8.62	219.0			49.07	

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)

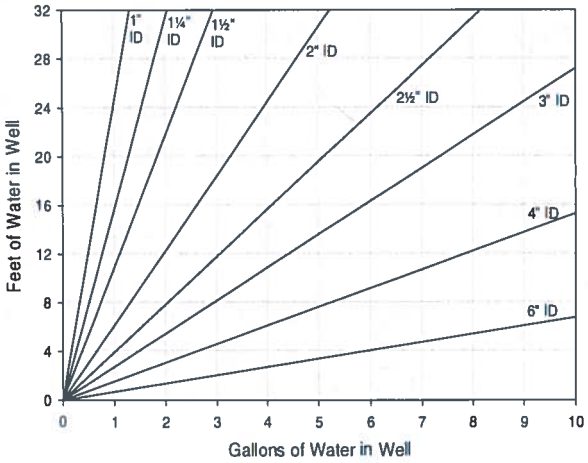
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D1-GW-062016	40-mL vials	3	HCl	VOCs	1015
RE123D1-GW-062016	1-L amber	2	none	1,4-Dioxane	1015

Comments

Signature Paul Kroth
Date 6/20/16

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: RE123 D1

(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	–	15.57	4.86	0.099	8.70	238.8	1.74	600	~~49.08~~	49.08
925	5 Gal	15.60	4.89	0.099	8.36	246.3	–	650	~~49.08~~	49.08
930	–	15.66	4.89	0.099	8.43	249.9	1.65	650	~~49.08~~	49.07
935	–	15.55	4.88	0.099	8.46	251.3	1.55	650	49.08	
940		15.58	4.87	0.099	8.46	256.1	–	650	49.08	
945		15.60	4.87	0.099	8.44	258.7	0.68	650	49.08	
950		15.54	4.87	0.099	8.47	259.1	–	650	49.08	
955		15.55	4.87	0.099	8.36	263.4	0.35	650	49.08	
1000		15.57	4.83	0.099	8.27	268.1	–	650	49.06	
1005		15.55	4.81	0.098	8.27	271.4	1.61	650	49.06	
1010		15.61	4.81	0.099	8.24	274.6	–	650	49.06	
1015										Sample

1,4-Dioxane samples associated with this sample collection record (6/20/16) were lost by the currier. The well was resampled for 1,4-Dioxane on 6/24/16.

Well ID: RE12302

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 20 / 16
Time: Start 806 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: LIRR yard
Weather Conds: Sunny 70°
Collector(s): SL

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

a. Total Well Length 66.8
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 50.36
d. Calculated System Volume (see back) 13.1 gal - 20ft screen

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	78600
~~Hanna~~ LaMotte	2020	63616

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		18.27	5.15	0.045	6.50	117.5	0.86	600	49.91	clear/none
900		17.91	5.09	0.036	6.17	121.1	1.45	600	49.96	"
905		17.84	4.62	0.034	6.19	150.2	1.24	600	49.95	"
910		17.85	4.65	0.032	6.51	149.7	1.38	600	49.96	"
915		17.91	4.64	0.028	7.74	150.7			49.42	
920	5 Gal	17.88	4.70	0.027	8.21	145.7	1.18	600	50.00	" "

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)

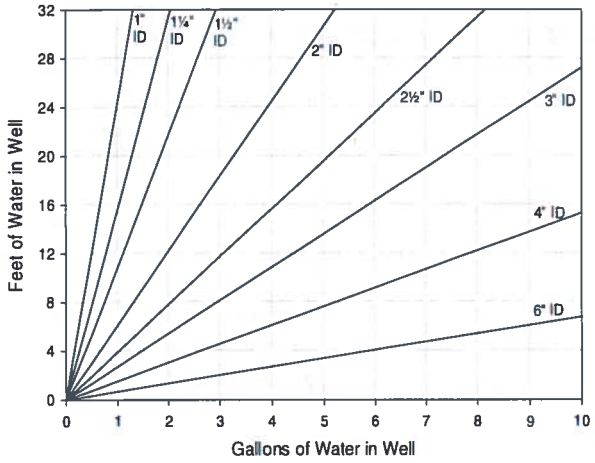
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D2-GW-062016	40-mL vials	3	HCl	VOCs	1030
RE123D2-GW-062016	1-L amber	2	none	1,4-Dioxane	1030

Comments: permanent drop tube installation

Signature: Paul Kruetto
Date: 6/20/16

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: RE12302

(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
9:25	—	17.81	5.09	0.027	8.17	144.5	~~600~~ 1.24	600	49.98	
930		17.76	5.12	0.027	8.14	146.1				
935		17.70	5.17	0.027	8.09	147.0	2.65			
940		17.73	5.22	0.027	7.69	147.2			49.93	
0945	—	17.78	5.25	0.027	6.75	148.1	1.53	600	49.99	
0950	—	17.81	5.27	0.027	6.79	151.5	—	600	49.98	
0955	10 Gal	17.91	5.28	0.027	6.80	152.9	1.14	600	49.95	
1000	—	17.88	5.28	0.026	6.78	153.8	—	600	49.96	
1005	—	17.86	5.28	0.026	6.74	154.2	—	600	—	
1010	—	17.88	5.28	0.026	6.71	156.1	0.99	600	49.95	
1015	12.5 Gal	17.85	5.30	0.026	6.70	157.6	0.99	600	49.96	
	Sample time 1030									

1,4-Dioxane samples associated with this sample collection record (6/20/16) were lost by the currier. The well was resampled for 1,4-Dioxane on 6/24/16.

Well ID: RE123D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6/20/16
Time: Start ~~800~~ 15:00 am/pm
Finish 1700 am/pm
Project No: 60266526
Site Location: LTRR yard
Weather Conds: Sunny 70°
Collector(s):

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

a. Total Well Length 840
b. Water Table Depth ~~50.16~~ 50.26
c. Length of Water Column _____ (a-b)
d. Calculated System Volume (see back) 13.1 gal - 20ft screen
Casing Diameter/Material 4-inch PVC

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	05D2372 AK
~~Hanna~~ LaMotte	2020WC	6360 16

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
~~1020~~ 1500	—	—	—	—	—	—	—	600	—	—
1505	-	17.95	4.95	0.041	9.93	108.7	27.8	600	50.2	
1520	—	17.83	4.86	0.039	8.65	96.5	—	600	—	
1525	—	17.93	5.17	0.043	7.15	71.5	21.5	600	50.2	
1530	-	17.94	5.51	0.052	6.91	63.8	20.2	600	50.23	
1535	5 Gal	18.16	5.74	0.054	6.43	52.0	21.0	600	50.23	

(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.

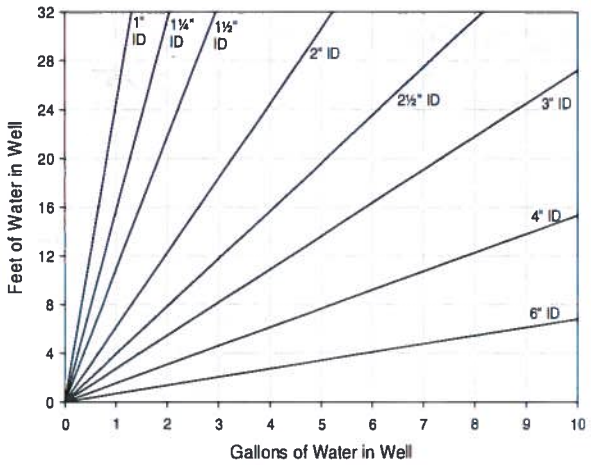
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D3-GW-062016	40-mL vials	3	HCl	VOCs	1610
RE123D3-GW-062016	1-L amber	2	none	1,4-Dioxane	1610

Comments MP-10 controller problem, started after sampling RE123D1. Came back, Sampled @1500 Check valve

Signature Paul Kuretz
Date 6/20/16

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

(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
1540	–	18.39	5.83	0.054	6.15	45.2	–	600	50.23	
1545	–	18.28	5.90	0.053	5.88	40.7	20.2	600	50.22	
1550	–	18.17	5.93	0.052	5.34	37.2	–	600	50.23	
1555	–	18.14	5.93	0.052	5.31	37.0	19.5	600	50.21	
1600	–	17.59	5.86	0.049	5.85	37.2	18.2	600	50.20	
1605	10 Gal	17.54	5.77	0.047	5.77	38.8	17.5	600	50.20	
1610	–	17.51	5.84	0.046	4.07	32.6	17.1	600	50.20	
1615	–	17.71	5.86	0.046	3.61	30.8	17.4	600	50.21	
1620	–	17.79	5.86	0.045	3.58	29.8	16.4	–	50.19	
1625	–	17.96	5.85	0.045	3.40	28.1	15.9	600	50.23	
1630	15.5 Gal	17.58	5.84	0.043	3.23	27.1	15.1	600	50.21	
1640 Sample Time										

1,4-Dioxane samples associated with this sample collection record (6/20/16) were lost by the currier. The well was resampled for 1,4-Dioxane on 6/24/16.

Well ID: RE129D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 20 / 16
Time: Start 1230 am/pm
Finish 1430 am/pm
Project No: 60266526
Site Location: Whitebirch
Weather Conds: Sunny 85°
Collector(s):

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

a. Total Well Length 71.5
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 25.81
d. Calculated System Volume (see back) 13.1 gal - 26 ft screen

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	87546
LaMotte ~~Hanna~~	2020 WE	63616

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
1245	0 N							800		
1310	–	17.37	4.81	0.032	1.04	239.1	48.1	700	26.14	Cloudy
1315	5 Gal	17.53	4.73	0.031	0.96	246.1	39.60	700	26.15	
1320		17.52	4.69	0.031	0.80	251.0			26.12	
1325		17.50	4.68	0.031	0.78	251.6	29.8	700	26.12	
1330		17.53	4.70	0.030	0.68	251.2				

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)

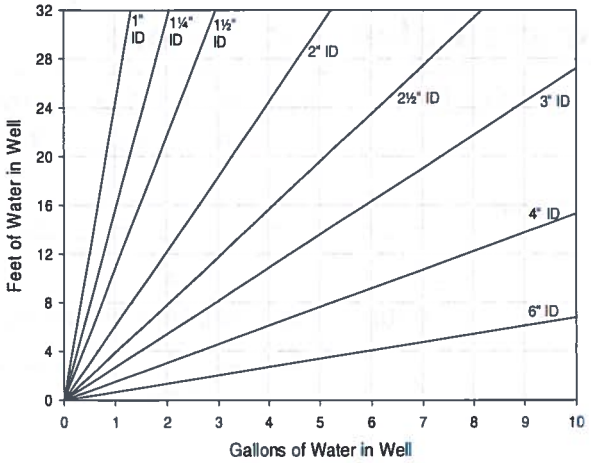
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE129D1GW-062016	40-mL vials	3	HCl	VOCs	1400
	1-L amber	2	none	1,4-Dioxane	

Comments: hit bottom, 25 ft too long

Signature: Paul Kreidt
Date: 6/20/16

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: RE129A1

(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	10gal	17.45	4.73	0.030	0.66	248.7	21.9	200	26.10	
1340		17.46	4.68	0.030	0.65	251.6				
1345		17.56	4.67	0.030	0.63	248.1	20.7		26.05	
1350	12gal	17.43	4.69	0.030	0.59	245.8	22.1			
1355	13.5gal	17.42	4.75	0.030	0.57	239.1				
1400										Sample

1,4-Dioxane samples associated with this sample collection record (6/20/16) were lost by the currier. The well was resampled for 1,4-Dioxane on 6/24/16.

Well ID: RE129D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Whitehorch
Weather Conds: Sunny 85°

Date: 6/ 20 /16

Time: Start 1305 am/pm
Finish 1300 am/pm

Collector(s):

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

a. Total Well Length 830

b. Water Table Depth 25.41

c. Length of Water Column _____ (a-b)

d. Calculated System Volume (see back) 13.1 gal 20ft screen

Casing Diameter/Material 4-inch PVC

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
1310		17.98	3.89	0.029	3.35	177.5	–	650	25.95	Faint/None
1315		17.79	3.76	0.029	2.96	182.1	27.5	650	25.95	"
1320		17.50	4.06	0.028	2.02	171.3	–	650	25.96	"
1325		17.31	4.27	0.028	1.66	164.3	27.7	650	25.96	"
1330		17.19	4.37	0.027	1.52	163.4	–	650	25.96	"
1335	5 gal	17.13	4.56	0.027	1.39	158.9	40.9	625	25.96	"

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

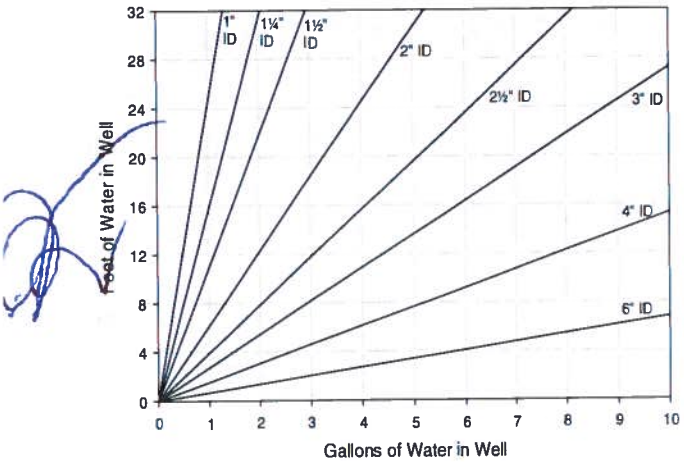
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE129D2-GW-062016	40-mL vials	3	HCl	VOCs	1420
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaeuto

Date 6/20/16

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: RE129D2

(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
1340		17.04	4.67	0.027	1.29	153.6	–	625	25.96	foggy / none
1345		17.02	4.72	0.027	1.20	151.1	35.7	625	25.93	"
1350		16.94	4.77	0.026	1.05	148.7	–	600	25.93	"
1355		16.85	4.82	0.027	1.02	146.5	32.9	600	25.93	"
1400	10gal	16.86	4.87	0.026	0.94	143.1	–	600	25.93	"
1405		16.67	4.85	0.026	0.93	143.3	38.6	600	25.92	"
1410		16.49	4.84	0.026	0.83	140.8	–	600	25.91	"
1415	13gal	16.59	4.84	0.026	0.79	141.0	36.2	600	25.91	"
1420										Sample

Well ID: RE126D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6/ 21 /16
Time: Start 750 am/pm
Finish 1015 am/pm
Project No: 60266526
Site Location: Lynn South Nassau
Weather Conds: cloudy 75°
Collector(s): SC

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

a. Total Well Length 525
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC

b. Water Table Depth 47.02
d. Calculated System Volume (see back) 13.1 gal - 20ft screen

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	78600
~~Hanna~~ LaMotte	2020	63616

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
810	ON									
820		15.83	6.84	0.075	6.63	103.0	–	500	46.14	clear/none
825		15.51	6.60	0.071	7.27	108.4	6.73	500	46.14	"
830		15.35	6.27	0.070	7.18	114.6				
835		15.34	6.07	0.069	7.21	118.5				
840		15.37	5.87	0.071	7.13	119.9		600		

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)

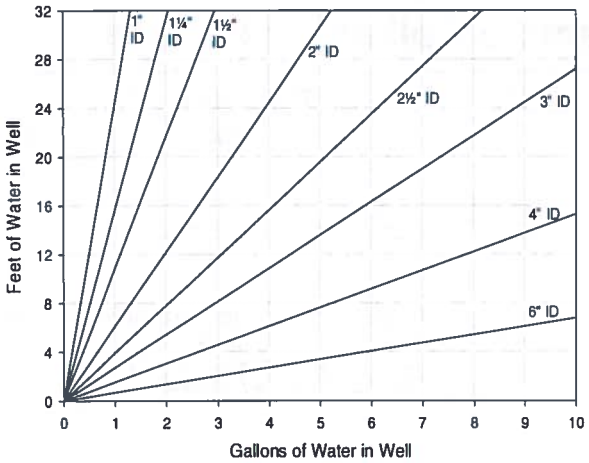
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D1-GW-062116	40-mL vials	3	HCl	VOCs	940
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Knott
Date 6/21/16

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: RE126P1

(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
845	5gal	15.33	5.80	0.070	7.09	119.8	3.46		47.14	
850		15.30	5.73	0.070	6.96	120.6				
855		15.39	5.70	0.070	6.88	121.4	2.19			
900		15.37	5.68	0.070	6.99	122.4		600		
905		15.29	5.68	0.070	6.99	123.7				
910		15.25	5.67	0.070	6.92	124.6	1.88			
915	10gal	15.23	5.66	0.070	7.01	125.5		600		
920		15.26	5.66	0.070	6.91	126.4	1.85			
925		15.26	5.67	0.070	6.89	126.9				
930		15.23	5.68	0.070	6.87	126.8	2.31	600		
935	13gal	15.23	5.68	0.070	6.95	127.0			46.37	
940										Sample

Well ID: RE126D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 21 / 16
Time: Start 750 am/pm
Finish 1015 am/pm
Project No: 60266526
Site Location: Lynn South Nassau
Weather Conds: cloudy 75°
Collector(s): F. Bell

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

a. Total Well Length 580
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 47.69
d. Calculated System Volume (see back) 13.1 gal - 20ft screen

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	08L100232
LaMotte ~~Hanna~~		6336 1 6

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
825										
845	—	16.07	2.05	0.087	6.33	433.7	—	600	47.7	Clear
850	—	15.03	1.17	0.082	4.27	406.7	3.48	600	47.83	
855	—	14.92	2.53	0.080	4.29	352.8	4.70	600	47.83	
0900	—	14.88	3.57	0.079	3.59	306.6	—	600	47.84	
0905	—	14.93	3.31	0.088	3.28	285.5	1.94	600	47.83	

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)

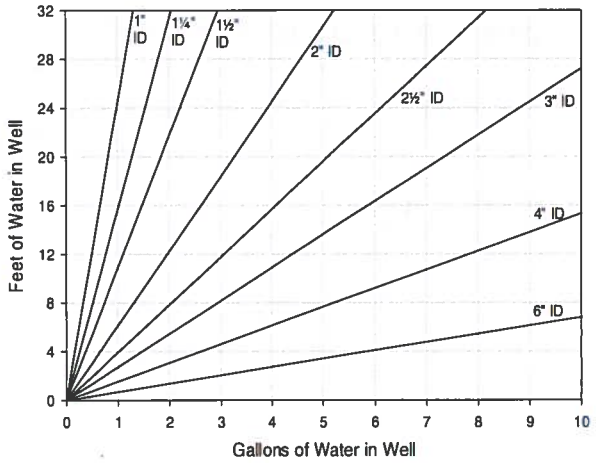
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D2-GW-062116	40-mL vials	3	HCl	VOCs	1000
RE126D2-GW-062116	1-L amber	2	none	1,4-Dioxane	1000

Comments

Signature Paul Kenoty
Date 6/20/16

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: RF126D2

(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
0910	5Gal	14.75	4.31	0.089	2.73	271.4	1.84	600	47.84	Clear / None
0915	–	14.68	4.58	0.089	2.55	260.4	–	600	–	"
0920	–	14.76	4.78	0.089	2.53	249.7	1.55	600	47.85	"
0925	–	14.78	5.08	0.089	2.40	232.8	–	600	–	"
0930	–	14.72	5.09	0.089	2.33	231.9	1.62	600	47.85	"
0935	–	14.87	5.27	0.089	2.31	219.8	–	600	–	"
0940	10gal	14.88	5.36	0.089	2.25	214.1	1.88	600	47.85	"
0945	–	14.90	5.40	0.089	2.20	210.0	–	600	–	"
0950		14.91	5.49	0.088	2.14	201.6	2.38		47.92	
955		14.92	5.53	0.088	2.13	196.8		600	47.92	
1000										Sample

Well ID: RE126D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 21 / 16 Time: Start 750 am/pm
Project No: 60266526 Finish 1015 am/pm
Site Location: Lynn & Smith Nassau
Weather Conds: cloudy 75° Collector(s):

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

a. Total Well Length 665 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 47.38 d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	73518
~~LaMotte Hanna~~	2020	63616

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
825	0#									
830		16.34	5.60	0.043	5.75	200.2		600	47.45	
835		15.29	5.05	0.039	4.92	204.6				
840		15.04	4.75	0.034	4.72	190.4	10.07		47.48	
845		14.97	4.66	0.031	4.73	185.4			47.48	
850		15.35	4.76	0.030	4.34	178.9				

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)

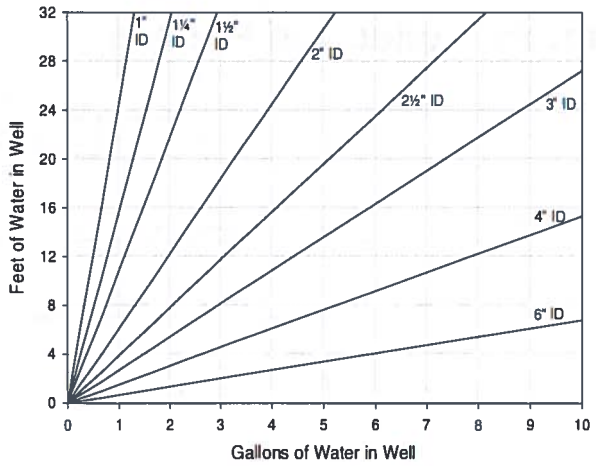
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D3-GW-062116	40-mL vials	3	HCl	VOCs	945
	1-L amber	2	none	1,4-Dioxane	

Comments: permanent screen

Signature: Paul Karaffa Date: 6/21/16

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: RE126P3

(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
855	5gal	15.33	4.88	0.030	4.34	174.5	6.02	600	47.48	
900		15.47	4.92	0.030	4.30	171.4				
905		15.10	4.94	0.030	4.27	169.9			47.47	
910		15.24	4.92	0.030	4.21	170.2	4.80			
915		15.20	4.97	0.029	4.14	168.3		600	47.49	
920		15.45	4.99	0.030	4.25	167.8	4.21			
925		15.88	5.06	0.030	4.02	164.3			47.49	
930		15.96	5.05	0.031	4.03	165.0	4.27	600	47.49	
935		16.05	5.06	0.031	3.89	164.1				
940	13gal	15.92	5.07	0.030	3.99	163.4	4.54		47.49	
948										Sample

Well ID: RE104D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 21 / 16 Time: Start ~~750~~ 1115 am/pm
Project No: 60266526 Finish 1330 am/pm
Site Location: ~~Bremner~~, Lynn, South Nassau
Weather Conds: cloudy 75° Collector(s):

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

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

b. Water Table Depth ~~47.02~~ 37.68 d. Calculated System Volume (see back) 13.1 gal - 20ft screen

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	73518
LaMotte	~~Hanna~~	2020	63616

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
1130	8H									
1140		15.93	3.87	0.058	2.59	214.6		650	37.69	
1145		15.81	4.08	0.060	3.45	196.1		650	37.68	
1150		15.68	4.24	0.059	3.35	190.6	3.29		37.68	
1155		15.61	4.42	0.058	3.30	184.1			37.67	
1200	5gal	15.80	4.50	0.059	3.19	181.5		650		

(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.

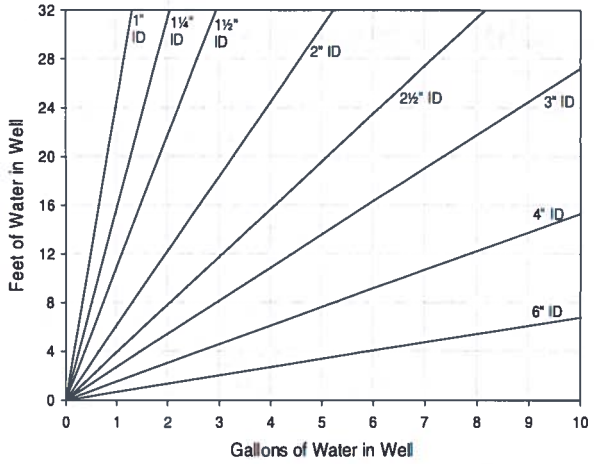
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D1-GW-062116	40-mL vials	3	HCl	VOCs	1245
RE104D1-GW-062116	1-L amber	2	none	1,4-Dioxane	1245

Comments

Signature Paul Kneeth Date 6-21-16

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: ~~RE~~ RE104D1-GW-062116

(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
1205		15.69	4.55	0.058	3.22	181.6	5.12	650	37.70	
1210		15.70	4.55	0.058	3.04	181.9	5.02			
1215		15.64	4.57	0.058	3.16	182.1			37.68	
1220		15.73	4.61	0.058	3.09	181.4	3.50			
1225	10gal	15.69	4.62	0.058	3.02	180.9		650	37.69	
1230		15.72	4.63	0.058	3.12	180.9				
1235	12gal	15.69	4.63	0.058	3.10	180.9	4.43		37.67	
1240	13gal	15.54	4.63	0.058	3.00	181.1				
1245										Sample

Well ID: RE104D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record 1130

Client: Navy NWIRP Bethpage Date: 6 / 21 / 16 Time: Start ~~750~~ am/pm
Project No: 60266526 Finish 1330 am/pm
Site Location: ~~Lynn & South Nassau~~ Hilltop
Weather Conds: cloudy 75° Collector(s): SC

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

a. Total Well Length 73.5 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth * ~~47.64~~ d. Calculated System Volume (see back) 13.1 gal, 20ft screen

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	78608
	~~LaMotte~~ ~~Hanna~~	2020	63616

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
1145	ON									
1150		15.62	5.40	0.021	8.93	107.9	–	600	–	clear / None
1155		15.29	4.95	0.021	6.91	132.2	4.01	600	–	"
1200		15.20	4.40	0.020	5.60	161.3	–	600	–	"
1205		15.14	4.47	0.020	5.75	159.7	10.21	600	–	"
1210		15.14	4.71	0.019	6.19	151.3	–	600	–	"

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)

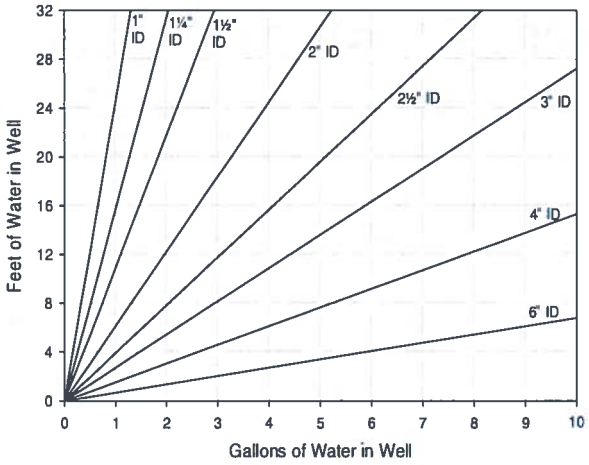
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D2-GW-062116	40-mL vials	3	HCl	VOCs	1300
RE104D2-GW-062116	1-L amber	2	none	1,4-Dioxane	

Comments * IP broken.

Signature Paul Karaffa Date 6/21/16

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: RE104 D2

(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
1215		15.10	5.01	0.018	6.41	139.4	2.41	600	–	clear / None
1220		15.07	5.21	0.018	6.36	131.8	–	600	–	"
1225		15.07	5.32	0.018	6.34	128.7	4.43	600	–	"
1230		15.04	5.34	0.018	6.35	127.0	–	600	–	"
1235		14.96	5.45	0.018	6.42	126.1	6.30	600	–	"
1240	10 Gal	14.94	5.49	0.018	6.31	126.4	–	600	–	"
1245		15.00	5.49	0.018	6.25	126.4	6.44	600	–	"
1250		14.97	5.51	0.018	6.40	126.9	–	600	–	"
1255		15.02	5.53	0.018	6.37	126.9	6.51	600	–	" "
1300		15.00	5.53	0.018	6.40	126.8	6.57	600	–	"
1300										Sample

Well ID: RE04D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record 1150

Client: Navy NWIRP Bethpage Date: 6 / 21 / 16 Time: Start ~~750~~ am/pm
Project No: 60266526 Finish 1300 am/pm
Site Location: ~~Gym & South Nassau~~ Hilltop
Weather Conds: cloudy 75° Collector(s): SC

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 42.20 d. Calculated System Volume (see back) 13.1 gal, 20ft screen

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	82546
~~LaMotte Hanna~~	2020	63616

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
1125	ON									
1150	–	15.90	4.27	0.017	5.52	290.2	–	650	41.68	clear/None
1155	–	15.78	4.29	0.016	5.82	296.6	3.61	650	41.68	"
1200	10 gal	15.78	4.34	0.016	5.90	296.1	–	650	41.68	"
1205	–	15.70	4.32	0.016	5.88	297.2	6.90	650	41.68	"
1210	–	15.79	4.33	0.016	5.84	297.7	–	650	41.69	"

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)

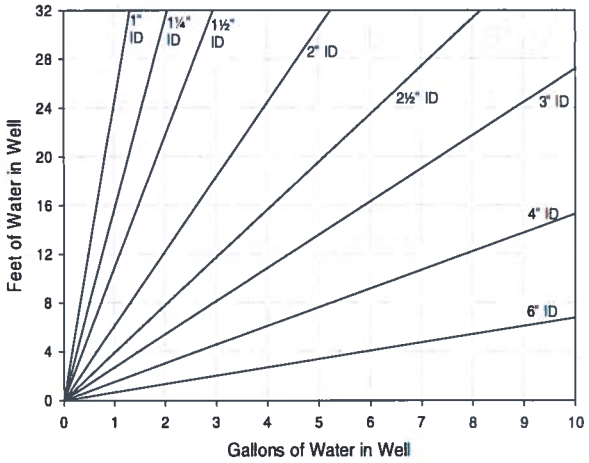
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE04D3-GW-062116	40-mL vials	3	HCl	VOCs	1250
RE04D3-GW-062116	1-L amber	2	none	1,4-Dioxane	1250

Comments

Signature Paul Kaczko Date 6/21/16

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

(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
1215		15.74	4.32	0.016	5.80	298.8	6.39	650	41.61	clear/None
1220		15.73	4.35	0.016	5.81	297.3	–	650	41.60	"
1225		15.74	4.43	0.016	5.84	293.5	7.14	650	41.60	"
1230		15.71	4.40	0.016	5.77	294.1	–	650	41.55	"
1235		15.57	4.46	0.016	5.82	289.3	11.3	650	41.50	"
1240		15.51	4.48	0.016	5.85	284.9	–	650	41.47	"
1245		15.67	4.48	0.016	5.84	285.5	12.7	650	41.47	"
1250										Sample

Well ID: TT101D

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 21 / 16 Time: Start 1320 am/pm
Project No: 60266526 Finish 1515 am/pm
Site Location:
Weather Conds: sunny 85° 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 34.78 d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	82546
~~Hanna~~	2020	63616

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
1335	0.1									
1340		16.16	4.28	0.072	1.08	291.9		900	~~37.41~~	37.78
1345		16.09	4.31	0.072	0.65	294.2			34.78	
1350		16.04	4.41	0.073	0.48	279.2		900	34.82	
1355	5 gal	16.08	4.37	0.073	0.43	282.8	1.71			
1400		16.07	4.36	0.073	0.39	284.2		900		

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)

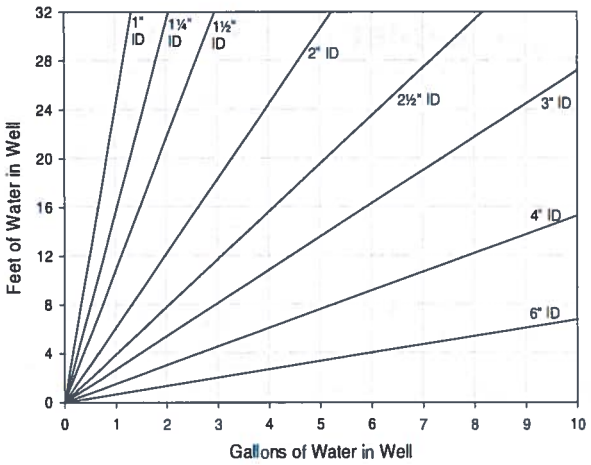
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D-GW-062116	40-mL vials	3	HCl	VOCs	1440
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kraft Date 6-21-16

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: TT101D

(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		16.02	4.36	0.073	0.36	285.9	1.33		34.82	
1410		15.96	4.36	0.074	0.34	287.2				
1415	10 gal	15.96	4.34	0.073	0.32	287.9	1.16		34.82	
1420		15.91	4.34	0.074	0.32	288.5				
1425		15.89	4.32	0.074	0.31	291.0	2.67		34.82	
1430	13 gal	15.84	4.32	0.074	0.28	292.0				
1440										Sample

Well ID: TT101D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 21 / 16
Time: Start 1330 am/pm
Finish 1515 am/pm
Project No: 60266526
Site Location: Bethpage, NY
Weather Conds: Sunny
Collector(s): F. B

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

a. Total Well Length 595
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 36.
d. Calculated System Volume (see back) 13.1 gal, 20ft screen

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	78[illegible]660
~~Hanna~~ LaMotte	2020	63616

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
1345	—	15.92	5.06	0.072	1.121	137.1	3.43	900	36.80	clear
1350	—	16.24	5.06	0.073	0.86	129.4	0.62	700	36.80	"
1355	Gal 5	16.24	5.05	0.073	0.91	123.7	1.29	700	36.78	"
1400	—	16.29	5.01	0.074	1.06	120.3	—	700	36.78	Clear
1405	—	16.27	5.01	0.074	1.00	119.9	1.40	700	36.78	
1410	—	16.28	5.01	0.074	1.02	116.1	—	700	36.77	

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)

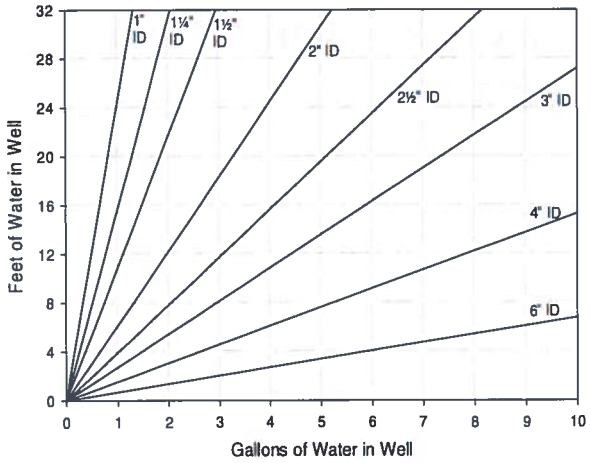
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D1-GW-062116	40-mL vials	3	HCl	VOCs	1500
TT101D1-GW-062116	1-L amber	2	none	1,4-Dioxane	1500
Dup1-GW-062116	40mL vials	3	HCl	VOCs	1500
Dup1-GW-062116	1L amber	2	none	1,4 Dioxane	1500

Comments
Duplicate

Signature Paul Kaneto
Date 6/21/16

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: TT 10101

(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
1415	–	16.26	5.01	0.074	1.05	115.7	.68	700	36.79	
1420	–	16.29	5.01	0.074	1.00	114.0	–	700	36.80	
1425	–	16.25	5.00	0.074	0.97	109.3	–	700	36.79	
1430	10 Gal	16.27	5.01	0.074	0.98	109.2	0.40	700	36.80	
1435	–	16.25	5.01	0.073	0.98	105.7	–	700	36.80	
1440	–	16.27	5.01	0.073	0.93	105.5	–	700	36.79	
1445	–	16.28	5.01	0.073	0.97	105.2	0.56	700	36.78	
1450	13.5 Gal	16.29	5.01	0.073	0.94	105.0	0.48	700	36.78	
Sample Time			1500							

Well ID: TT10102

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 21 / 16 Time: Start 1320 am/pm
Project No: 60266526 Finish 1515 am/pm
Site Location:
Weather Conds: Sunny 85° 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 ~~34.78~~ 37.42 d. Calculated System Volume (see back) 13.1 gal, 20ft screen

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	73518
	LaMotte ~~Hanna~~	2020	83616

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
~~1230~~	0.4							800		
1240		15.99	4.16	0.032	1.14	229.1		800	~~34.78~~	37.42
1245		16.06	4.50	0.032	1.57	203.1			37.42	
1250		16.03	4.64	0.032	1.82	190.3				
1255	5 gal	16.04	4.69	0.031	2.00	186.1	0.62	800	37.42	
~~1300~~		16.00	4.78	0.032	2.84	180.1				

(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:

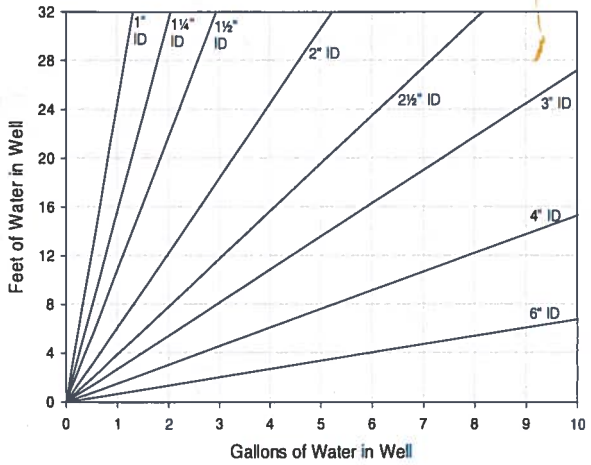
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT10102-GW-062116	40-mL vials	8	HCl	VOCs	1445
	1-L amber	2	none	1,4-Dioxane	1445

Comments MS, MSD

Signature Paul Kraeth Date 6-21-16

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: TT 1010 2

(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		15.99	4.77	0.032	3.40	177.6	2.75		37.42	
1410		15.96	4.79	0.032	3.67	175.8				
1415	10 gal	15.98	4.80	0.032	3.45	173.6	0.61		37.42	
1420		15.97	4.81	0.032	3.90	172.3				
1425		15.94	4.84	0.032	4.13	170.2	0.87		37.42	
1430		15.94	4.85	0.032	4.16	168.6				
1435	13 gal	15.94	4.85	0.032	4.19	168.1				
1440		15.94	4.86	0.032	4.15	665.8			37.42	
1445										Sample

Well ID: RE122D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 22 / 16
Time: Start 750 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: Gurbis
Weather Conds: Sunny 75°
Collector(s): F. Bell

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

a. Total Well Length 545
c. Length of Water Column ____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 43.83
d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	05D2372 AK
LaMotte ~~Hanna~~	~~2102020~~	63616

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
830	Start pump time									
845	–	16.02	4.93	0.073	7.49	179.0	0.37	600	43.95	Clear
850	–	15.95	4.92	0.072	6.35	176.9	1.82	700	43.92	Clear
855	–	15.94	5.04	0.072	5.36	171.8	2.06	700	43.93	"
0900	–	15.88	5.20	0.072	4.75	165.2	–	700	43.98	"
0905	5 Gal	15.82	5.30	0.072	4.52	160.6	1.11	700	43.	"

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

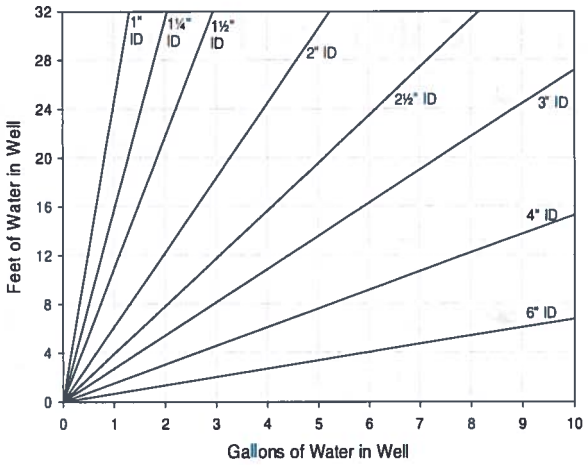
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D1GW-062216	40-mL vials	3	HCl	VOCs	1000
RE122D1GW-062216	1-L amber	2	none	1,4-Dioxane	1000

Comments

Signature

Date 6/22/16

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
0910	~~–~~	15.86	5.35	0.072	4.41	158.3	–	700	43.93	Clear
0915	–	15.86	5.35	0.072	4.42	158.1	–	700	43.92	"
0920	–	15.86	5.37	0.072	4.38	154.5	1.62	700	43.94	"
0925	–	15.84	5.39	0.072	4.24	151.2	0.91	700	43.95	"
0930	10 Gal	15.83	5.40	0.072	4.19	144.1	1.00	700	43.94	"
0935	–	15.84	5.41	0.073	4.01	131.6	–	700	43.95	"
0940	–	15.81	5.43	0.073	3.95	126.0	0.96	700	43.93	"
0945	–	15.85	5.45	0.073	3.91	125.6	–	700	43.92	"
0950	13.5 Gal	15.85	5.44	0.073	3.95	125.2	0.92	700	43.93	"
Sample 1000										

Well ID: RE122D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 22 / 16
Time: Start 750 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: Curtis
Weather Conds: sunny 75°
Collector(s): PK

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

a. Total Well Length 61.5
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 44.20
d. Calculated System Volume (see back) 13.1 gal 20 ft screen

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	82546
~~LaMotte~~ ~~Hanna~~	2020	63616

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
825	ON							650		
835		16.56	6.85	0.076	14.8	477.8			43.33?	WL not working
840		16.53	1.99	0.075	6.61	418.6			44.38	
845		16.76	3.04	0.074	4.83	367.1	1.80	650		
850		16.84	3.50	0.074	4.73	343.1				
855	5gal	16.96	3.88	0.075	4.67	326.2			44.54	

(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.

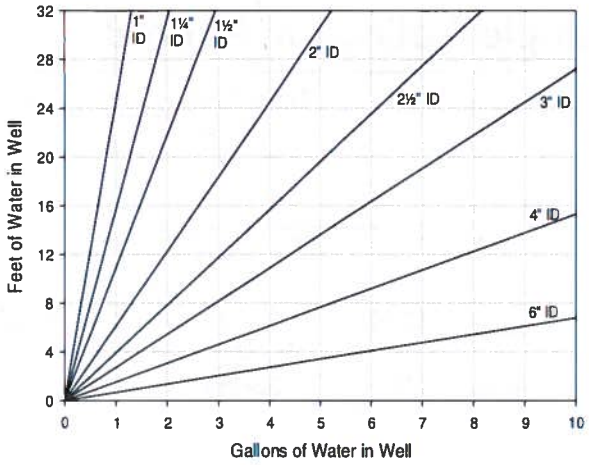
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D2-GW-062216	40-mL vials	3	HCl	VOCs	950
RE122D2-GW-062216	1-L amber	2	none	1,4-Dioxane	950

Comments: water level meter is giving conflicting numbers

Signature: Paul Kruetz
Date: 6-22-16

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: RE12202

(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
900		17.47	4.61	0.020	1.65	173.1		650	43.53	
905		17.38	4.37	0.075	4.21	302.9				
910		17.32	4.41	0.076	4.68	302.2	0.54		~~44.58~~	43.58
915		17.51	4.50	0.076	4.70	298.6	~~0.75~~			
920		17.42	4.53	0.076	4.77	297.9	0.75	650	43.57	
925	10gal	17.38	4.57	0.076	4.75	297.2				
930		17.47	4.56	0.076	5.34	298.1			43.58	
935		17.58	4.62	0.076	5.35	295.9	2.03			
940	13gal	17.60	4.65	0.076	5.32	294.9			43.54	
950										Sample

Well ID: RE12D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 22 / 16
Time: Start 750 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: Curtis & Hayden
Weather Conds: sunny 75°
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 44.91
d. Calculated System Volume (see back) 13.1 gal, 20ft screen

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	73518
LaMotte ~~Hanna~~		63616

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
820	ON							550	44.83	
835		17.94	3.99	0.023	1.80	223.1				
840		17.79	3.99	0.022	1.65	218.6			44.88	
845		18.85	4.40	0.021	1.56	192.7	16.1	500		
850		19.29	4.64	0.021	1.53	177.4				
855		19.30	4.64	0.021	1.50	172.1			44.88	

(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.

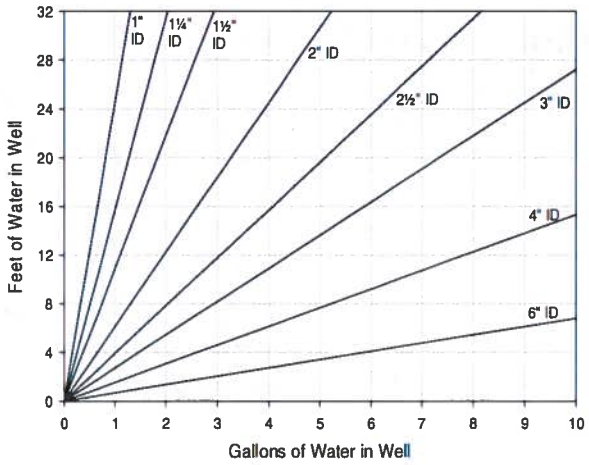
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12D3-GW-062216	40-mL vials	3	HCl	VOCs	1040
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Karatt
Date 6-22-16

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: RE122D3

(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
900	5gal	17.23	4.23	0.075	1.64	309.8		450	44.88	
905		19.97	4.61	0.020	1.61	172.4				
910		20.25	4.62	0.020	1.68	170.2	13.4		44.88	
915		20.85	4.70	0.020	1.67	168.2				
920		21.16	4.71	0.020	1.61	164.9	12.4		44.88	
925		21.42	4.73	0.021	1.57	169.9		450	44.87	
930		21.68	4.72	0.020	1.57	169.2	15.2		44.87	
935		21.89	4.73	0.021	1.54	168.9				
940		22.12	4.71	0.021	1.54	169.3				
945		22.24	4.72	0.021	1.55	168.7			44.88	
950	10gal	22.25	4.71	0.021	1.51	168.0	12.8			
955		22.45	4.70	0.021	1.51	167.4	12.8		44.90	
1000		22.54	4.69	0.021	1.53	169.1	12.2	300		drop off in flowrate
1005		23.75	4.76	0.022	1.58	165.1	13.1			
1010		23.21	4.71	0.022	1.63	167.1	11.7		44.88	
1015	12gal	23.15	4.64	0.021	1.57	170.8	13.0			
1020		23.43	4.66	0.021	1.65	170.4	13.0		44.87	
1025		23.50	4.66	0.022	1.65	168.4	11.3			
1030	13gal	23.50	4.67	0.022	1.62	168.2	12.1			
1040										Sample

Well ID: RE120D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 22 / 16
Time: Start 1130 am/pm
Finish 1410 am/pm
Project No: 60266526
Site Location: Shelly
Weather Conds: sunny 80°
Collector(s): PK

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

a. Total Well Length 65.5
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 38.64
d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	82546
~~Hanna~~ LaMotte	2020	63616

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
1200	ON									
1205		18.35	4.86	0.094	10.71	270.4		650		
1210		18.12	2.75	0.091	5.85	370.6			38.74	
1215		18.11	3.64	0.090	4.67	320.1	2.87	600		
1220		17.92	3.82	0.088	2.30	304.9				
1225		17.96	4.03	0.089	2.43	302.3	1.73	600	38.75	

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)

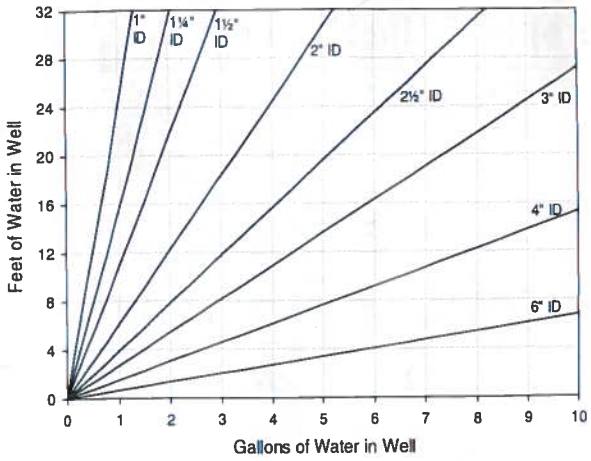
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D1-GW-062216	40-mL vials	3	HCl	VOCs	1330
	1-L amber	2	none	1,4-Dioxane	1330

Comments

Signature Paul Kaeth
Date 6-22-16

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: RE12001 @ 12:00

(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
1230	5gal	17.72	4.18	0.088	2.41	301.8	0.72	600	38.73	
1235		18.86	4.27	0.088	2.36	301.1				
1240		17.91	4.33	0.089	2.33	300.3			38.74	
1245		17.88	4.37	0.089	2.30	300.1	0.90			
1250		17.98	4.43	0.089	2.25	299.3			38.76	
1255		17.97	4.46	0.089	2.24	300.0				
1300	10gal	17.87	4.46	0.089	2.22	301.1	0.71	600	38.74	
1305		17.88	4.48	0.089	2.18	301.1				
1310		17.87	4.51	0.089	2.14	301.1	0.86		38.73	
1315	12gal	17.91	4.51	0.089	2.13	302.0				
1320		17.83	4.52	0.089	2.15	303.0	0.67		38.75	
1325	13gal	17.81	4.53	0.088	2.12	303.2		600	38.78	
1330										Sample

Well ID: RE120D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 22 / 16
Time: Start 1140 am/pm
Finish 1410 am/pm
Project No: 60266526
Site Location: Shelly
Weather Conds: Sunny 80°
Collector(s):

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

a. Total Well Length 713
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth _____
d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	78600
~~Hanna~~ Cole Parmer	2020	63616

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 pump		1200								
1210	–	17.78	5.26	0.058	5.77	128.7	~~4.73~~ 4.64	250	~~39.97~~	Clear
1215	–	17.70	5.12	0.058	5.76	131.3	1.80	500	~~39.95~~ 39.90	Clear
1220	–	17.61	4.95	0.060	5.92	135.4	1.27	500	~~39.95~~ 39.95	Clear
1225	–	17.7	4.94	0.061	6.23	136.7	–	500	–	"
12:30	5 Gal	17.82	4.96	0.061	6.18	136.8	1.39	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)

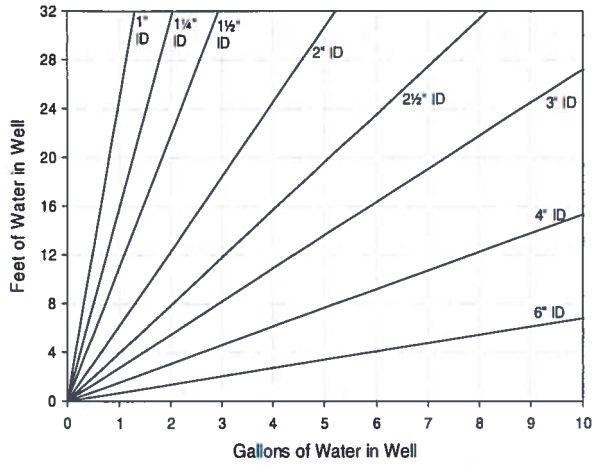
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D2-GW-062216	40-mL vials	3	HCl	VOCs	1345
	1-L amber	2	none	1,4-Dioxane	

Comments *Non-working IP*

Signature Paul Kwartz
Date 6/22/16

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: RE120 D2

(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
1235	–	18.19	5.01	0.061	5.96	137.5	–	500	38.58	–
1240	–	18.24	5.04	0.061	5.84	138.7	1.03	500	38.55	–
1245	–	18.34	5.06	0.061	5.75	139.4	–	500	38.53	–
1250	–	18.25	5.07	0.061	5.73	139.9	1.03	500	38.54	–
1255	–	18.28	5.07	0.061	5.70	140.4	–	500	38.54	–
1300	–	18.17	5.08	0.062	5.67	141.8	0.93	500	38.53	–
1305	–	18.08	5.11	0.062	5.22	142.5	–	500	38.53	–
1310	–	18.45	5.10	0.062	5.10	142.6	0.73	500	38.55	Clear
1315	10 Gal	17.85	5.09	0.062	4.75	144.8	–	500	38.55	"
1320	–	17.75	5.09	0.061	4.74	145.7	0.59	500	38.58	Clear
1330	–	17.78	5.09	0.062	4.64	147.4	0.55	500	38.58	

Well ID: RE12003

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 22 / 16
Time: Start 1140 am/pm
Finish 1410 am/pm
Project No: 60266526
Site Location: Shelly
Weather Conds: Sunny 80°
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 _____
d. Calculated System Volume (see back) 13.1 gal 20 ft screen

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	739518
	La Motte ~~Hanna~~		63616

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
1210	–	20.15	3.84	0.021	5.35	243.6	9.89	500	39.11	Clear
1215	–	18.04	3.56	0.020	4.04	240.3	6.86	500	39.12	Clear
1220	–	17.84	3.91	0.020	2.41	208.6	5.36	500	39.13	"
1225	–	17.83	4.05	0.020	2.11	198.0	–	500	39.18	"
12:30	–	17.77	4.08	0.019	2.05	195.8	6.13	500	39.12	"
12:35	–	17.68	4.15	0.020	2.01	190.3	–	500	39.13	"

(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:

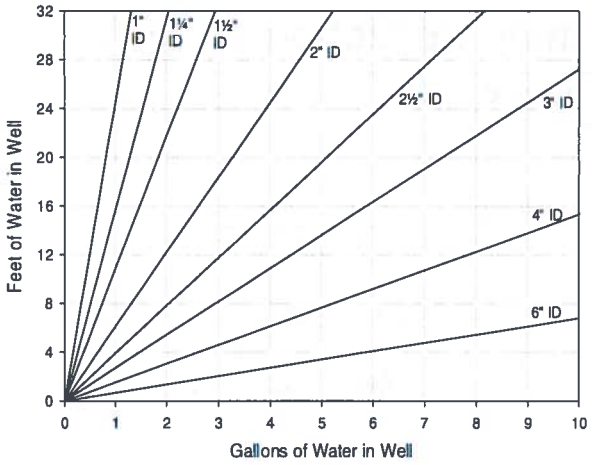
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12003-GW-062216	40-mL vials	3	HCl	VOCs	13:35
	1-L amber	2	none	1,4-Dioxane	13:35

Comments ~~Non-working Missing ZP Nut~~

Signature Paul Kenoth
Date 6/22/16

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: RE122-D3

(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
1240	5Gal	17.75	4.18	0.022	2.05	189.7	3.58	500	39.13	
1245	–	17.74	4.23	0.022	2.01	187.0	4.11	500	39.15	
1250	–	17.70	4.25	0.022	2.03	186.1	–	500	39.14	
1255	–	17.72	4.24	0.022	2.03	186.0	3.71	500	39.14	
1300	–	17.76	4.30	0.021	2.02	182.4	–	500	39.13	–
1305	–	17.75	4.33	0.021	2.01	179.3	2.35	500	39.13	
1310	–	17.26	4.31	0.021	2.79	182.4	–	700	39.16	
1315	10Gal	17.11	4.22	0.021	4.40	186.4	2.51	700	39.16	
1320	–	17.08	4.23	0.021	4.24	185.7	–	700	39.17	
1330	–	16.98	4.29	0.021	4.15	182.0	1.82	700	39.18	
1335	Sample time									

Well ID: RE103D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6/23/16
Time: Start 750 am/pm
Finish 1000 am/pm
Project No: 60266526
Site Location: Avoca
Weather Conds: partly cloudy 75°
Collector(s): 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 15 ft screen

b. Water Table Depth 41.86
d. Calculated System Volume (see back) 10 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	18513
	~~Hanna~~ LaMotte	2020	63616

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
810	0 H							600		
830		18.23	7.77	0.145	7.72	168.1		600	41.84	
835	5 gal	15.77	3.69	0.077	2.15	202.0	0.90		41.85	
840		15.67	3.80	0.077	2.12	194.7				
845		15.66	4.18	0.078	2.11	177.7	0.31	600	41.85	
850		15.65	4.33	0.077	2.10	171.3				

(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:

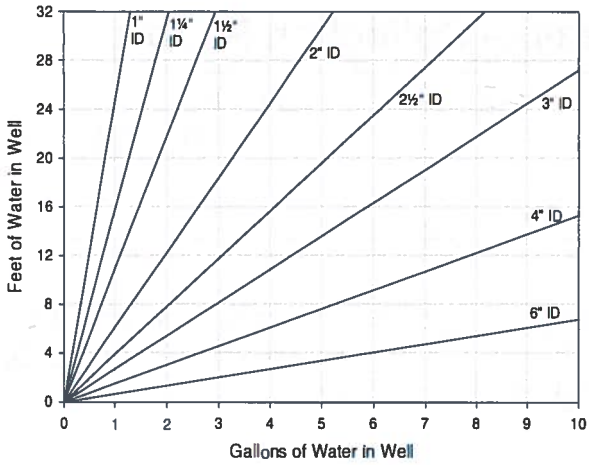
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D1-GW-062316	40-mL vials	3	HCl	VOCs	910
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kanitz
Date 6-23-16

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: RE103N1 at 8:10 15 ft screen

(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
855		15.67	4.45	0.078	2.09	165.7	0.40	600	41.85	
900		15.74	4.51	0.078	2.12	162.5				
905	10 gal	15.74	4.53	0.078	2.20	159.9	0.38		41.86	
910										sample

Well ID: RE103D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 23 / 16
Time: Start 750 am/pm
Finish 1040 am/pm
Project No: 60266526
Site Location: Avoca
Weather Conds: Overcast 70°F
Collector(s): JC

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 41.95
d. Calculated System Volume (see back) 13.1 gal ~~13.1 gal 4 gal~~ 15 ft screen

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	~~78~~513
~~Hanna~~	2020	63616

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
835	ON									
845		19.33	8.80	0.031	8.88	128.6	0.71	450	39.82	Clear /None
850		16.52	6.50	0.033	9.25	153.8	-	450	39.82	"
855		16.46	6.29	0.032	8.60	155.7	0.64	450	39.04	"
900		16.67	6.21	0.031	6.71	153.2	—	450	39.04	"
905		16.55	6.29	0.029	5.69	149.9	0.44	450	39.04	"

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

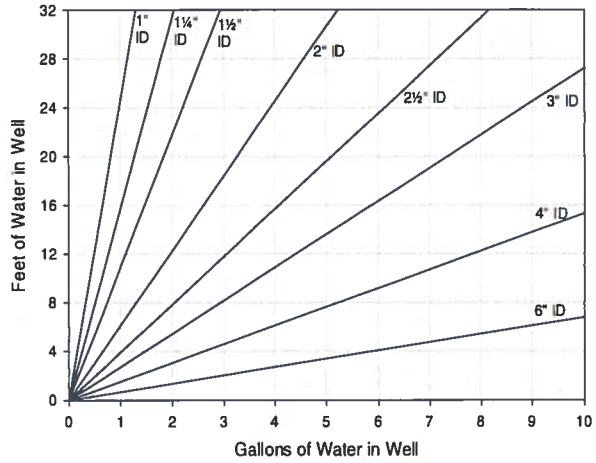
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D2-GW-062316	40-mL vials	3	HCl	VOCs	1025
RE103D2-GW-062316	1-L amber	2	none	1,4-Dioxane	1025

Comments

Signature

Date 6/23/16

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: RE103D2

(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
910							–	450	–	clear/None
915		16.48	6.09	0.034	5.44	145.5	0.79	450	38.68	"
920		16.52	6.10	0.033	5.75	125.7	–	450	–	"
930		16.63	6.15	0.031	5.95	110.1	0.84	450	38.68	"
935		16.45	6.16	0.030	6.09	102.3	–	450	38.68	"
940		16.44	6.17	0.029	6.15	98.8	0.91	450	38.68	"
950		16.53	6.20	0.028	6.15	98.3	–	450	38.68	"
1000		16.38	6.20	0.028	6.14	101.4	0.88	450	38.68	"
1005		16.43	6.20	0.029	6.11	105.6	–	450	38.68	"
1010		16.66	6.21	0.029	6.09	108.5	0.78	450	38.68	"
1015		16.74	6.22	0.030	6.05	109.6	—	450	38.64	"
1020		16.72	6.22	0.030	6.12	112.1	–	450	–	"
1025										SAMPLE

Well ID: RE103D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 23 / 16
Time: Start 750 am/pm
Finish 1000 am/pm
Project No: 60266526
Site Location: Avoca
Weather Conds:
Collector(s): MZ

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 41.95
d. Calculated System Volume (see back) 9.8gal 15ft screen

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 10 gal

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	78600
	~~Hanna~~ LaMotte	2020	63616

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
830		15.67	-6.13	0.022	5.85	570.1		800		
905										
910										
915										
920		15.57	3.16	0.023	2.41	203.9		800		
930		15.56	3.49	0.022	2.78	199.1	1.12	800	42.07	Clear/None

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

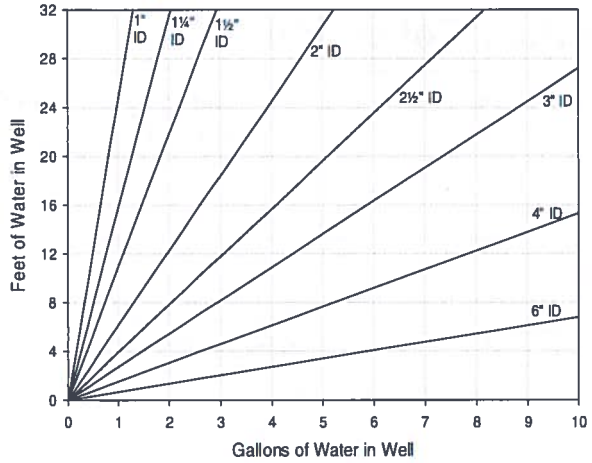
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D3-GW-062316	40-mL vials	3	HCl	VOCs	945
RE103D3-GW-062316	1-L amber	2	none	1,4-Dioxane	945
DUP2-GW-062316					

Comments DUPLICATE COLLECTED HERE @ 1030
- YSI issues, no parameter - until 920

Signature

Date 6/23/16

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: RE103D3

(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		15.56	3.56	0.023	2.77	195.8	–	800	42.07	clear / None
940		15.54	3.58	0.023	2.85	194.6	0.84	800	42.07	"
945										Sample

Well ID: RE13101

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 23 / 16
Time: Start 1130 am/pm
Finish 1 am/pm
Project No: 60266526
Site Location: Oriole
Weather Conds: Cloudy 80
Collector(s):

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

a. Total Well Length 455
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 38.56
d. Calculated System Volume (see back) 13.1gal 20ft screen

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	82546
~~LaMotte Hanna~~	2020	63616

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
1155	ON									
1205		16.69	3.62	0.097	5.48	325.9		650	38.58	
1210		16.34	4.15	0.095	2.71	313.4	2.25		38.58	
1215		16.41	4.54	0.095	3.13	309.6		650	38.57	
1220		16.33	4.60	0.095	5.08	312.9				
1225	5gal	16.27	4.64	0.095	4.51	319.8	3.11		38.58	

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)

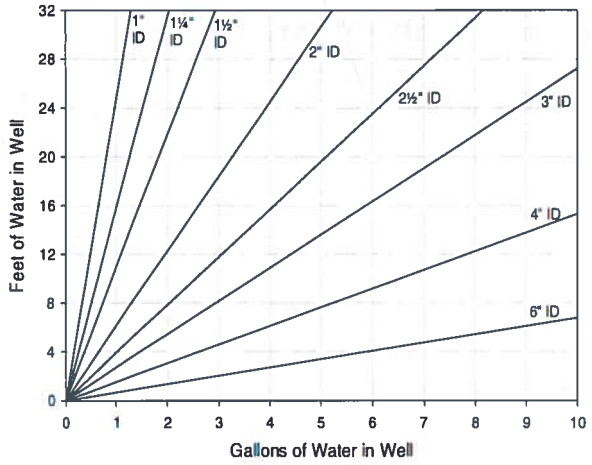
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13101-GW-062316	40-mL vials	3	HCl	VOCs	1320
	1-L amber	2	none	1,4-Dioxane	132

Comments: DO sensor will not stabilize, MS/MSD

Signature: Paul Kravath
Date: 6-23-16

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
1230		16.01	4.61	0.095	4.10	328.6		650	38.58	
1235		16.14	4.62	0.095	4.36	328.3	2.29			
1240		16.18	4.69	0.096	4.02	328.0			38.57	
1245		16.21	4.74	0.096	–	327.5				
1250		16.27	4.75	0.096	–	329.3				
1255	10gal	16.24	4.77	0.096	–	329.6	2.31		38.58	
1300		16.25	4.79	0.096	–	330.6		650		
1305		16.48	4.80	0.096	–	331.9	1.73		38.60	
1310		16.44	4.82	0.096	–	331.2				
1315	13gal	16.67	4.81	0.097	–	331.6		650	38.60	
1320										sample

Well ID: RE13102

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 23 / 16
Time: Start 1130 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: Triple
Weather Conds: Cloudy 80
Collector(s): _____

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

a. Total Well Length 595
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 40.21
d. Calculated System Volume (see back) 16.3gal 25ft screen

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	23518
Hanna		63616

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
1145	ON									
1200		16.20	4.03	0.054	3.82	198.1	30.1	500	39.35	Cloudy/None
1205		16.14	4.10	0.054	3.77	190.1	–	500	39.37	"
1210		16.06	4.12	0.054	3.56	186.5	19.5	500	39.37	"
1215		15.96	4.36	0.055	3.27	177.7	–	500	39.37	"
1220		15.93	4.54	0.056	3.19	172.9	14.8	500	39.37	"

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)

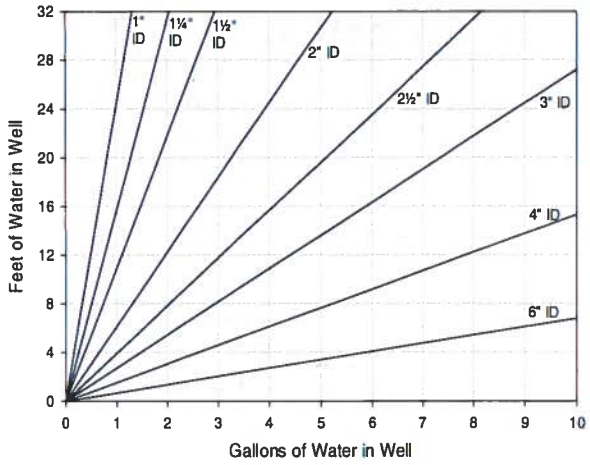
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13102-GW-062316	40-mL vials	3	HCl	VOCs	1355
RE13102-GW-062316	1-L amber	2	none	1,4-Dioxane	1357

Comments

Signature _____ Date 6-23-16

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: RE131D2

(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
1225		15.71	4.58	0.055	3.10	172.4	–	500	39.37	clearing / none
1230			4.58	0.055	2.07	171.1	–	500	39.37	"
1235		15.58	4.60	0.056	2.92	170.7	–	500	39.37	"
1240		15.61	4.73	0.055	2.82	169.1	–	500	39.38	"
1250		15.78	4.84	0.057	2.60	160.8	–	500	39.38	"
1300		15.82	4.90	0.057	2.36	156.3	–	500	39.38	"
1310		15.96	4.91	0.058	2.28	153.4	7.78	500	39.38	"
1320		15.79	4.91	0.058	2.14	149.9	–	500	39.38	"
1330		15.85	4.96	0.058	1.98	144.6	–	500	39.42	"
1335		15.77	4.95	0.058	1.46	144.5	6.29	500	39.40	"
1340		15.70	4.93	0.058	1.84	144.3	1.84	500	39.40	"
1345		15.88	4.95	0.059	1.79	141.8	–	500	39.40	"
1350		15.76	4.98	0.058	1.84	141.0	–	500	39.40	"
1355										sample

Well ID: RE13103

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6/23/16
Time: Start 1130 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: Oriole
Weather Conds: Cloudy 80°
Collector(s): _____

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

a. Total Well Length 685
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth _____
d. Calculated System Volume (see back) 13.1 gal 20ft screen

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 13 gal

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	78600
Hanna	2020 WE	63616

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
1200	GM									
1210		16.71	6.68	0.035	9.40	129.8	28.6	800		Clear
1220		16.41	6.01	0.030	6.07	164.8	8.93	800		Clear
1225	5 gal	16.09	6.05	0.030	6.21	159.2	–	800		clear
1230		16.04	6.03	0.030	5.93	158.0	2.08	800		clear
1235		16.14	6.06	0.030	5.54	149.9	–	800		

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:

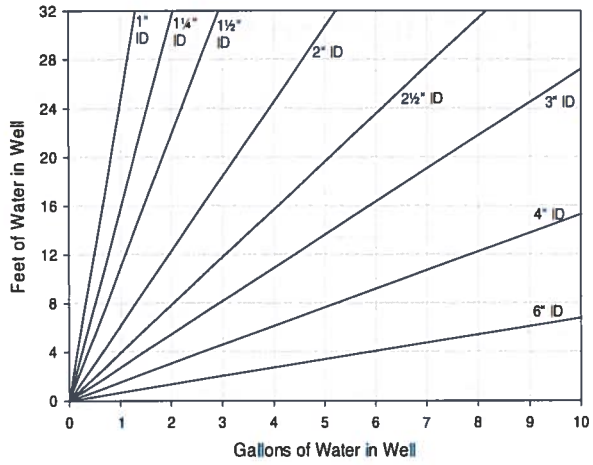
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13103-GW-062316	40-mL vials	3	HCl	VOCs	1310
	1-L amber	2	none	1,4-Dioxane	1310

Comments _____

Signature [signature] Date 6-23-16

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: RG103 D3

(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
1240		16.21	6.09	0.030	5.93	143.2	2.06	800		
1245		16.26	6.12	0.030	6.04	141.6	1.89	800		
1250		16.27	6.15	0.030	6.16	139.0	1.65	800		
1255		16.31	6.19	0.030	6.19	139.4	1.71	800		
1300		16.34	6.21	0.030	6.14	138.6	1.31	800		
1305		16.36	6.22	0.030	6.03	140.8	1.18	800		
1310	13gal	16.38	6.23	0.030	5.98	142.1	0.96	800		Clear
1310										Sample

Well ID: RE123D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 6 / 24 / 16 | Time: Start 800 am/pm
Project No: 60266526 | Finish _____ am/pm
Site Location: LIRK Yard
Weather Conds: Sunny 75° | Collector(s): MZ, PK, JC

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

a. Total Well Length 50.5 | c. Length of Water Column _____ (a-b) | Casing Diameter/Material 4-inch PVC Zoffscreen

b. Water Table Depth 49.22 | 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 13 gal

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	73513
Lamotte ~~Hanna~~	2020wE	63616

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
0845		16.39	6.59	0.090	4.91	199.5	4.70	700	49.18	clear
0855		15.89	5.52	0.094	4.49	189.4	3.91	700	49.18	clear
0905		15.72	5.77	0.095	4.73	190	3.11	700	49.18	clear
0915		15.69	5.45	0.094	4.64	187.9	1.59	700	49.18	clear
0920		15.72	5.48	0.094	4.62	186.9	1.02	700	49.18	clear
0925		15.78	5.53	0.095	4.60	186.1	0.093	700	49.17	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)

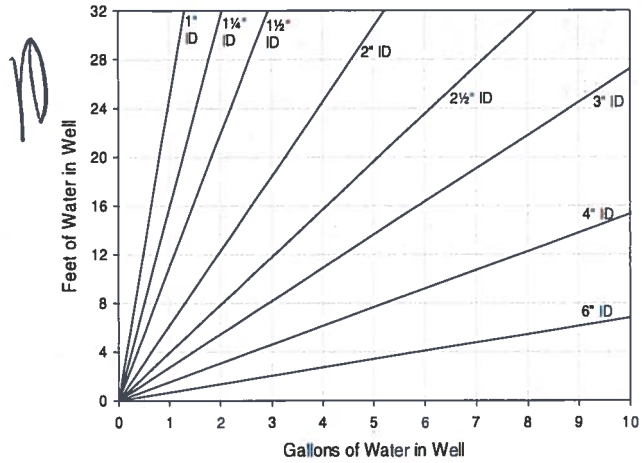
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D1-GW-062416	~~40-mL vials~~	~~3~~	~~HCl~~	~~VOCs~~	
	1-L amber	2	none	1,4-Dioxane	0955

Comments: Resample, late Fedex shipment, 14-Dioxane only, VOCs collected on 6/20/16

Signature: [signature] Date: 6-24-16

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: RE1230 1

(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
0930		15.82	5.52	0.094	4.59	185.7	0.085	700	49.17	Clear
0935		15.80	5.54	0.095	4.59	185.9	0.082	700	49.17	Clear
0940		15.81	5.57	0.095	4.58	183.7	0.088	700	49.17	Clear
~~0945~~		15.82	5.57	0.095	4.55	182.1	0.091	700	49.17	Clear
0950		15.83	5.57	0.094	4.53	180.8	0.077	700	49.17	Clear
0955										Sample

Well ID: RE123D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 24 / 16
Time: Start 800 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: LTRR yard
Weather Conds: sunny 75°
Collector(s): _____

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

a. Total Well Length ~~665~~ 660 c. Length of Water Column _____ (a-b)

Casing Diameter/Material 4-inch PVC 20ft screen

b. Water Table Depth 50.55 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	18600
~~Hanna~~ LaMotte	2020	63616

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
845	ON									
850		18.83	5.33	0.027	7.65	147.9		600		
900		18.12	5.08	0.026	4.99	153.9				
905		18.05	5.09	0.026	5.28	159.0	2.21	600	50.66	
910		18.00	5.11	0.026	6.53	161.7				
915	5 gal	17.92	5.14	0.026	6.91	161.1				

(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.

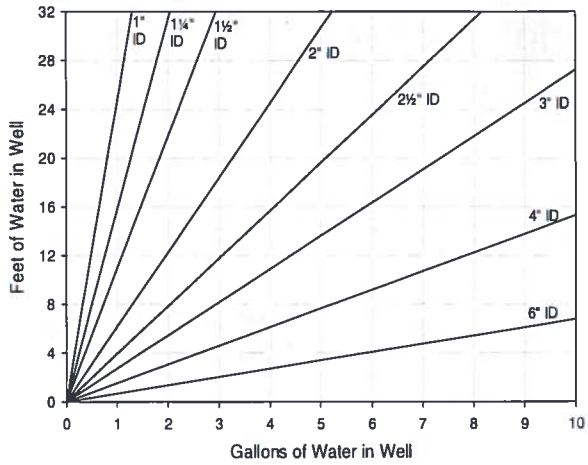
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

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

Comments resample, late Fedex shipment, 1,4 Dioxane only, VOCs collected on 6/20/16, broken WL meter

Signature Paul Kaneth Date 6-24-16

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: RE123D2 @ 845

(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		17.82	5.20	~~164.8~~ 0.025	6.87	162.4	2.64	600	50.45	
925		17.82	5.21	~~162.5~~ 0.025	6.90	162.9				
930		~~15~~ 17.84	5.23	~~165.6~~ 0.025	6.93	163.6				Cond = 0.025
935		17.90	5.26	0.025	6.97	164.1	2.29	600		
940	10gal	17.96	5.27	0.025	7.07	164.7			50.20	
945		18.06	5.26	0.025	7.10	165.1	1.83			
950		18.00	5.27	0.025	7.10	166.0			50.18	
955		17.98	5.28	0.025	7.16	166.8	1.99	600	50.21	
1000	13gal	18.13	5.29	0.026	7.14	166.8				
1005										Sample

Well ID: RE123D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 24 / 16
Time: Start 800 am/pm
Finish 1015 am/pm
Project No: 60266526
Site Location: GIRR
Weather Conds: Sunny 75°
Collector(s): SC

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

a. Total Well Length 840
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 50.42
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	82546
~~Hanna~~ LaMotte	2020	63616

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
830	ON									
845		16.12	—	0.037	2.86	450.5	12.2	600	50.63	Clear/None
850		15.99	-0.59	0.036	1.75	402.2	—	600	50.62	"
855		16.17	2.71	0.036	1.01	244.1	11.5	600	50.62	"
900		16.14	2.99	0.035	1.02	230.4	—	600	50.63	"
905		16.13	3.95	0.043	0.82	173.7	10.4	600	50.63	"

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:

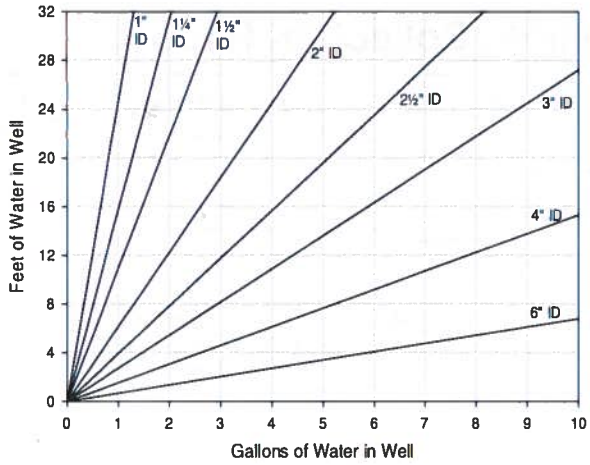
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	~~40 mL vials~~	~~3~~	~~HCl~~	~~VOCs~~	
RE123D3-GW-062416	1-L amber	2	none	1,4-Dioxane	1000

Comments: Resample, late Fedex shipment, 14 Dioxane only, VOCs collected on 6/20/16

Signature _____ Date 6/24/16

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

(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
910		16.17	4.53	0.044	0.58	132.7	10.1	650	50.62	clear/none
915		16.14	4.63	0.043	0.62	124.7	–	650	50.62	"
920		16.31	4.77	0.042	0.50	114.9	9.62	650	50.62	"
925		16.50	4.94	0.041	0.27	106.0	–	650	50.64	"
930		16.41	4.94	0.041	0.29	107.2	14.5	650	50.65	"
935		16.47	4.98	0.041	0.35	105.9	–	650	50.65	"
940		16.49	5.00	0.039	0.33	104.1	13.2	650	50.65	"
945		16.89	5.04	0.037	0.31	103.2	–	650	50.66	"
950		16.88	5.04	0.036	0.33	105.8	11.9	650	50.66	"
955		16.86	5.06	0.036	0.37	106.1	–	650	50.68	"
1000										Sample

Well ID: RE12901

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 24 / 16
Time: Start 1130 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: Whitebirch
Weather Conds: Sunny 85°
Collector(s): PK

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 20ft screen
b. Water Table Depth 26.87
d. Calculated System Volume (see back) 131 gal 20ft screen

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	78660
LaMotte ~~Hanna~~	2020	63616

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
1200	6L								26.48	
1210		18.39	5.03	0.036	4.90	126.1	29.1	600		
1215		18.09	4.58	0.037	4.23	152.4	28.1	600	26.32	
1220		18.06	4.73	0.037	1.51	142.6				
1225		17.93	4.68	0.033	1.35	134.7	13.4		26.32	
1230	5gal	17.86	4.66	0.031	1.27	129.8		600		

(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:

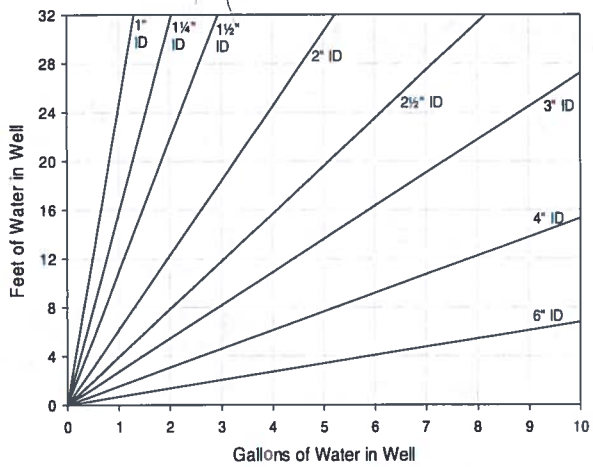
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
~~RE12901-GW-062416~~	~~40 mL vials~~	~~3~~	~~HCl~~	~~VOCs~~	
RE12901-GW-062416	1-L amber	2	none	1,4-Dioxane	1320

Comments: resample for 1,4 Dioxane only (late Fedex shipment), VOCs collected on 6/20/16

Signature: Paul Kaneth
Date: 6/24/16

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: RE12901 @ 1200

(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
1235		17.79	4.69	0.031	1.18	124.9	11.2	650	26.32	
1240		17.77	4.89	0.030	1.05	111.0		650	26.33	
1245		17.78	4.92	0.030	0.94	107.6	10.05		26.34	
1250		17.81	4.91	0.030	0.93	106.6		650	26.33	
1255		17.71	4.92	0.030	0.86	104.6	10.49		26.33	
1300	1gal	17.53	4.94	0.030	0.81	103.9	7.33	650	26.33	
1305		17.55	4.94	0.030	0.81	102.3			26.34	
1310		17.57	5.00	0.030	0.78	98.4	6.57		26.33	
1315	1gal	17.64	5.04	0.030	0.72	95.3	6.06	650	26.34	
1320										Sample

Well ID: RE129D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 24 / 16
Time: Start 1150 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location:
Weather Conds:
Collector(s): SC

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

a. Total Well Length 83.0
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 26.36
d. Calculated System Volume (see back) 13.1 gal 20 ft screen

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	82546
~~Hanna~~ Cole Parmer	2020	63616

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
1205		17.60	1.91	0.026	1.40	198.8	—	700	26.36	cloudy / none
1210		17.41	2.25	0.026	1.04	192.8	29.1	700	26.36	"
1215		17.06	2.56	0.024	0.88	186.9	—	700	26.36	"
1220	5 gal	16.92	3.04	0.024	0.84	173.2	14.7	700	26.36	"
1225		16.76	3.11	0.024	0.70	164.9	—	700	26.36	"
1235		16.69	3.36	0.024	0.58	152.6	13.9	700	26.39	"

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

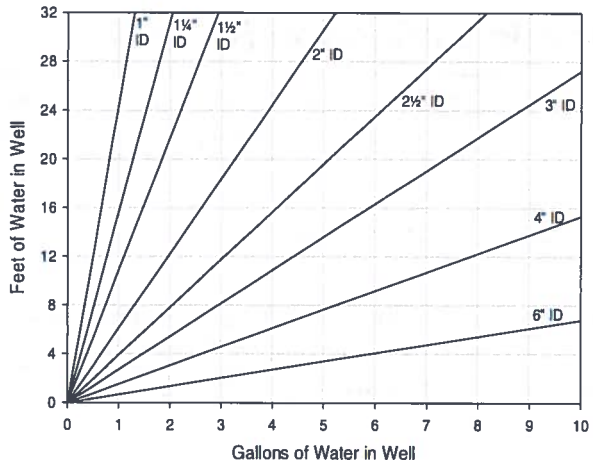
Sample ID	Container Type ~~40-mL vials~~	No. of Containers ~~3~~	Preservation ~~HCl~~	Analysis Req. ~~VOCs~~	Time
RE129D2-GW-062416	1-L amber	2	none	1,4-Dioxane	1310

Comments: resample for 1,4 Dioxane only (Fedex lab shipment) VOCs collected on 6/20/16

Signature

Date 6/24/16

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: RE129D2

(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
1240		16.62	3.51	0.024	0.49	140.9	14.4	725	26.38	Clear/brown
1245	10 gal	16.61	3.65	0.024	0.45	134.6	–	725	26.38	"
1250		16.49	3.56	0.024	0.43	131.3	13.2	725	26.38	"
1255		16.38	3.67	0.024	0.39	128.4	–	725	26.38	"
1300		16.30	3.70	0.024	0.36	125.0	11.7	725	26.38	"
1305	13.1 gal	16.36	3.70	0.024	0.34	123.9	–	725	26.38	"
1310										Sample

Well ID: RE105 D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6 / 27 / 16
Time: Start 815 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: Roosevelt + Lincoln
Weather Conds: 78°F, partly cloudy
Collector(s): JC

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 39.77
d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	786000
~~Hanna~~ Cole Parmer	2820	6546

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
835	ON									
850		15.67	4.49	0.094	4.19	206.2	–	500	40.09	clear / none
855		15.60	4.54	0.093	3.85	202.8	3.17	500	39.74	"
900		15.55	4.60	0.093	3.46	198.2	–	600	39.69	"
905	5 gal	15.55	4.65	0.093	3.24	194.3	2.86	600	39.65	"
910		15.54	4.69	0.093	3.17	189.1	–	600	39.61	"

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:

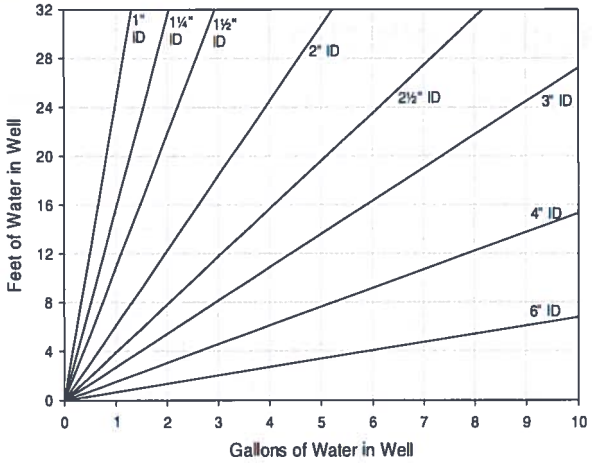
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D1-GW-062716	40mL VOA	3	HCl	VOCs	1005
RE105D1-GW-062716	1L AG	2	–	1,4 Dioxane	1005

Comments

Signature _____ Date 6/27/16

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)

10 ft = 24.6 L / 6.5 G
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: RE105D1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
915		15.52	4.73	0.093	3.09	182.7	1.09	600	39.62	clear / None
920		15.55	4.73	0.093	2.95	173.7	–	600	39.62	"
925		15.53	4.75	0.092	2.87	166.9	1.41	600	39.62	"
930		15.54	4.76	0.093	2.71	157.8	–	600	39.62	"
935	10gal	15.54	4.77	0.093	2.60	144.2	0.89	600	39.62	"
940		15.53	4.77	0.093	2.55	139.4	–	600	39.62	"
945		15.47	4.76	0.093	2.50	128.6	0.72	600	39.61	"
955		15.49	4.76	0.093	2.53	120.2	–	600	39.61	"
1000	13gal	15.49	4.75	0.093	2.50	117.9	0.91	600	39.60	"
1005										SAMPLE

Well ID: RE105D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 6/27/16
Time: Start 830 am/pm
Finish _____ am/pm
Project No: 60266526
Site Location: Bethpage, NY
Weather Conds: Sunny
Collector(s): F. B

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 40.85
d. Calculated System Volume (see back) 13.1 gal 20 ft screen

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	13E100654
~~Hanna~~ LaMotte	2020	63616

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
850	ON									
0900	–	16.20	2.89	0.050	3.60	178.9	–	650	40.85	Clear
0905	–	16.81	5.42	0.053	9.12	419.2	1.19	700	40.65	Red YSI 0 BL 700020
0910	–	–	–	–	–	–	–	700	40.15	Red YSI Back 13E100654
0915	–	17.65	4.29	0.052	2.34	151.4	1.19	700	41.11	Clear
0920	–	16.11	2.77	0.051	2.70	187.1	–	675	41.16	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:

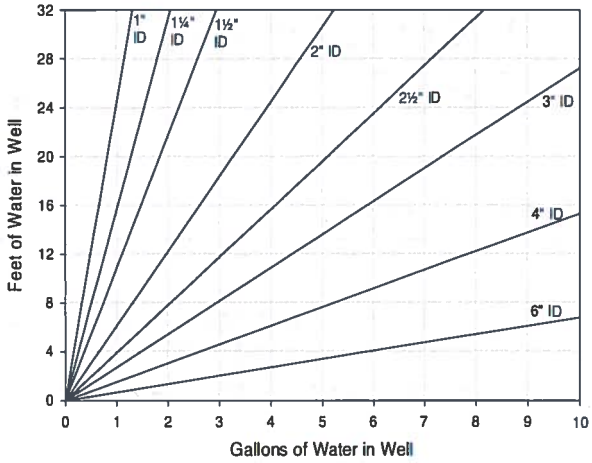
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D2-GW-062716	1L Amber	2	None	1,4-Dioxane	10.35
RE105D2-GW-062716	VOA	3	HCl	VOC	10.35

Comments

Signature Farrell Ball
Date 6/27/16

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)

10 ft = 24.6 L / 6.5 G
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: RE103D2

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0925	–	16.03	3.82	0.055	2.45	180.5	0.94	675	41.18	Clear
930		16.03	3.21	0.057	2.52	172.4	–	675	41.18	"
935		16.03	3.42	0.058	2.58	161.0	0.89	675	41.18	"
940		16.05	3.45	0.058	2.58	160.4	–	675	41.18	"
945		16.08	3.53	0.058	2.56	158.7	0.94	675	41.18	"
0950	–	16.10	3.59	0.058	2.56	157.0	–	675	41.18	"
0955	–	16.13	3.66	0.059	2.52	153.9	0.90	675	41.18	
1000	10 Gal	16.12	3.66	0.058	2.54	153.7	–	675	41.18	
1005	–	16.17	3.67	0.059	2.54	152.6	0.85	675	41.19	
1010	–	16.17	3.70	0.058	2.53	151.8	–	675	41.19	
1015	–	16.17	3.68	0.058	2.54	151.9	0.81	675	41.19	
1020	13.5 Gal	16.15	3.68	0.057	2.56	151.3	0.79	675	41.20	Clear
1035	Sample time									

Well ID: RE108 DL

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/27/16 Time: Start 1130 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Corona + Cal
Weather Conds: 76°F Overcast Collector(s): JC

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 42.64 d. Calculated System Volume (see back) 13.1 gal 20ft screen

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	78600
CalMate	Hanna	2020	63616

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1150	ON									
1210		16.98	4.57	0.085	8.81	173.2	–	550	42.72	clear/none
1215		16.86	4.25	0.085	7.62	185.9	3.84	550	42.72	"
1220		16.49	4.28	0.084	7.55	184.9	–	650	42.72	"
1225		16.89	4.39	0.085	7.38	180.9	1.10	650	42.71	"
1230	5 Gal	16.77	4.63	0.084	6.39	169.7	–	650	42.76	"

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)

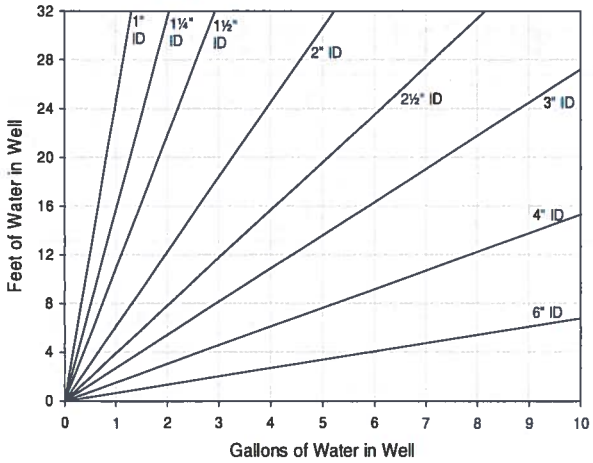
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108DL-GW-0627/6	40mL VOA	3	HCl	VOCs	1315
RE108DL-GW-0627/6	1L AG	2	–	1,4 Dioxane	1315

Comments

Signature _____ Date 6/27/16

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)

10 ft = 24.6 L / 6.5 G
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: RE108D1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1235	–	16.83	4.76	0.084	6.19	165.1	–	650	42.77	"
1240	–	16.81	4.75	0.084	6.24	164.7	0.64	650	42.78	Clear
1245	–	16.34	4.83	0.083	6.32	162.5	0.57	650	42.77	"
1250	–	16.40	4.79	0.083	6.32	164.4	–	650	42.76	"
1255	10 Gal	16.34	4.78	0.083	6.28	164.6	0.85	650	42.76	"
1300	–	16.59	4.80	0.084	6.23	164.5	–	650	42.76	"
1310	–	16.61	4.80	0.084	6.21	164.0	0.89	650	42.76	"
1315										SAMPLE

Well ID: RE108 D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 07 / 16 Time: Start 1130 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Bethpage, NY
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 43.22 d. Calculated System Volume (see back) 13.1 gal 20 ft screen

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	73518
	~~Hanna~~ CaMate	2020	63616

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
1200	ON									
1215	—	17.19	2.91	0.070	3.21	197.1	1.53	700	—	Clear
1220	—	17.05	3.35	0.068	3.53	172.2	1.07	700	42.27	Clear
1225	—	16.97	3.60	0.068	2.29	167.4	1.38	700	—	Clear
1230	—	16.97	3.64	0.068	2.42	168.0	—	700	42.58	"
1235	5 Gal	16.94	3.70	0.067	2.37	167.6	0.88	700	—	"

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)

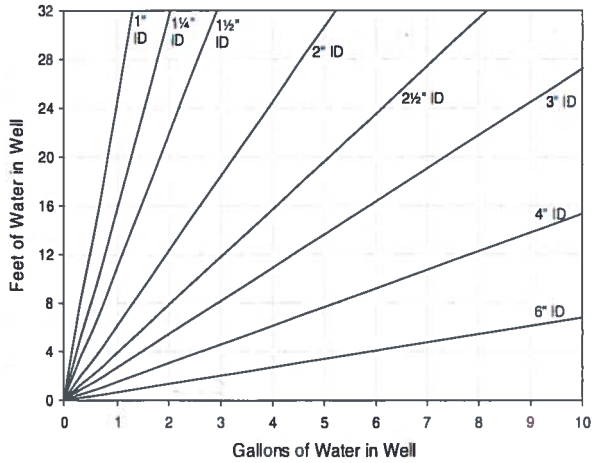
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108D2-GW-062716	40-mL vials	3	HCl	VOCs	1330
RE108D2-GW-062716	1-L amber	2	none	1,4-Dioxane	1330

Comments: IP not working correctly

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: RE108D2

(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
1240	–	16.99	3.77	0.068	2.41	165.1	—	700	–	Clear
1245	–	16.71	3.84	0.068	2.40	163.2	0.69	700	–	"
1250	–	16.55	3.73	0.067	2.42	166.6	–	700	2.50	"
1255	–	16.45	3.79	0.066	2.41	166.5	0.75	700	~~2.50~~	"
1300	10 Gal	16.79	3.80	0.067	2.46	166.8	–	700	–	"
1305	–	16.59	3.87	0.067	2.48	166.0	–	700	–	"
1310	–	16.45	3.75	0.066	2.48	170.0	–	700	–	"
1320	13.5 Gal	16.61	3.84	0.067	2.53	168.7	0.71	700	2.62	"
1330	Sample.									

Appendix B

Analytical Data Validation – Resolution Consultants

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Sample Delivery Group:	BETHPAGE-6	
Analyses/Method:	Volatile Organic Compounds by U.S. EPA SW-846 Method 8260C and 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: 08/24/2016
Reviewed by:	Tina Clemmey/Resolution Consultants	File Name: BETHPAGE 6_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 20 to 27 June 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
TB1-WQ-062116	Trip Blank	8260C
RE104D1-GW-062116	Groundwater	8260C/8270D_SIM
RE104D2-GW-062116	Groundwater	8260C/8270D_SIM
RE104D3-GW-062116	Groundwater	8260C/8270D_SIM
TT101D-GW-062116	Groundwater	8260C/8270D_SIM
TT101D1-GW-062116	Groundwater	8260C/8270D_SIM
TT101D2-GW-062116	Groundwater	8260C/8270D_SIM
DUP1-GW-062116	Field duplicate of TT101D1-GW-062116	8260C/8270D_SIM
RE123D1-GW-062016	Groundwater	8260C/8270D_SIM
RE123D2-GW-062016	Groundwater	8260C/8270D_SIM
RE123D3-GW-062016	Groundwater	8260C/8270D_SIM
RE129D1-GW-062016	Groundwater	8260C/8270D_SIM

Sample ID	Matrix/Sample Type	Analysis
RE129D2-GW-062016	Groundwater	8260C/8270D_SIM
RE126D1-GW-062116	Groundwater	8260C/8270D_SIM
RE126D2-GW-062116	Groundwater	8260C/8270D_SIM
RE126D3-GW-062116	Groundwater	8260C/8270D_SIM
TB2-WQ-062316	Trip Blank	8260C
RE103D2-GW-062316	Groundwater	8260C/8270D_SIM
RE103D3-GW-062316	Groundwater	8260C/8270D_SIM
DUP2-GW-062316	Field duplicate of RE103D3-GW-062316	8260C/8270D_SIM
RE131D1-GW-062316	Groundwater	8260C/8270D_SIM
RE131D2-GW-062316	Groundwater	8260C/8270D_SIM
RE131D3-GW-062316	Groundwater	8260C/8270D_SIM
RE122D1-GW-062216	Groundwater	8260C/8270D_SIM
RE122D2-GW-062216	Groundwater	8260C/8270D_SIM
RE122D3-GW-062216	Groundwater	8260C/8270D_SIM
RE120D1-GW-062216	Groundwater	8260C/8270D_SIM
RE120D2-GW-062216	Groundwater	8260C/8270D_SIM
RE120D3-GW-062216	Groundwater	8260C/8270D_SIM
FB1-WQ-062216	Field Blank	8260C/8270D_SIM
RE103D1-GW-062316	Groundwater	8260C/8270D_SIM
TB3-WQ-062416	Trip Blank	8260C
RE108D1-GW-062716	Groundwater	8260C/8270D_SIM
RE108D2-GW-062716	Groundwater	8260C/8270D_SIM
RE105D1-GW-062716	Groundwater	8260C/8270D_SIM
RE105D2-GW-062716	Groundwater	8260C/8270D_SIM
FB2-WQ-062716	Field Blank	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, Semi volatile 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 (MS) and/or matrix spike duplicate (MSD) 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, no qualification was performed, and/or 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

The ICAL is evaluated to ensure that the instrument was capable of producing acceptable quantitative data prior to the analysis of samples. The ICV is evaluated to assess the accuracy of ICAL standards. The CCV is evaluated to determine whether the instrument was within acceptable calibration throughout the period in which the samples were analyzed. Failure of the CCV indicates that the ICAL is no longer valid and should trigger recalibration and reanalysis of the associated samples in the analytical sequence.

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
	> 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	U	=	Undetected
LOD	=	Limit of detection	R	=	Rejected

Blank non-conformances are summarized in Attachment A in Table A-4.

Surrogate Spike Recoveries

Surrogates provide information needed to assess the accuracy of analyses. Known amounts of surrogate compounds, or compounds which are not likely to be found in the actual samples, are added to each organic sample to check for accuracy. If surrogate percent recoveries (%Rs) are close to the known concentrations, the reported target compound concentrations are assumed to be accurate. Data qualification on the basis of surrogate recovery was as follows:

Surrogate Recovery Non-conformance Chart:

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

Notes:

%R	=	Percent recovery
J	=	Estimated
UJ	=	Undetected and estimated

Surrogate recovery non-conformance is summarized in Attachment A in Table A-5.

Matrix Spike / Matrix Spike Duplicate 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 %R non-conformances are summarized in Attachment A in Table 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 A

Non-Conformance Summary Table

Table A-1 Initial Calibration Non-Conformance							
Method	**Analyte**	**Instrument Calibration Date**	**%RSD**	**Limit**	**Associated Samples**	**Lab ID**	**Qualifier**
8260C	Acetone	6/21/2016	20.0645	<15%	DUP1-GW-062116	SJ4579-16	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	DUP2-GW-062316	SJ4670-12	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	FB2-WQ-062716	SJ4749-9	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE103D1-GW-062316	SJ4670-9	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE103D2-GW-062316	SJ4670-10	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE103D3-GW-062316	SJ4670-11	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE104D1-GW-062116	SJ4579-10	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE104D2-GW-062116	SJ4579-11	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE104D3-GW-062116	SJ4579-12	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE105D1-GW-062716	SJ4749-7	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE105D2-GW-062716	SJ4749-8DL	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE108D1-GW-062716	SJ4749-10	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE108D2-GW-062716	SJ4749-11DL	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE120D1-GW-062216	SJ4670-5	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE120D2-GW-062216	SJ4670-6	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE120D3-GW-062216	SJ4670-7	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE122D1-GW-062216	SJ4670-2	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE122D2-GW-062216	SJ4670-3	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE122D3-GW-062216	SJ4670-4	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE123D1-GW-062016	SJ4579-2	Detect: J
8260C	Acetone	6/21/2016	20.0645	<15%	RE123D2-GW-062016	SJ4579-3	Detect: J
8260C	Acetone	6/21/2016	20.0645	<15%	RE123D3-GW-062016	SJ4579-4	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE126D1-GW-062116	SJ4579-7	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE126D2-GW-062116	SJ4579-8	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE126D3-GW-062116	SJ4579-9	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE129D1-GW-062016	SJ4579-5	Detect: J
8260C	Acetone	6/21/2016	20.0645	<15%	RE129D2-GW-062016	SJ4579-6	Detect: J
8260C	Acetone	6/21/2016	20.0645	<15%	RE131D2-GW-062316	SJ4670-14	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	RE131D3-GW-062316	SJ4670-15	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	TB1-WQ-062116	SJ4579-1	Detect: J
8260C	Acetone	6/21/2016	20.0645	<15%	TB3-WQ-062416	SJ4749-1	Detect: J
8260C	Acetone	6/21/2016	20.0645	<15%	TT101D1-GW-062116	SJ4579-14	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	TT101D2-GW-062116	SJ4579-15	Non-detect: UJ
8260C	Acetone	6/21/2016	20.0645	<15%	TT101D-GW-062116	SJ4579-13	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	DUP1-GW-062116	SJ4579-16	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	DUP2-GW-062316	SJ4670-12	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	FB2-WQ-062716	SJ4749-9	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE103D1-GW-062316	SJ4670-9	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE103D2-GW-062316	SJ4670-10	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE103D3-GW-062316	SJ4670-11	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE104D1-GW-062116	SJ4579-10	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE104D2-GW-062116	SJ4579-11	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE104D3-GW-062116	SJ4579-12	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE105D1-GW-062716	SJ4749-7	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE105D2-GW-062716	SJ4749-8DL	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE108D1-GW-062716	SJ4749-10	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE108D2-GW-062716	SJ4749-11DL	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE120D1-GW-062216	SJ4670-5	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE120D2-GW-062216	SJ4670-6	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE120D3-GW-062216	SJ4670-7	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE122D1-GW-062216	SJ4670-2	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE122D2-GW-062216	SJ4670-3	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE122D3-GW-062216	SJ4670-4	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE123D1-GW-062016	SJ4579-2	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE123D2-GW-062016	SJ4579-3	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE123D3-GW-062016	SJ4579-4	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE126D1-GW-062116	SJ4579-7	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE126D2-GW-062116	SJ4579-8	Non-detect: UJ

Table A-1 Initial Calibration Non-Conformance							
Method	**Analyte**	**Instrument Calibration Date**	**%RSD**	**Limit**	**Associated Samples**	**Lab ID**	**Qualifier**
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE126D3-GW-062116	SJ4579-9	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE129D1-GW-062016	SJ4579-5	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE129D2-GW-062016	SJ4579-6	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE131D2-GW-062316	SJ4670-14	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	RE131D3-GW-062316	SJ4670-15	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	TB1-WQ-062116	SJ4579-1	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	TB3-WQ-062416	SJ4749-1	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	TT101D1-GW-062116	SJ4579-14	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	TT101D2-GW-062116	SJ4579-15	Non-detect: UJ
8260C	1,4-Dichlorobenzene	6/21/2016	15.17018	<15%	TT101D-GW-062116	SJ4579-13	Non-detect: UJ
8260C	Chloroethane	6/27/2016	15.12902	<15%	FB1-WQ-062216	SJ4670-8	Non-detect: UJ
8260C	Chloroethane	6/27/2016	15.12902	<15%	RE131D1-GW-062316	SJ4670-13	Non-detect: UJ
8260C	Chloroethane	6/27/2016	15.12902	<15%	TB2-WQ-062316	SJ4670-1	Non-detect: UJ
8260C	Acetone	6/27/2016	19.00968	<15%	FB1-WQ-062216	SJ4670-8	Detect: J
8260C	Acetone	6/27/2016	19.00968	<15%	RE131D1-GW-062316	SJ4670-13	Non-detect: UJ
8260C	Acetone	6/27/2016	19.00968	<15%	TB2-WQ-062316	SJ4670-1	Detect: J

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	Bromomethane	P6095.D	127.02	80-120	DUP1-GW-062116	SJ4579-16	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	DUP2-GW-062316	SJ4670-12	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	FB2-WQ-062716	SJ4749-9	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE103D1-GW-062316	SJ4670-9	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE103D2-GW-062316	SJ4670-10	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE103D3-GW-062316	SJ4670-11	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE104D1-GW-062116	SJ4579-10	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE104D2-GW-062116	SJ4579-11	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE104D3-GW-062116	SJ4579-12	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE105D1-GW-062716	SJ4749-7	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE105D2-GW-062716	SJ4749-8DL	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE108D1-GW-062716	SJ4749-10	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE108D2-GW-062716	SJ4749-11DL	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE120D1-GW-062216	SJ4670-5	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE120D2-GW-062216	SJ4670-6	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE120D3-GW-062216	SJ4670-7	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE122D1-GW-062216	SJ4670-2	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE122D2-GW-062216	SJ4670-3	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE122D3-GW-062216	SJ4670-4	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE123D1-GW-062016	SJ4579-2	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE123D2-GW-062016	SJ4579-3	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE123D3-GW-062016	SJ4579-4	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE126D1-GW-062116	SJ4579-7	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE126D2-GW-062116	SJ4579-8	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE126D3-GW-062116	SJ4579-9	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE129D1-GW-062016	SJ4579-5	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE129D2-GW-062016	SJ4579-6	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE131D2-GW-062316	SJ4670-14	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	RE131D3-GW-062316	SJ4670-15	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	TB1-WQ-062116	SJ4579-1	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	TB3-WQ-062416	SJ4749-1	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	TT101D1-GW-062116	SJ4579-14	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	TT101D2-GW-062116	SJ4579-15	Non-detect: UJ
8260C	Bromomethane	P6095.D	127.02	80-120	TT101D-GW-062116	SJ4579-13	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	DUP1-GW-062116	SJ4579-16	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	DUP2-GW-062316	SJ4670-12	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	FB2-WQ-062716	SJ4749-9	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE103D1-GW-062316	SJ4670-9	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE103D2-GW-062316	SJ4670-10	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE103D3-GW-062316	SJ4670-11	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE104D1-GW-062116	SJ4579-10	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE104D2-GW-062116	SJ4579-11	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE104D3-GW-062116	SJ4579-12	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE105D1-GW-062716	SJ4749-7	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE105D2-GW-062716	SJ4749-8DL	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE108D1-GW-062716	SJ4749-10	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE108D2-GW-062716	SJ4749-11DL	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE120D1-GW-062216	SJ4670-5	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE120D2-GW-062216	SJ4670-6	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE120D3-GW-062216	SJ4670-7	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE122D1-GW-062216	SJ4670-2	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE122D2-GW-062216	SJ4670-3	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE122D3-GW-062216	SJ4670-4	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE123D1-GW-062016	SJ4579-2	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE123D2-GW-062016	SJ4579-3	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE123D3-GW-062016	SJ4579-4	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE126D1-GW-062116	SJ4579-7	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE126D2-GW-062116	SJ4579-8	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE126D3-GW-062116	SJ4579-9	Non-detect: UJ

Table A-2 Initial Calibration Verification Non-Conformance							
Method	**Analyte**	**ICV ID**	**%R**	**Limit**	**Associated Samples**	**Lab ID**	**Qualifier**
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE129D1-GW-062016	SJ4579-5	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE129D2-GW-062016	SJ4579-6	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE131D2-GW-062316	SJ4670-14	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	RE131D3-GW-062316	SJ4670-15	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	TB1-WQ-062116	SJ4579-1	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	TB3-WQ-062416	SJ4749-1	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	TT101D1-GW-062116	SJ4579-14	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	TT101D2-GW-062116	SJ4579-15	Non-detect: UJ
8260C	Carbon Disulfide	P6095.D	140.15	80-120	TT101D-GW-062116	SJ4579-13	Non-detect: UJ
8260C	Carbon Disulfide	W6632A.D	176.92	80-120	FB1-WQ-062216	SJ4670-8	Non-detect: UJ
8260C	Carbon Disulfide	W6632A.D	176.92	80-120	RE131D1-GW-062316	SJ4670-13	Non-detect: UJ
8260C	Carbon Disulfide	W6632A.D	176.92	80-120	TB2-WQ-062316	SJ4670-1	Non-detect: UJ
8260C	Acetone	W6632A.D	150.29	80-120	FB1-WQ-062216	SJ4670-8	Detect: J
8260C	Acetone	W6632A.D	150.29	80-120	RE131D1-GW-062316	SJ4670-13	Non-detect: UJ
8260C	Acetone	W6632A.D	150.29	80-120	TB2-WQ-062316	SJ4670-1	Detects: J
8260C	Cyclohexane	W6632A.D	125.34	80-120	FB1-WQ-062216	SJ4670-8	Non-detect: UJ
8260C	Cyclohexane	W6632A.D	125.34	80-120	RE131D1-GW-062316	SJ4670-13	Non-detect: UJ
8260C	Cyclohexane	W6632A.D	125.34	80-120	TB2-WQ-062316	SJ4670-1	Non-detect: UJ

Notes:

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

Table A-3 Continuing Calibration Verification Non-Conformance						
Lab ID/ Lab File ID	**Analyte**	**%D**	**%D Limit**	**Associated Samples**	**Lab ID**	**Qualifier**
WG186222-4/P6203.D	Bromomethane	22.30338	+/- 20%	FB2-WQ-062716	SJ4749-9	Non-detect: UJ
WG186222-4/P6203.D	Bromomethane	22.30338	+/- 20%	RE105D1-GW-062716	SJ4749-7	Non-detect: UJ
WG186222-4/P6203.D	Bromomethane	22.30338	+/- 20%	RE105D2-GW-062716	SJ4749-8DL	Non-detect: UJ
WG186222-4/P6203.D	Bromomethane	22.30338	+/- 20%	RE108D1-GW-062716	SJ4749-10	Non-detect: UJ
WG186222-4/P6203.D	Bromomethane	22.30338	+/- 20%	RE108D2-GW-062716	SJ4749-11DL	Non-detect: UJ
WG186222-4/P6203.D	Bromomethane	22.30338	+/- 20%	TB3-WQ-062416	SJ4749-1	Non-detect: UJ
WG186222-4/P6203.D	Carbon Disulfide	26.30299	+/- 20%	FB2-WQ-062716	SJ4749-9	Non-detect: UJ
WG186222-4/P6203.D	Carbon Disulfide	26.30299	+/- 20%	RE105D1-GW-062716	SJ4749-7	Non-detect: UJ
WG186222-4/P6203.D	Carbon Disulfide	26.30299	+/- 20%	RE105D2-GW-062716	SJ4749-8DL	Non-detect: UJ
WG186222-4/P6203.D	Carbon Disulfide	26.30299	+/- 20%	RE108D1-GW-062716	SJ4749-10	Non-detect: UJ
WG186222-4/P6203.D	Carbon Disulfide	26.30299	+/- 20%	RE108D2-GW-062716	SJ4749-11DL	Non-detect: UJ
WG186222-4/P6203.D	Carbon Disulfide	26.30299	+/- 20%	TB3-WQ-062416	SJ4749-1	Non-detect: UJ
WG186134-4/W6650.D	Acetone	-23.43794	+/- 20%	FB1-WQ-062216	SJ4670-8	Detect: J
WG186134-4/W6650.D	Acetone	-23.43794	+/- 20%	TB2-WQ-062316	SJ4670-1	Detect: J

Notes:

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

Table A-4 Blank Non-Conformance					
Blank ID	**Lab ID**	**Analyte**	**Blank Result (ug/L)**	**Detected Associated Sample**	**Qualifier**
TB1-WQ-062116	SJ4579-1	Acetone	3.7	RE104D3-GW-062116 RE126D1-GW-062116 RE126D2-GW-062116 TT101D2-GW-062116	U
TB2-WQ-062316	SJ4670-1	Acetone	5.6	RE103D1-GW-062316 RE103D3-GW-062316 RE131D1-GW-062316 RE131D2-GW-062316 RE131D3-GW-062316	U
TB3-WQ-062416	SJ4749-1	Acetone	4.5	RE105D1-GW-062716 RE108D1-GW-062716	U
WG186084-9	WG186084-9	Acetone	9.4	RE131D1-GW-062316	U

Notes:

ID = Identification
ug/L = Micrograms per liter
U = Non-detect value

Table A-5 Surrogate Non-Conformance						
Method	**Sample ID**	**Batch**	**Surrogate**	**%R**	**Control Limit**	**Qualifier**
8270D SIM	RE120D1-GW-062216	WG186087	1,4-Dioxane-d8	152	30-150	J

Notes:

SIM = Selected Ion Monitoring
ID = Identification
%R = Percent recovery
J = Detected estimated value

Table A-6 Matrix Spike/Matrix Spike Duplicate Percent Recovery Non-Conformance					
Sample ID	**Analyte**	**MS %R**	**MSD %R**	**%R Limit**	**Qualifier**
TT101D2-GW-062116	1,4-Dioxane	5.2	17.7	10-90	J

Notes:

ID = Identification
MS = Matrix spike
MSD = Matrix spike duplicate
%R = Percent recovery
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

June 2016 2nd Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4579-1		
			Sample ID	TB1-WQ-062116		
			Sample Date	6/21/2016		
			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	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	3.7	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
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	NA		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-10		
			Sample ID	RE104D1-GW-062116		
			Sample Date	6/21/2016		
			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	2.8		
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	0.55	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	0.96	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	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	UJ	c
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	0.96	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	1.9		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	92		
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	8.5		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-11		
			Sample ID	RE104D2-GW-062116		
			Sample Date	6/21/2016		
			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	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	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	UJ	c
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	0.76	J	
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	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	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	0.48		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-12		
			Sample ID	RE104D3-GW-062116		
			Sample Date	6/21/2016		
			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	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	UJ	bt,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	UJ	c
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	0.18	U	

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-13		
			Sample ID	TT101D-GW-062116		
			Sample Date	6/21/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.29	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	14		
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	3.1		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	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	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	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	UJ	c
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	0.44	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.9		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.6	J	
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	73		
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	11		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-14		
			Sample ID	TT101D1-GW-062116		
			Sample Date	6/21/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.61	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	14		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.88	J	
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	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	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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
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	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.82	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.2	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	190		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	9.4		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4579-15		
			Sample ID	TT101D2-GW-062116		
			Sample Date	6/21/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.41	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	21		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.42	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.9	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	5.2		
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	UJ	bt,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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
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	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.81	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	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		
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	690		
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	3.9	J	m

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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

			Lab ID	SJ4579-16		
			Sample ID	DUP1-GW-062116		
			Sample Date	6/21/2016		
			Sample Type	Field Duplicate		
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	14		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.4	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.9	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	5		
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	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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
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	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.92	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.3	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	200		
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	15		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
Final Results after Data Review
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			Lab ID	SJ4579-2		
			Sample ID	RE123D1-GW-062016 *		
			Sample Date	6/20/2016		
			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	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	4.1	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
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	7.4		
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	3.9		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4579-3		
			Sample ID	RE123D2-GW-062016 *		
			Sample Date	6/20/2016		
			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	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	2.8	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
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	0.85	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	1.5		
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	0.77		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-4		
			Sample ID	RE123D3-GW-062016 *		
			Sample Date	6/20/2016		
			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	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	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	UJ	c
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	0.28		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-5		
			Sample ID	RE129D1-GW-062016 *		
			Sample Date	6/20/2016		
			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	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	3.2	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
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	

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-6		
			Sample ID	RE129D2-GW-062016 *		
			Sample Date	6/20/2016		
			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	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	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
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	

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-7		
			Sample ID	RE126D1-GW-062116		
			Sample Date	6/21/2016		
			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	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	UJ	bt,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	UJ	c
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	0.6	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	28		
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	8.4		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4579-8		
			Sample ID	RE126D2-GW-062116		
			Sample Date	6/21/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.85	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	0.81	J	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	2.3		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.88	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	2.3		
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	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	UJ	bt,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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.58	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	0.61	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.3		
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	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	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	6.6		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4579-9		
			Sample ID	RE126D3-GW-062116		
			Sample Date	6/21/2016		
			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	0.45	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	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	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	UJ	c
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	1.7		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	4		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.6		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-1		
			Sample ID	TB2-WQ-062316		
			Sample Date	6/23/2016		
			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	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	5.6	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	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	UJ	c
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:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-10		
			Sample ID	RE103D2-GW-062316		
			Sample Date	6/23/2016		
			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	0.38	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.87	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.4		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.9	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	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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.43	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	0.92	J	
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	0.97	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	890		
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	3.3		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-11		
			Sample ID	RE103D3-GW-062316		
			Sample Date	6/23/2016		
			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		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.47	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	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	UJ	bt,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	UJ	c
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	0.6	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	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	500		
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	1.4		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-12		
			Sample ID	DUP2-GW-062316		
			Sample Date	6/23/2016		
			Sample Type	Field Duplicate		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	2.1		
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	0.52	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	0.87	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	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	UJ	c
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	0.64	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.87	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	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	510		
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	1.3		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-13		
			Sample ID	RE131D1-GW-062316		
			Sample Date	6/23/2016		
			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	4.5		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.8	J	
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	4		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	bt,bl,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	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	3.9		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.39	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	2.4		
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	7.2		
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	96		
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	16		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-14		
			Sample ID	RE131D2-GW-062316		
			Sample Date	6/23/2016		
			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	200		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.5		
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	3.8		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	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	UJ	bt,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	UJ	c
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	3.8		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.34	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	5.5		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	46		
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	10		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-15		
			Sample ID	RE131D3-GW-062316		
			Sample Date	6/23/2016		
			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	96		
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	0.65	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	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	UJ	bt,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	UJ	c
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	1.3		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	6.1		
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	2.2		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-2		
			Sample ID	RE122D1-GW-062216		
			Sample Date	6/22/2016		
			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	3.8		
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	0.85	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	1.7	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	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	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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.41	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	0.54	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.7		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	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	1.4		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	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	11		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-3		
			Sample ID	RE122D2-GW-062216		
			Sample Date	6/22/2016		
			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	17		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	2		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.3		
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	4.8		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	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	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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.5		
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	2.2		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	4.8		
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	2.6		
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	5500		
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	16		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-4		
			Sample ID	RE122D3-GW-062216		
			Sample Date	6/22/2016		
			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	UJ	c
8260C	2-BUTANONE	78-93-3	UG_L	2	J	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	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	UJ	c
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	7.4		
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	0.18	U	

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-5		
			Sample ID	RE120D1-GW-062216		
			Sample Date	6/22/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1.3		
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	29		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.1		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	2.6		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	17		
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	3.6		
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	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	UJ	c
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	0.77	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.6		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	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		
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	0.29	J	
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	22	J	s

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-6		
			Sample ID	RE120D2-GW-062216		
			Sample Date	6/22/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.35	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	18		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.56	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	4.9		
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	3.5		
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	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	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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.45	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	0.61	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.25	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	3		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	720		
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	14		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4670-7		
			Sample ID	RE120D3-GW-062216		
			Sample Date	6/22/2016		
			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	1.1		
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	0.5	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	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	UJ	c
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	46		
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	0.66		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4670-8		
			Sample ID	FB1-WQ-062216		
			Sample Date	6/22/2016		
			Sample Type	Field Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	3.2	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	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	UJ	c
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	

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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Final Results after Data Review
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			Lab ID	SJ4670-9		
			Sample ID	RE103D1-GW-062316		
			Sample Date	6/23/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.42	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	11		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.42	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.91	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	7.3		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	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	UJ	bt,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	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.26	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	0.58	J	
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	4.4		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	930		
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:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
Final Results after Data Review
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			Lab ID	SJ4749-1		
			Sample ID	TB3-WQ-062416		
			Sample Date	6/24/2016		
			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	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	4.5	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
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	NA		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
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NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4749-10		
			Sample ID	RE108D1-GW-062716		
			Sample Date	6/27/2016		
			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	0.61	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	0.33	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	UJ	bt,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	UJ	c
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	0.33	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	1.1		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	82		
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	7.7		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4749-11DL		
			Sample ID	RE108D2-GW-062716		
			Sample Date	6/27/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	20	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	20	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	20	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	20	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	20	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	20	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	20	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	30	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	20	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	20	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	20	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	40	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	20	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	20	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	20	UJ	c
8260C	2-BUTANONE	78-93-3	UG_L	100	U	
8260C	2-HEXANONE	591-78-6	UG_L	100	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	100	U	
8260C	ACETONE	67-64-1	UG_L	100	UJ	c
8260C	BENZENE	71-43-2	UG_L	20	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	20	U	
8260C	BROMOFORM	75-25-2	UG_L	20	U	
8260C	BROMOMETHANE	74-83-9	UG_L	40	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	20	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	20	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	20	U	
8260C	CHLOROETHANE	75-00-3	UG_L	40	U	
8260C	CHLOROFORM	67-66-3	UG_L	20	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	40	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	20	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	20	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	20	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	20	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	40	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	20	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	20	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	40	U	
8260C	METHYL ACETATE	79-20-9	UG_L	30	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	20	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	20	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	100	U	
8260C	O-XYLENE	95-47-6	UG_L	20	U	
8260C	STYRENE	100-42-5	UG_L	20	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	20	U	
8260C	TOLUENE	108-88-3	UG_L	20	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	20	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	20	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	3000		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	40	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	40	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	60	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	5.8		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4749-7		
			Sample ID	RE105D1-GW-062716		
			Sample Date	6/27/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.35	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	5.9		
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	0.91	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	1.5	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	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	UJ	bt,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	UJ	c
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	1.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.38	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	110		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	9.8		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

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			Lab ID	SJ4749-8DL		
			Sample ID	RE105D2-GW-062716		
			Sample Date	6/27/2016		
			Sample Type	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	10	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	10	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	20	J	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	10	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	10	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	10	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	10	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	15	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	10	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	10	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	10	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	20	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	10	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	10	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	10	UJ	c
8260C	2-BUTANONE	78-93-3	UG_L	50	U	
8260C	2-HEXANONE	591-78-6	UG_L	50	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	50	U	
8260C	ACETONE	67-64-1	UG_L	50	UJ	c
8260C	BENZENE	71-43-2	UG_L	10	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	10	U	
8260C	BROMOFORM	75-25-2	UG_L	10	U	
8260C	BROMOMETHANE	74-83-9	UG_L	20	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	10	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	10	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	10	U	
8260C	CHLOROETHANE	75-00-3	UG_L	20	U	
8260C	CHLOROFORM	67-66-3	UG_L	10	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	20	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	10	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	10	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	10	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	10	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	20	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	10	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	10	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	20	U	
8260C	METHYL ACETATE	79-20-9	UG_L	15	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	10	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	10	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	50	U	
8260C	O-XYLENE	95-47-6	UG_L	10	U	
8260C	STYRENE	100-42-5	UG_L	10	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	10	U	
8260C	TOLUENE	108-88-3	UG_L	10	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	10	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	10	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	1800		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	20	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	20	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	30	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	7		

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

June 2016 2nd Quarter
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Lab ID	SJ4749-9		
			Sample ID	FB2-WQ-062716		
			Sample Date	6/27/2016		
			Sample Type	Field Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	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	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	UJ	c
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	

Notes:

*	=1,4-Dioxane results collected on 06/24/2016
UG_L	= Micrograms per liter
NA	= Not applicable
Qual	= Final qualifiers (See Attachment A)
RC	= Reason codes (See Attachment B)

Appendix C

Analytical Data Validation – ARCADIS

Northrop Grumman Corporation -

Operable Unit 2

Data Review

Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs #JC21491, JC21974 and JC21978

Analyses Performed By:
Accutest-SGS Laboratories
Dayton, New Jersey

Report #25921R
Review Level: Tier II
Project: NY001496.NV15.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC21491, JC21974 and JC21978 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:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC21491	TB060216AM1	JC21491-1	Water	6/2/2016		X				
	BPOW 2-2	JC21491-2	Water	6/2/2016		X	X			
	BPOW 5-5	JC21491-3	Water	6/2/2016		X	X			
	BPOW 5-6	JC21491-4	Water	6/2/2016		X	X			
	TB060216MO1	JC21491-5	Water	6/2/2016		X				
JC21974	BPOW 5-4	JC21974-1	Water	6/10/2016		X	X			
	BPOW 1-3	JC21974-2	Water	6/10/2016		X	X			
	TB061016AR1	JC21974-3	Water	6/10/2016		X				
JC21978	BPOW 5-2	JC21978-1	Water	6/9/2016		X	X			
	BPOW 5-1	JC21978-2	Water	6/9/2016		X	X			
	TB060916AR1	JC21978-3	Water	6/9/2016		X				

Notes:

1. EPA Method 522 Semi-volatile analysis for 1,4-Dioxane was performed by GEL Laboratories, LLC, located in Charleston, South Carolina (subcontracted via Accutest Laboratory). The associated SDGs are: JC21492X/398801, JC21974X/399288 and JC21978X/399284.

2. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location BPOW 2-2 for VOCs; and sample locations BPOW 2-2 and BPOW 5-2 for SVOCs analysis.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

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. Master tracking list		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		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) methods 524.2 and 522-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 COMPOUNDS (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.

Note:

s.u. Standard units

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 in any of the SDGs.

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 in all SDGs.

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.

The MS exhibited acceptable recoveries in SDG JC21491.

A MS/MSD was not performed on a sample location associated with SDGs JC21974 or JC21978.

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 for SDGs JC21974 and JC21978.

Sample locations associated with LCS analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery
SDG JC21491		
TB060216AM1 BPOW 2-2 BPOW 5-5 BPOW 5-6 TB060216MO1	Bromomethane	>UL
	Chloroethane	>UL
	Vinyl chloride	>UL

The criteria used to evaluate the LCS recoveries are presented in the following table. In the case of an LCS deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

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 with 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.

The laboratory duplicate met RPD QC criteria in SDG JC21491.

A laboratory duplicate sample was not performed on a sample location associated SDGs JC21974 or JC21978.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were not detected in any of the sample locations.

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 VOCs

VOCs: EPA 524	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
C. Trip 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
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
EPA 522-SIM	Water	28 days from collection to extraction and 28 days from extraction to analysis	Cool to <6 °C; preserved with Sodium Bisulfate (NaHSO4) to a pH of less than 4 s.u.

Note:

s.u. Standard units

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 in SDGs JC21491.

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 JC21974X

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
SDG JC21978X			
BPOW 5-2 BPOW 5-1	1,4-Dioxane	Detected sample results <RL and <BAL	"UB" at the RL

Note:

RL Reporting limit

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 in all SDGs.

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.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDGs JC21491 and JC21978.

A MS/MSD was not performed on a sample location associated with SDG JC21974.

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 for all SDGs.

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 with 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: EPA 522-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
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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: August 2, 2016

PEER REVIEW: Todd Church

DATE: August 3, 2016

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
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 # JC21491

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Orabona / AARON [illegible] / 2nd Pre-[illegible] 16 721 6820 Phone #:

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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, CO State: Zip: 80129
Attention: + Soma Das

Requested Analysis (see TEST CODE sheet)

V5242NG36GW+40
1, 4-dioxane USEPA Method 522

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	Pre-preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	TB060216MM1		6/2/16	0900	AM	GW	2	2									2		SUB
2	BP0W 2-2		6/2/16	1340	AM	GW		3								2	3	2	
3	BP0W 5-5		6/2/16	1350	MO	GW	5	3								2	3	2	V290
4	BP0W 5-6		6/2/16	1405	AP	GW	5	3								2	3	2	
5	TB060216M01		6/2/16	1140	—	TB	2	2									2		

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 2A
LABEL VERIFICATION JK

Data Deliverable Information

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS
Send results to Soma.Das@arcadis.com
1,4-Dioxane Method 522 sample pre-preserved with NaHSO4

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 [illegible]	6/2/16	2 [illegible]	2 [illegible] 6/2/16 2030	6/3/16 10:35	2 Chris [illegible] 6/3/16 10:35
Relinquished by Sampler: 3 Chris [illegible]	6/3/16 1645	Received By: 3 [illegible] Date 6/2/16 Time 1900	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. 5.6, 6.1°C CTG

JC21491: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	TB060216AM1		
Lab Sample ID:	JC21491-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
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]	1B103921.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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:	TB060216AM1		
Lab Sample ID:	JC21491-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
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 [b]	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	98%		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.
(b) This compound in BS is outside in house QC limits bias high.

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 2-2		
Lab Sample ID:	JC21491-2	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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]	1B103916.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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 2-2		
Lab Sample ID:	JC21491-2	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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 [b]	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	102%		78-114%
460-00-4	4-Bromofluorobenzene	103%		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.
(b) This compound in BS is outside in house QC limits bias high.

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:	JC21491-3	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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]	1B103917.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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:	JC21491-3	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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 [b]	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	101%		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.
(b) This compound in BS is outside in house QC limits bias high.

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:	JC21491-4	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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]	1B103918.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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:	JC21491-4	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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 [b]	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	98%		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.
(b) This compound in BS is outside in house QC limits bias high.

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:	TB060216MO1		
Lab Sample ID:	JC21491-5	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
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]	1B103922.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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:	TB060216MO1		
Lab Sample ID:	JC21491-5	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
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 [b]	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	98%		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.
(b) This compound in BS is outside in house QC limits bias high.

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

SGS ACCUTEST 3988801

CHAIN OF CUSTODY

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

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC21491X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayurp E-mail: mayurp@accutest.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): AM Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

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		Sim 14 Dioxane via EPA 522 method. Low PQL is needed.	LAB USE ONLY
2X	BPOW 2-2		6/2/16	1:40:00 PM	AM	AQ	2									2	X	Sub
3X	BPOW 5-5		6/2/16	1:50:00 PM	MO	AQ	2									2	X	Sub
4X	BPOW 5-6		6/2/16	2:05:00 PM	PP	AQ	2									2	X	Sub

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 21

Emergency & Rush T/A data available VIA Lablink

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

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 D Vasiliadis	6/6/16 17:00	1 Fed Ex	2		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 # 39	[ ] Intact [ ] Not intact	Preserved where applicable [ ] On Ice [ ] Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 398801 GEL Work Order: 398801

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J The response between the confirmation column and the primary column is >40%D.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 24 JUN 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**398801**	**Date Collected:**	**06/02/2016 13:40**	**Matrix:**	**WATER**
Lab Sample ID:	**398801001**	**Date Received:**	**06/07/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 2-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1572843**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/09/2016 18:09**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/09/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060916.B\s6j0924.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.338	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**398801**	**Date Collected:**	**06/02/2016 13:50**	**Matrix:**	**WATER**
Lab Sample ID:	**398801002**	**Date Received:**	**06/07/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1572843**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/09/2016 19:25**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/09/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060916.B\s6j0927.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.17	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**398801**	**Date Collected:**	**06/02/2016 14:05**	**Matrix:**	**WATER**
Lab Sample ID:	**398801003**	**Date Received:**	**06/07/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1572843**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/09/2016 19:52**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/09/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060916.B\s6j0928.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.040	ug/L	0.040	0.040	0.200

ACCUTEST LABORATORIES

GW
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
Accutest Quote #
Bottle Order Control #
Accutest Job # JC21974

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Pazorski Albina Redzepagic Phone #: 516-287-6421

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	pre-preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 5-4		6/10/16	1145	AR	GW	5	3								2	3	2	SUB
2	BPOW 1-3		6/10/16	1400	AR	GW	5	3								2	3	2	
3	TB061016AR1		6/10/16	0900	—	TB	2	2									2		U352

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
LABEL VERIFICATION

Data Deliverable Information

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS

1,4 Dioxane Method 522
Samples are pre-preserved with NaHSO4

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	6/10/16 1410	1	2	6/10 1756	2
3		3	4		4
5		5			

Custody Seal # Intact Not intact Preserved where applicable On Ice Cooler Temp. 0.4 - 2.0

5.1 5

JC21974: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-4		
Lab Sample ID:	JC21974-1	**Date Sampled:**	06/10/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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]	1B104113.D	1	06/15/16	BK	n/a	n/a	V1B4945
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 5-4		
Lab Sample ID:	JC21974-1	**Date Sampled:**	06/10/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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:	BPOW 1-3		
Lab Sample ID:	JC21974-2	**Date Sampled:**	06/10/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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]	1B104114.D	1	06/15/16	BK	n/a	n/a	V1B4945
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 1-3		
Lab Sample ID:	JC21974-2	**Date Sampled:**	06/10/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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	92%		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:	TB061016AR1		
Lab Sample ID:	JC21974-3	**Date Sampled:**	06/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/10/16
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]	1B104115.D	1	06/15/16	BK	n/a	n/a	V1B4945
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:	TB061016AR1		
Lab Sample ID:	JC21974-3	**Date Sampled:**	06/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/10/16
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	91%		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

SGS ACCUTEST

399288

CHAIN OF CUSTODY

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

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC21974X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayurp E-mail: mayurp@accutest.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): AR Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Sim 14 Dioxane via EPA 522 method. Low PQL is needed.

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		Sim 14 Dioxane via EPA 522 method. Low PQL is needed.	LAB USE ONLY
1X	BPOW 5-4		6/10/16	11:45:00 AM	AR	AQ	2									2	X	Sub
2X	BPOW 1-3		6/10/16	2:00:00 PM	AR	AQ	2									2	X	Sub
																		Sub

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 21

Emergency & Rush T/A data available VIA Lablink

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

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 Oleg Besenyo	6/13/16 1700	1 [illegible] 6/14/16 9:15	2		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 # 69 [ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [ ] Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 399288 GEL Work Order: 399288

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J The response between the confirmation column and the primary column is >40%D.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 30 JUN 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399288**	**Date Collected:**	**06/10/2016 11:45**	**Matrix:**	**WATER**
Lab Sample ID:	**399288001**	**Date Received:**	**06/14/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1574361**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/20/2016 13:02**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/17/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s062016.B\s6f2011.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.21	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399288**	**Date Collected:**	**06/10/2016 02:00**	**Matrix:**	**WATER**
Lab Sample ID:	**399288002**	**Date Received:**	**06/14/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 1-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1574361**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/20/2016 13:27**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/17/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s062016.B\s6f2012.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.167	ug/L	0.040	0.040	0.200

ACCUTEST LABORATORIES

GW
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 # JC21978

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Radzyapsk Phone #: 516-287-6247
Pat Pezarski

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	pre preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522									LAB USE ONLY
1	BPOW 5-2		6/9/16	1435	AR	GW	5	3								2	3	2									SUB
2	BPOW 5-1		6/9/16	1510	AR	GW	5	3								2	3	2									
3	TBUG0916AR1		6/9/16	1100	—	TB	2	2									2										V355

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sedment
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 1BJ
LABEL VERIFICATION OB

Data Deliverable Information

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS

1,4 Dioxane Method 522 Samples are pre-preserved with NaHSO4

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 CA Gryork	6/9/16 1700	1 [signature] Date Time:	2 [signature]	6/10 1757	2 [signature]
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp.
5		5			04.0

5.1
5

JC21978: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC21978-1	**Date Sampled:**	06/09/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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]	1B104116.D	1	06/15/16	BK	n/a	n/a	V1B4945
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:	JC21978-1	**Date Sampled:**	06/09/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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	93%		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:	JC21978-2	**Date Sampled:**	06/09/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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]	1B104117.D	1	06/15/16	BK	n/a	n/a	V1B4945
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	2.1	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:	BPOW 5-1		
Lab Sample ID:	JC21978-2	**Date Sampled:**	06/09/16
Matrix:	AQ - Ground Water	**Date Received:**	06/10/16
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	92%		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:	TB060916AR1		
Lab Sample ID:	JC21978-3	**Date Sampled:**	06/09/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/10/16
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]	1B104118.D	1	06/15/16	BK	n/a	n/a	V1B4945
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:	TB060916AR1		
Lab Sample ID:	JC21978-3	**Date Sampled:**	06/09/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/10/16
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

SGS ACCUTEST

399284

CHAIN OF CUSTODY

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

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC21978X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayurp E-mail: mayurp@accutest.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): AR Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

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		Sim 14 Dioxane via EPA 522 method. Low PQL is needed.	LAB USE ONLY
1X	BPOW 5-2		6/9/16	2:35:00 PM	AR	AQ	2									2	X	Sub
2X	BPOW 5-1		6/9/16	3:10:00 PM	PP	AQ	2									2	X	Sub

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 21

Emergency & Rush T/A data available VIA Lablink

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

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 Oleg Bezmuzg	6/13/16 1700	1 [illegible] 6/14/16 0915	2		2
3		3	4		4
5		5			

Custody Seal # 69 [ ] Intact [ ] Not intact Preserved where applicable [ ] On Ice [ ] Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 399284 GEL Work Order: 399284

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J The response between the confirmation column and the primary column is >40%D.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 30 JUN 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399284**	**Date Collected:**	**06/09/2016 02:35**	**Matrix:**	**WATER**
Lab Sample ID:	**399284001**	**Date Received:**	**06/14/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1574361**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/20/2016 11:23**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/17/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s062016.B\s6f2007.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	0.040 ~~J~~ UB	~~0.0578~~	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399284**	**Date Collected:**	**06/09/2016 03:10**	**Matrix:**	**WATER**
Lab Sample ID:	**399284002**	**Date Received:**	**06/14/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1575931**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/26/2016 13:08**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/24/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s062616.B\s6f2605.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	0.040 ~~J~~ UB	~~0.0554~~	ug/L	0.040	0.040	0.200

Northrop Grumman Corporation -

Operable Unit 2

Data Review

Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs #JC22174 and JC23099

Analyses Performed By:
Accutest-SGS Laboratories
Dayton, New Jersey

Report #26007R
Review Level: Tier II
Project: NY001496.NV15.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC22174 and JC23099 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:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC22174	BPOW 5-7	JC22174-1	Water	6/13/2016		X	X			
	TB061316AR1	JC22174-2	Water	6/13/2016		X				
JC23099	BPOW5-3	JC23099-1	Water	6/27/2016		X	X			
	TB062716AM1	JC23099-2	Water	6/27/2016		X				

Notes:

1. EPA Method 522 Semi-volatile analysis for 1,4-Dioxane was performed by GEL Laboratories, LLC, located in Charleston, South Carolina (subcontracted via Accutest Laboratory). The associated SDGs are: JC22174X/399631 and JC23099X/400417.

2. Matrix spike /matrix spike duplicate (MS/MSD) analysis was performed on sample location BPOW5-3 for VOC and SVOC analyses.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

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. Master tracking list		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		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) methods 524.2 and 522-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 COMPOUNDS (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.

Note:

s.u. Standard units

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 in either SDG.

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 in both SDGs.

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 JC22174.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
SDG JC23099:			
BPOW5-3	2-Butanone	>UL	>UL
	2-Hexanone	>UL	>UL
	4-Methyl-2-pentatnone	>UL	>UL

Note:

UL Upper Limit

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action

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 in SDG JC23099.

Sample locations associated with LCS analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery
TB061316AR1	Acetone	>UL
	Bromomethane	
	Chloroethane	

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

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 with a sample location associated with either SDG.

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 either SDG.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were not detected in any of the sample locations.

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 VOCs

VOCs: EPA 524	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
C. Trip 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

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
EPA 522-SIM	Water	28 days from collection to extraction and 28 days from extraction to analysis	Cool to <6 °C; preserved with Sodium Bisulfate (NaHSO4) to a pH of less than 4 s.u.

Note:

s.u. Standard units

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 in SDG JC22174X.

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 JC23099X.

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 in both SDGs.

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 JC22174X.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC23099X.

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 for both SDGs.

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 with a sample location associated with either SDG.

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: EPA 522-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
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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: August 4, 2016

PEER REVIEW: Todd Church

DATE: August 4, 2016

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
WB

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

SUB

PAGE 1 OF 7

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC23099

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): A. Mani M Orbean 516-661-7961 Phone #:

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	Preservative	V5242NG36GW+40	1, 4-dioxane USEPA Method 522
1	BPOW5-3		6/27/16	1425	AM	GW	15	9								Preserved NaHSO4	9	6
2	TB062716AM1		6/27/16	1000	—	TB	2	2								~~NaHSO4~~	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

LAB USE ONLY

SUB

INITIAL ASSESSMENT JA 06
LABEL VERIFICATION JC

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS
Please use BPOW5-3 as a QA/QC MS/MSD sample.
1,4 Dioxane 522 ambers are pre-preserved with NaHSO4

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	6/27/16 1810	1 Chris Law	2 Chris Law	6/28/16 9:35	2
3		3	4		4
5		5			

Custody Seal # [ ] Intact [ ] Not intact Preserved where applicable [x] On Ice [x] Cooler Temp. 1.6°C IP

JC23099: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW5-3		
Lab Sample ID:	JC23099-1	**Date Sampled:**	06/27/16
Matrix:	AQ - Ground Water	**Date Received:**	06/28/16
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]	1B104486.D	1	07/06/16	BK	n/a	n/a	V1B4964
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:	BPOW5-3		
Lab Sample ID:	JC23099-1	**Date Sampled:**	06/27/16
Matrix:	AQ - Ground Water	**Date Received:**	06/28/16
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	108%		78-114%
460-00-4	4-Bromofluorobenzene	109%		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:	TB062716AM1		
Lab Sample ID:	JC23099-2	**Date Sampled:**	06/27/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/28/16
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]	1B104491.D	1	07/06/16	BK	n/a	n/a	V1B4964
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:	TB062716AM1		
Lab Sample ID:	JC23099-2	**Date Sampled:**	06/27/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/28/16
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	109%		78-114%
460-00-4	4-Bromofluorobenzene	108%		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

480417%

SGS ACCUTEST

CHAIN OF CUSTODY

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

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC23099X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City / State / Zip: Dayton NJ 08810
Project Contact / E-mail: mayur.patel@sgs.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): AM Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City / State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Sim 14 Dioxane via 522 method, Low PQL needed

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		Sim 14 Dioxane via 522 method, Low PQL needed
1X	BPOW5-3		6/27/16	11:25:00 AM	AM	AQ	2									2	X
1SX	BPOW5-3		6/27/16	11:25:00 AM	AM	AQ	2									2	X
1DX	BPOW5-3		6/27/16	11:25:00 AM	AM	AQ	2									2	X

Number of preserved Bottles

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

LAB USE ONLY

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 7/19/2016

Emergency & Rush T/A data available VIA Lablink

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

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 D Vasselatos	6/29/16 17:00	1 Fed Ex	2		2
3	6-30-16 0915	3	4		4
5		5			

Custody Seal # [ ] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [ ]
Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 400417 GEL Work Order: 400417

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit or indicates that the analyte recovery in the MS or MSD is outside of specified acceptance criteria.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Cameron Bearden **Name: Cameron Bearden**

Date: 22 JUL 2016 **Title: Group Leader**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**400417**	**Date Collected:**	**06/27/2016 11:25**	**Matrix:**	**WATER**
Lab Sample ID:	**400417001**	**Date Received:**	**06/30/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1583749**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/22/2016 11:37**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/21/2016 13:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072216.B\s6g2207.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.64	ug/L	0.040	0.040	0.200

ACCUTEST LABORATORIES

GW
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 # JC22174

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #:

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	Pre-preserved with NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 5-7		6/13/16	1305	AR	GW	5	3								2	3	2	SUB
2	TB060316AR1		6/13/16	1000	—	TB	2	2									2		U390

Number of preserved Bottles

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 ASSESSMENT IA OB
LABEL VERIFICATION VK

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS

1,4 Dioxane Method 522

Samples are pre-preserved with NaHSO4

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:
Ed Gregorski	6/13/16 1900	1 Chris Land	2 Chris Land	6/14/16 1753	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. 1.7°C IP

JC22174: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-7		
Lab Sample ID:	JC22174-1	**Date Sampled:**	06/13/16
Matrix:	AQ - Ground Water	**Date Received:**	06/14/16
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]	1B104258.D	1	06/24/16	BK	n/a	n/a	V1B4954
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	1.7	5.0	0.57	ug/l	J
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	0.11	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 5-7		
Lab Sample ID:	JC22174-1	**Date Sampled:**	06/13/16
Matrix:	AQ - Ground Water	**Date Received:**	06/14/16
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	92%		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:	TB061316AR1		
Lab Sample ID:	JC22174-2	**Date Sampled:**	06/13/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/14/16
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	1B104148.D	1	06/16/16	BK	n/a	n/a	V1B4947
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 [a]	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 [a]	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 [a]	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:	TB061316AR1		
Lab Sample ID:	JC22174-2	**Date Sampled:**	06/13/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/14/16
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) This compound in BS is outside in house QC limits bias high.

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

7/6/9/4

CHAIN OF CUSTODY

SGS ACCUTEST

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

6EL

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC22174X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street
City State Zip: Dayton NJ 08810	City State
Project Contact E-mail: mayur.patel@sgs.com	Project #
Phone # Fax #: 732-329-0200	Client Purchase Order #
Sampler(s) Name(s) Phone: AR	Project Manager

Billing Information (if different from Report to)
Company Name
Street Address
City State Zip
Attention:

Requested Analysis (see TEST CODE sheet): Sim 14 Dioxane via 522 method lower PQL needed

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		Sim 14 Dioxane via 522 method lower PQL needed	LAB USE ONLY
1X	BPOW 5-7		6/13/16	1:05:00 PM	AR	AQ	2									2	X	sub

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 21

Emergency & Rush T/A data available VIA Lablink

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

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 D Vassalatos	6/16/16 17:00	1 FedEx	2 FedEx	6/17/16 1255	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 # 71 [ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [ ] Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 399631 GEL Work Order: 399631

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit or indicates that the analyte recovery in the MS or MSD is outside of specified acceptance criteria.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 07 JUL 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399631**	**Date Collected:**	**06/13/2016 13:05**	**Matrix:**	**WATER**
Lab Sample ID:	**399631001**	**Date Received:**	**06/17/2016 12:55**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-7**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1575931**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/26/2016 13:33**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/24/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s062616.B\s6f2606.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.0798	ug/L	0.040	0.040	0.200

Northrop Grumman Corporation -

Operable Unit 2

Data Review

Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs #JC21492, JC21774 and JC21895

Analyses Performed By:
Accutest-SGS Laboratories
Dayton, New Jersey

Report #25873R
Review Level: Tier II
Project: NY001496.NV15.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # JC21492, JC21774 and JC21895 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:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC21492	BPOW 6-2	JC21492-1	Water	6/3/2016		X	X			
	TB060316PP1	JC21492-2	Water	6/3/2016		X				
	BPOW 6-1	JC21492-3	Water	6/3/2016		X	X			
JC21774	BPOW 1-2	JC21774-1	Water	6/7/2016		X	X			
	TB060716AM1	JC21774-2	Water	6/7/2016		X				
	BPOW 6-3	JC21774-3	Water	6/7/2016		X	X			
	TB060716AR1	JC21774-4	Water	6/7/2016		X				
	BPOW 6-4	JC21774-5	Water	6/7/2016		X	X			
JC21895	BPOW 1-1	JC21895-1	Water	6/8/2016		X	X			
	TB060816AM1	JC21895-2	Water	6/8/2016		X				
	BPOW 6-5	JC21895-3	Water	6/8/2016		X	X			
	BPOW 6-6	JC21895-4	Water	6/8/2016		X	X			
	TB060816AR1	JC21895-5	Water	6/8/2016		X				
	REP060816AR1	JC21895-6	Water	6/8/2016	BPOW 6-6	X	X			

Note:

1. Method 522 Semi-volatile analysis for 1,4-Dioxane was performed by GEL Laboratories, LLC, located in Charleston, South Carolina. The associated GEL SDGs are: JC21492 = 398804, JC21774 = 399168 and JC21895 = 399229.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

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. Master tracking list		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		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) methods 524.2 and 522-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 COMPOUNDS (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.

Note:

s.u. Standard units

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 in any of the SDGs.

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 in all SDGs.

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 any of the SDGs.

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.

Sample locations associated with LCS analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery
SDG JC21492		
BPOW 6-2 TB060316PP1 BPOW 6-1	Bromomethane	>UL
	Chloroethane	>UL
	Vinyl chloride	>UL
SDG JC21895		
BPOW 1-1 TB060816AM1 BPOW 6-5 BPOW 6-6 TB060816AR1 REP060816AR1	Acetone	>UL
	Bromomethane	>UL
	Chloroethane	>UL

The criteria used to evaluate the LCS recoveries are presented in the following table. In the case of an LCS deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

Control Limit	Sample Result	Qualification

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.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BPOW 6-6/ REP060816AR1	Carbon disulfide	0.14 J	0.14 J	AC

Notes:

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 any of the SDGs.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were not detected in any of the sample locations.

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 VOCs

VOCs: EPA 524	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
C. Trip 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		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
EPA 522-SIM	Water	28 days from collection to extraction and 28 days from extraction to analysis	Cool to <6 °C; preserved with Sodium Bisulfate (NaHSO4) to a pH of less than 4 s.u.

Note:

s.u. Standard units

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 in any of the SDGs.

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 in all SDGs.

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 any of the SDGs.

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 for all SDGs.

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.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BPOW 6-6/ REP060816AR1	1,4-Dioxane	0.0442 J	0.0476 J	AC

Notes:

AC Acceptable

The calculated RPD between the parent sample and field duplicate was 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
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		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: July 15, 2016

PEER REVIEW: Todd Church

DATE: July 19, 2016

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
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 # JC21492

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Alisha Redzepovic, Pat Prezioti Phone #: 516-247-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	Preservative	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BP04 G-2		6/3/16	1215	AR	GW	5	3								pre-preserved NaHSO4 2	3	2	SUB
2	TB060316PP1		6/3/16	1000	–	TB	2	2									2		
3	BP04 G-1		6/3/16	1205	AR	GW	5	3								2	3	2	V292

INITIAL ASESSMENT 3/4 OB
LABEL VERIFICATION TR

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:

Data Deliverable Information

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS

1,4 dioxane Method 522 samples are pre-preserved with NaHSO4

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 Prezioti	6/3/16 13:45	1 Chris Law	2 Chris Law	6/3/16 1645	2
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp.
5		5			1.8°C

JC21492: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 6-2		
Lab Sample ID:	JC21492-1	**Date Sampled:**	06/03/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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]	1B103923.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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 6-2		
Lab Sample ID:	JC21492-1	**Date Sampled:**	06/03/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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 [b]	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.
(b) This compound in BS is outside in house QC limits bias high.

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:	TB060316PP1		
Lab Sample ID:	JC21492-2	**Date Sampled:**	06/03/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
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]	1B103924.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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:	TB060316PP1		
Lab Sample ID:	JC21492-2	**Date Sampled:**	06/03/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
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 [b]	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	98%		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.
(b) This compound in BS is outside in house QC limits bias high.

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 6-1		
Lab Sample ID:	JC21492-3	**Date Sampled:**	06/03/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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]	1B103925.D	1	06/06/16	BK	n/a	n/a	V1B4938
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 [b]	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 [b]	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 6-1		
Lab Sample ID:	JC21492-3	**Date Sampled:**	06/03/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
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 [b]	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	99%		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.
(b) This compound in BS is outside in house QC limits bias high.

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

SGS ACCUTEST 398804

CHAIN OF CUSTODY

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

FED-EX Tracking #
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job JC21492X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayurp E-mail: mayurp@accutest.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): PP Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

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		Sim 14 Dioxane via EPA 522 method. Low PQL is needed.	LAB USE ONLY
1X	BPOW 6-2		6/3/16	12:15:00 PM	PP	AQ	2									2	X	Sub
3X	BPOW 6-1		6/3/16	12:05:00 PM	AR	AQ	2									2	X	Sub

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 21

Emergency & Rush T/A data available VIA Lablink

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

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 DVassilakos	6/6/16 17:01	1 Fed Ex	2		2
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3 6/7/16 9:15	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal # 39 [ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [ ] Cooler Temp.
5		5			

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 398804 GEL Work Order: 398804

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 27 JUN 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**398804**	**Date Collected:**	**06/03/2016 12:15**	**Matrix:**	**WATER**
Lab Sample ID:	**398804001**	**Date Received:**	**06/07/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1572843**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/09/2016 20:17**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/09/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060916.B\s6j0929.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.040	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**398804**	**Date Collected:**	**06/03/2016 12:05**	**Matrix:**	**WATER**
Lab Sample ID:	**398804002**	**Date Received:**	**06/07/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1572843**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/09/2016 20:43**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/09/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060916.B\s6j0930.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.040	ug/L	0.040	0.040	0.200

ACCUTEST LABORATORIES

GW
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
Accutest Quote #
Bottle Order Control #
Accutest Job # JC21774

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Prezorski, Aaron Kunkel/Matthew Rodriguez Phone #: 516-721-6820

Project Information

Project Name: AGMNYM62235 // OU2 Outpost
Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	pre-preserved NaHSO4	V5242NG36GW+40 1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 1-2		6/7/16	1445	AM	GW	5	3								2	3 2	SUB
2	TB060716AM1		6/7/16	0800	AM	TB	2	2									2	V324
3	BPOW 6-3		6/7/16	1243	AR	GW	5	3								2	3 2	
4	TB060716AR1		6/7/16	1000	—	TB	2	2									2	
5	BPOW 6-4		6/7/16	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 ASESSMENT 2/3/17
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

Analyze VOCs for 36 constituents and 40TICS
1,4 Dioxane Method 522 samples are pre-preserved with NaHSO4

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

	Relinquished By	Date Time	Received By	Date Time
1	[signature]	6/7/16 1600	[signature]	6/7/16 1900
2	[signature]	6/7/16 1900	[signature]	6/7/16 1930
3	[signature]	6-8-16 1730	[signature]	
4			Kolb on Temp	6-8-16 1120
5				

Custody Seal # 400 402 Intact [ ] Not intact [ ] Preserved where applicable [ ] On Ice 8 Cooler Temp. 2.1C-IP 2.1C-IP

5.1 5

JC21774: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 1-2		
Lab Sample ID:	JC21774-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/08/16
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]	1B103980.D	1	06/09/16	BK	n/a	n/a	V1B4941
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	0.066	0.50	0.031	ug/l	J
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	0.13	0.50	0.039	ug/l	J
75-35-4	1,1-Dichloroethylene	0.26	0.50	0.054	ug/l	J
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	0.34	0.50	0.050	ug/l	J
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 1-2		
Lab Sample ID:	JC21774-1	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/08/16
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	0.85	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	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:	TB060716AM1		
Lab Sample ID:	JC21774-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/08/16
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]	1B103981.D	1	06/09/16	BK	n/a	n/a	V1B4941
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:	TB060716AM1		
Lab Sample ID:	JC21774-2	**Date Sampled:**	06/07/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/08/16
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
	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:	JC21774-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/08/16
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]	1B103982.D	1	06/09/16	BK	n/a	n/a	V1B4941
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 6-3		
Lab Sample ID:	JC21774-3	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/08/16
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	99%		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:	TB060716AR1		
Lab Sample ID:	JC21774-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/08/16
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]	1B103983.D	1	06/09/16	BK	n/a	n/a	V1B4941
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:	TB060716AR1		
Lab Sample ID:	JC21774-4	**Date Sampled:**	06/07/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/08/16
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	83%		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:	BPOW 6-4		
Lab Sample ID:	JC21774-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/08/16
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]	1B103984.D	1	06/09/16	BK	n/a	n/a	V1B4941
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:	JC21774-5	**Date Sampled:**	06/07/16
Matrix:	AQ - Ground Water	**Date Received:**	06/08/16
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	83%		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

SGS ACCUTEST

CHAIN OF CUSTODY

399168

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

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC21774X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayurp E-mail: mayurp@accutest.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): AM Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

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		SB522SIM14DIOX.											LAB USE ONLY
1X	BPOW 1-2		6/7/16	2:45:00 PM	AM	AQ	2									2	X											
3X	BPOW 6-3		6/7/16	12:43:00 PM	AR	AQ	2									2	X											
5X	BPOW 6-4		6/7/16	1:15:00 PM	PP	AQ	2									2	X											

Number of preserved Bottles

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)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/22/2016

Emergency & Rush T/A data available VIA Lablink

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

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]	6/9/16 17:00	1 [signature] 6/10/16 9:05	2		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 # 62		

[ ] Intact [ ] Not intact Preserved where applicable [ ] On Ice [ ] Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 399168 GEL Work Order: 399168

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J The response between the confirmation column and the primary column is >40%D.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 27 JUN 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399168**	**Date Collected:**	**06/07/2016 14:45**	**Matrix:**	**WATER**
Lab Sample ID:	**399168001**	**Date Received:**	**06/10/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 1-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 14:28**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1613.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.160	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399168**	**Date Collected:**	**06/07/2016 12:43**	**Matrix:**	**WATER**
Lab Sample ID:	**399168002**	**Date Received:**	**06/10/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 14:54**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1614.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.040	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399168**	**Date Collected:**	**06/07/2016 13:15**	**Matrix:**	**WATER**
Lab Sample ID:	**399168003**	**Date Received:**	**06/10/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 16:38**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1618.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.087	ug/L	0.040	0.040	0.200

ACCUTEST LABORATORIES

GW
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
Accutest Quote #
Bottle Order Control #
Accutest Job # JC21895

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City / State / Zip: Melville NY 11747
Project Contact / E-mail: Soma Das, soma.das@arcadis-us.com
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Amaias Pracurski Kalsmonic 516 721 6820 Phone #

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Northrop Grumman OU2 Hydro
Street
City / State: Bethpage NY
Project #: NY001496.NV15.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 / State / Zip: Highlands Ranch, CO 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	pre-preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 1-1		6/8/16	1380	AM	GW	5	3								2	3	2	SUB
2	TB060816AM1		6/8/16	0900	AM	TB	2	2									2		
3	BPOW 6-5		6/8/16	1325	PP	GW	5	3								2	3	2	V345
4	BPOW 6-6		6/8/16	1330	AR	GW	5	3								2	3	2	
5	TB060816AR1		6/8/16	1100	—	TB	2	2									2		
6	REP060816AR1		6/8/16	—	—	GW	5	3								2	3	2	

INITIAL ASESSMENT
LABEL VERIFICATION

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:

Data Deliverable Information

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

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

Comments / Special Instructions

Analyze VOCs for 36 constituents and 40TICS

1,4 Dioxane Method 522 Samples are pre-preserved with NaHSO4

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

Relinquished by Sampler / Relinquished by	Date/Time	Received By	Relinquished By	Date Time	Received By	Date Time
1 Amaias	6/8/16 1515	2 [signature]	2 [signature]	6/8/16 1830	3 [signature]	6/9/16 17:19
3 [signature]	6/9/16 17:19	4	4		5	
5						

Custody Seal # [ ] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [✓]
Cooler Temp. 3.1C° 2.8C°
2 COOLERS

JC21895: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 1-1		
Lab Sample ID:	JC21895-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	1B104055.D	1	06/13/16	BK	n/a	n/a	V1B4943
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 [a]	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 [a]	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 [a]	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	0.11	0.50	0.031	ug/l	J
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	0.18	0.50	0.054	ug/l	J
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	0.25	0.50	0.050	ug/l	J
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 1-1		
Lab Sample ID:	JC21895-1	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	1.1	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	87%		78-114%
460-00-4	4-Bromofluorobenzene	87%		77-115%

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

(a) This compound in BS is outside in house QC limits bias high.

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:	TB060816AM1		
Lab Sample ID:	JC21895-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/16
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	1B104056.D	1	06/13/16	BK	n/a	n/a	V1B4943
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 [a]	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 [a]	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 [a]	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:	TB060816AM1		
Lab Sample ID:	JC21895-2	**Date Sampled:**	06/08/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/16
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	87%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

(a) This compound in BS is outside in house QC limits bias high.

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:	JC21895-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	1B104057.D	1	06/13/16	BK	n/a	n/a	V1B4943
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 [a]	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 [a]	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	0.27	0.50	0.028	ug/l	J
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane [a]	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 6-5		
Lab Sample ID:	JC21895-3	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	87%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

(a) This compound in BS is outside in house QC limits bias high.

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:	JC21895-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	1B104058.D	1	06/14/16	BK	n/a	n/a	V1B4943
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 [a]	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 [a]	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	0.14	0.50	0.028	ug/l	J
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane [a]	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:	JC21895-4	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	86%		77-115%

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

(a) This compound in BS is outside in house QC limits bias high.

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:	TB060816AR1		
Lab Sample ID:	JC21895-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/16
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	1B104059.D	1	06/14/16	BK	n/a	n/a	V1B4943
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 [a]	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 [a]	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 [a]	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:	TB060816AR1		
Lab Sample ID:	JC21895-5	**Date Sampled:**	06/08/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/16
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 [a]	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	87%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

(a) This compound in BS is outside in house QC limits bias high.

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:	REP060816AR1		
Lab Sample ID:	JC21895-6	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	1B104060.D	1	06/14/16	BK	n/a	n/a	V1B4943
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 [a]	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 [a]	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	0.14	0.50	0.028	ug/l	J
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane [a]	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:	REP060816AR1		
Lab Sample ID:	JC21895-6	**Date Sampled:**	06/08/16
Matrix:	AQ - Ground Water	**Date Received:**	06/09/16
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	86%		77-115%

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

(a) This compound in BS is outside in house QC limits bias high.

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

SGS ACCUTEST

CHAIN OF CUSTODY

399229

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

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job JC21895X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: michelld E-mail: michelld@accutest.com
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): AM Phone:

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

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	SB522SIM14DIOX	LAB USE ONLY
1X	BPOW 1-1		6/8/16	1:50:00 PM	AM	AQ										X	
3X	BPOW 6-5		6/8/16	1:25:00 PM	PP	AQ										X	
4X	BPOW 6-6		6/8/16	1:30:00 PM	AR	AQ										X	
6X	REP060816AR1		6/8/16	12:00:00 AM		AQ										X	

Number of preserved Bottles

Comments / Special Instructions

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 14

Emergency & Rush T/A data available VIA Lablink

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

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

Relinquished by Sampler: 1 James Nuen	Date Time: 6/10/16 1700	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2
Relinquished by Sampler: 3	Date Time: 6-11-16 0900	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 641 [ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [ ] Cooler Temp.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 399229 GEL Work Order: 399229

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
J The response between the confirmation column and the primary column is >40%D.
U Indicates the target analyte was analyzed for but not detected above the detection limit.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Barbara Bailey **Name: Barbara Bailey**

Date: 27 JUN 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399229**	**Date Collected:**	**06/08/2016 01:50**	**Matrix:**	**WATER**
Lab Sample ID:	**399229001**	**Date Received:**	**06/11/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 1-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 17:04**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1619.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.165	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399229**	**Date Collected:**	**06/08/2016 01:25**	**Matrix:**	**WATER**
Lab Sample ID:	**399229002**	**Date Received:**	**06/11/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 17:30**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1620.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.040	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399229**	**Date Collected:**	**06/08/2016 01:30**	**Matrix:**	**WATER**
Lab Sample ID:	**399229003**	**Date Received:**	**06/11/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 17:55**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1621.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.0442	ug/L	0.040	0.040	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**399229**	**Date Collected:**	**06/08/2016 12:00**	**Matrix:**	**WATER**
Lab Sample ID:	**399229004**	**Date Received:**	**06/11/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**REP060816AR1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1573798**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/16/2016 18:21**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/15/2016 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s061616.B\s6f1622.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.0476	ug/L	0.040	0.040	0.200

Northrop Grumman Corporation -

Operable Unit 2

Data Review

Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs #JC20425, JC20516 and JC20612

Analyses Performed By:
Accutest-SGS Laboratories
Dayton, New Jersey

Report #25836R
Review Level: Tier II
Project: NY001496.NV15.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC20425, JC20516 and JC20612 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:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC20425	RE-117D1	JC20425-1	Water	5/16/2016		X	X			
	RE-117D2	JC20425-2	Water	5/16/2016		X	X			
	TB051616MO1	JC20425-3	Water	5/16/2016		X				
	FB051616MO1	JC20425-4	Water	5/16/2016		X	X			
JC20516	RE-119D1	JC20516-1	Water	5/17/2016		X	X			
	FB051716MO1	JC20516-2	Water	5/17/2016		X	X			
	TB051716MO1	JC20516-3	Water	5/17/2016		X				
JC20612	RE-118D1	JC20612-1	Water	5/18/2016		X	X			
	FB051816MO1	JC20612-2	Water	5/18/2016		X	X			
	TB051816MO1	JC20612-3	Water	5/18/2016		X				

Note:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location RE-119D1 (SDG JC20516) for VOC and SVOC.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

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. Master tracking list		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		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260C 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 COMPOUNDS (VOC) 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 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.

Note:

s.u. Standard units

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 in SDG JC20516.

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 with SDGs JC20425 and JC20612.

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 in all SDGs.

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.

The MS/MSD was not performed on a sample location associated with SDGs JC20425 and JC20612.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC20516.

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 for all SDGs.

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 with a sample location associated with any of the SDGs evaluated in this report.

7. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were not detected in any of the sample locations.

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 VOCs

VOCs: SW-846 8260C	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		
C. Trip 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

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (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 in SDGs JC20425, JC20516 and JC20612.

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 in all SDGs.

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.

The MS/MSD was not performed on a sample location associated with SDGs JC20425 and JC20612.

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
RE-119D1 (SDG JC20516)	1,4-Dioxane

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

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 for all SDGs.

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 with a sample location associated with any of the SDGs evaluated in this report.

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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: July 5, 2016

PEER REVIEW: Todd Church

DATE: July 6, 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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC20425

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Ombara Pat Pizzarello Phone #: 516-661-7061

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street
City: Bethpage State: NY
Project #: NY001496.NV15.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	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-11701		5/16/16	1450	PP	GW	5	3				2				3	2	
2	RE-11702		5/16/16	1442	MO	GW	5	3				2				3	2	E1
3	TB 051616 MO1		5/16/16	1030	—	TB	2	2								2		V124
4	FB 051616 MO1		5/16/16	1045	MO	FB	5	3				2				3	2	

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

RL reporting for metals

INITIAL ASESSMENT 2B 03

LABEL VERIFICATION 03

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 Mike Ombara	5/16/16 1835	1 Chris Lam Pat 5/17/16 10:25	2 Chris Lam	5/17/16 1610	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. 2.6, 1.4°C/B

JC20425: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-117D1		
Lab Sample ID:	JC20425-1	**Date Sampled:**	05/16/16
Matrix:	AQ - Ground Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168210.D	1	05/21/16	TK	n/a	n/a	V2A7146
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-117D1		
Lab Sample ID:	JC20425-1	**Date Sampled:**	05/16/16
Matrix:	AQ - Ground Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	21.3	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	94%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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:	RE-117D2		
Lab Sample ID:	JC20425-2	**Date Sampled:**	05/16/16
Matrix:	AQ - Ground Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168211.D	1	05/21/16	TK	n/a	n/a	V2A7146
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-117D2		
Lab Sample ID:	JC20425-2	**Date Sampled:**	05/16/16
Matrix:	AQ - Ground Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

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:	TB051616MO1		
Lab Sample ID:	JC20425-3	**Date Sampled:**	05/16/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168207.D	1	05/21/16	TK	n/a	n/a	V2A7146
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB051616MO1		
Lab Sample ID:	JC20425-3	**Date Sampled:**	05/16/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	94%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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:	FB051616MO1		
Lab Sample ID:	JC20425-4	**Date Sampled:**	05/16/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168208.D	1	05/21/16	TK	n/a	n/a	V2A7146
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	7.2	10	3.8	ug/l	J
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	FB051616MO1		
Lab Sample ID:	JC20425-4	**Date Sampled:**	05/16/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/17/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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:	RE-117D1		
Lab Sample ID:	JC20425-1	**Date Sampled:**	05/16/16
Matrix:	AQ - Ground Water	**Date Received:**	05/17/16
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	3M61841.D	1	06/01/16	LK	05/22/16	OP94110A	E3M2914
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	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		24-125%
321-60-8	2-Fluorobiphenyl	84%		19-127%
1718-51-0	Terphenyl-d14	91%		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:	RE-117D2		
Lab Sample ID:	JC20425-2	**Date Sampled:**	05/16/16
Matrix:	AQ - Ground Water	**Date Received:**	05/17/16
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	3M61842.D	1	06/01/16	LK	05/22/16	OP94110A	E3M2914
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	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		24-125%
321-60-8	2-Fluorobiphenyl	76%		19-127%
1718-51-0	Terphenyl-d14	103%		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:	FB051616MO1		
Lab Sample ID:	JC20425-4	**Date Sampled:**	05/16/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/17/16
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	3M61843.D	1	06/01/16	LK	05/22/16	OP94110A	E3M2914
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		24-125%
321-60-8	2-Fluorobiphenyl	73%		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

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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC20516

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Cabrera, Pat Pacarsk Phone #: 516-667-8281

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-1190 1		5/17/16	1332	MO	GW	5	3				2				3	2	E17
2	FB051716MO1		5/17/16	1030	MO	FB	5	3				2				3	2	V136
3	TB051716MO1		5/17/16	1000	—	TB	2	2								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:

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

RL reporting for metals

INITIAL ASSESSMENT AMA
LABEL VERIFICATION

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	5/17/16 1825	1 Chris Lad 5/18/16 12:50	2 Chris Lad	5/18/16 1640	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. 1.6°, 1.8°C

JC20516: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-119D1		
Lab Sample ID:	JC20516-1	**Date Sampled:**	05/17/16
Matrix:	AQ - Ground Water	**Date Received:**	05/18/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U205849.D	1	05/20/16	JM	n/a	n/a	VU9447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-119D1		
Lab Sample ID:	JC20516-1	**Date Sampled:**	05/17/16
Matrix:	AQ - Ground Water	**Date Received:**	05/18/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	100%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

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:	FB051716MO1		
Lab Sample ID:	JC20516-2	**Date Sampled:**	05/17/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/18/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U205850.D	1	05/20/16	JM	n/a	n/a	VU9447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	FB051716MO1		
Lab Sample ID:	JC20516-2	**Date Sampled:**	05/17/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/18/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

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:	TB051716MO1		
Lab Sample ID:	JC20516-3	**Date Sampled:**	05/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U205851.D	1	05/20/16	JM	n/a	n/a	VU9447
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB051716MO1		
Lab Sample ID:	JC20516-3	**Date Sampled:**	05/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

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:	RE-119D1		
Lab Sample ID:	JC20516-1	**Date Sampled:**	05/17/16
Matrix:	AQ - Ground Water	**Date Received:**	05/18/16
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	4M65668.D	1	06/01/16	LK	05/23/16	OP94122A	E4M2945
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	0.053	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		24-125%
321-60-8	2-Fluorobiphenyl	66%		19-127%
1718-51-0	Terphenyl-d14	105%		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:	FB051716MO1		
Lab Sample ID:	JC20516-2	**Date Sampled:**	05/17/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/18/16
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	4M65669.D	1	06/01/16	LK	05/23/16	OP94122A	E4M2945
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	0.053	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		24-125%
321-60-8	2-Fluorobiphenyl	55%		19-127%
1718-51-0	Terphenyl-d14	104%		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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC20612

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Pizzorti Mike Orabona Phone #: 516-267-6247

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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)

VC82602NG36GW+40
1,4-dioxane USEPA Method 8270D SIM

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	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-1101		5/19/16	1235	PP MO	GW	5	3				2				3	2	E49
2	FB051916M01		5/19/16	0835	PP MO	FB	5	3				2				3	2	V154
3	TB051916M01		5/19/16	0800	—	TB	2	2								2		

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

RL reporting for metals

INITIAL ASESSMENT IB CB
LABEL VERIFICATION AW

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	5/19/16 1930	1 Louis	2 Louis	5/19/16 1615	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: [x] Cooler Temp. 4.3C, 3.8C

2 COOLERS

JC20612: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-118D1		
Lab Sample ID:	JC20612-1	**Date Sampled:**	05/18/16
Matrix:	AQ - Ground Water	**Date Received:**	05/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127270.D	1	05/26/16	HA	n/a	n/a	V3B5697
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-118D1		
Lab Sample ID:	JC20612-1	**Date Sampled:**	05/18/16
Matrix:	AQ - Ground Water	**Date Received:**	05/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	104%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

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:	FB051816MO1		
Lab Sample ID:	JC20612-2	**Date Sampled:**	05/18/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127264.D	1	05/26/16	HA	n/a	n/a	V3B5697
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.6	10	3.8	ug/l	J
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	FB051816MO1		
Lab Sample ID:	JC20612-2	**Date Sampled:**	05/18/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	109%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	107%		78-117%

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:	TB051816MO1		
Lab Sample ID:	JC20612-3	**Date Sampled:**	05/18/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A161210.D	1	05/26/16	HA	n/a	n/a	V1A6898
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB051816MO1		
Lab Sample ID:	JC20612-3	**Date Sampled:**	05/18/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/19/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	107%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	3.98	38	ug/l	J
	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:	RE-118D1		
Lab Sample ID:	JC20612-1	**Date Sampled:**	05/18/16
Matrix:	AQ - Ground Water	**Date Received:**	05/19/16
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	3M61704.D	1	05/27/16	JJ	05/25/16	OP94208A	E3M2907
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.052	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		24-125%
321-60-8	2-Fluorobiphenyl	84%		19-127%
1718-51-0	Terphenyl-d14	55%		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:	FB051816MO1		
Lab Sample ID:	JC20612-2	**Date Sampled:**	05/18/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/19/16
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	3M61705.D	1	05/27/16	JJ	05/25/16	OP94208A	E3M2907
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	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		24-125%
321-60-8	2-Fluorobiphenyl	98%		19-127%
1718-51-0	Terphenyl-d14	95%		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 Semi-volatile Analyses

SDGs #JC20736, JC20918 and JC20990

Analyses Performed By:
Accutest-SGS Laboratories
Dayton, New Jersey

Report #25837R
Review Level: Tier II
Project: NY001496.NV15.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC20736, JC20918 and JC20990 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:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC20736	TT-102D2	JC20736-1	Water	5/19/2016		X	X			
	TT-102D	JC20736-2	Water	5/19/2016		X	X			
	TB051916MO1	JC20736-3	Water	5/19/2016		X				
JC20918	RE-107D1	JC20918-1	Water	5/23/2016		X	X			
	RE-107D2	JC20918-2	Water	5/23/2016		X	X			
	TB052316MO1	JC20918-3	Water	5/23/2016		X				
	FB052316MO1	JC20918-4	Water	5/23/2016		X	X			
JC20990	RE-107D3	JC20990-1	Water	5/24/2016		X	X			
	TB052416MO1	JC20990-2	Water	5/24/2016		X				
	FB052416MO1	JC20990-3	Water	5/24/2016		X	X			

Notes:

1. VOC analysis for SDG JC20736 was by Method 524.2.
2. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location RE-107D3 (SDG JC20990) for VOC and SVOC.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

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. Master tracking list		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		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 8260C, 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 COMPOUNDS (VOC) 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 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.
EPA 524.2		14 days from collection to analysis	

Note:

s.u. Standard units

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 in SDGs JC20918 and JC20990.

Compounds were detected in the associated QA blanks for SDG JC20736; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required with SDG JC20736.

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 in all SDGs.

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.

The MS/MSD was not performed on a sample location associated with SDGs JC20736 and JC20918.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC20990.

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 for all SDGs.

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 with a sample location associated with any of the SDGs evaluated in this report.

7. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were detected in sample location TB051916MO1 (SDG JC20736). 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 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: SW-846 8260C	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	
C. Trip 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

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (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 in SDGs JC20736, JC20918 and JC20990.

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 in all SDGs.

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.

The MS/MSD was not performed on a sample location associated with SDGs JC20736 and JC20918.

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
RE-107D3 (SDG JC20990)	1,4-Dioxane

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

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 for all SDGs.

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 with a sample location associated with any of the SDGs evaluated in this report.

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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: July 5, 2016

PEER REVIEW: Todd Church

DATE: July 6, 2016

CHAIN OF CUSTODY CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC20736

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Mike Orabona, Pat Przotki Phone #: 516-287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	V5242NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	TT-102D2		5/19/16	1223	OP	GW	5	3				2				3	2	E103
2	TT-102D		5/19/16	1308	MO	GW	5	3				2				3	2	V174
3	TB051916M01		5/19/16	1200	—	TB	2	2								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:

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

RL reporting for metals

INITIAL ASESSMENT AMJA

LABEL VERIFICATION JR

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	5/19/16 1740	1 Christal 5/20/16 10:00	2 Christal	5/20/16 1705	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. 1.2°, 3.7°C IR

5.1
5

JC20736: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	TT-102D2		
Lab Sample ID:	JC20736-1	**Date Sampled:**	05/19/16
Matrix:	AQ - Ground Water	**Date Received:**	05/20/16
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	1B103694.D	1	05/24/16	BK	n/a	n/a	V1B4926
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	0.94	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 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:	TT-102D2		
Lab Sample ID:	JC20736-1	**Date Sampled:**	05/19/16
Matrix:	AQ - Ground Water	**Date Received:**	05/20/16
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	97%		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:	TT-102D		
Lab Sample ID:	JC20736-2	**Date Sampled:**	05/19/16
Matrix:	AQ - Ground Water	**Date Received:**	05/20/16
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	1B103695.D	1	05/24/16	BK	n/a	n/a	V1B4926
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:	TT-102D		
Lab Sample ID:	JC20736-2	**Date Sampled:**	05/19/16
Matrix:	AQ - Ground Water	**Date Received:**	05/20/16
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	96%		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:	TB051916MO1		
Lab Sample ID:	JC20736-3	**Date Sampled:**	05/19/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/20/16
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	1B103696.D	1	05/24/16	BK	n/a	n/a	V1B4926
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:	TB051916MO1		
Lab Sample ID:	JC20736-3	**Date Sampled:**	05/19/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/20/16
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	98%		77-115%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.23	.86	ug/l	JN
	Total TIC, Volatile		.86	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:	TT-102D2		
Lab Sample ID:	JC20736-1	**Date Sampled:**	05/19/16
Matrix:	AQ - Ground Water	**Date Received:**	05/20/16
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	4M65724.D	1	06/03/16	LK	05/26/16	OP94253A	E4M2948
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	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		24-125%
321-60-8	2-Fluorobiphenyl	79%		19-127%
1718-51-0	Terphenyl-d14	77%		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:	TT-102D		
Lab Sample ID:	JC20736-2	**Date Sampled:**	05/19/16
Matrix:	AQ - Ground Water	**Date Received:**	05/20/16
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	4M65725.D	1	06/03/16	LK	05/26/16	OP94253A	E4M2948
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	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		24-125%
321-60-8	2-Fluorobiphenyl	75%		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

ACCUTEST LABORATORIES

GW
FB
WB

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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC20918

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
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): M.Orbona / P.Prezorski Phone #: 516 361 3261

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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)

VC82602NG36GW+40
1,4-dioxane USEPA Method 8270D SIM

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	MeOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-10701		5/23/16	1313	PP	GW	5	3				2				3	2	E58
2	RE-10702		5/23/16	1310	mo	GW	5	3				2				3	2	V207
3	TB052316M01		5/23/16	0900	—	TB	2	2								2		
4	FB052316M01		5/23/16	0910	mo	FB	5	3				2				3	2	

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 3A3M
LABEL VERIFICATION OB

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

RL reporting for metals

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	5/23/16 1000	1 Chris Lau	2 Chris Lau	5/24/16 1855	2
3		3	4		4
5		5			

Date Time: 5/24/16 1055

Custody Seal # [x] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [x]
Cooler Temp. 1.0, 1.2° C IP

5.1 5

JC20918: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-107D1		
Lab Sample ID:	JC20918-1	**Date Sampled:**	05/23/16
Matrix:	AQ - Ground Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127308.D	1	05/27/16	HA	n/a	n/a	V3B5699
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	0.70	1.0	0.23	ug/l	J
108-88-3	Toluene	0.37	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-107D1		
Lab Sample ID:	JC20918-1	**Date Sampled:**	05/23/16
Matrix:	AQ - Ground Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	11.6	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		76-120%
17060-07-0	1,2-Dichloroethane-D4	84%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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:	RE-107D2		
Lab Sample ID:	JC20918-2	**Date Sampled:**	05/23/16
Matrix:	AQ - Ground Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127309.D	1	05/27/16	HA	n/a	n/a	V3B5699
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.25	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.40	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	3.4	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	17.0	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	3.7	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-107D2		
Lab Sample ID:	JC20918-2	**Date Sampled:**	05/23/16
Matrix:	AQ - Ground Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	162	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		76-120%
17060-07-0	1,2-Dichloroethane-D4	83%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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:	TB052316M01		
Lab Sample ID:	JC20918-3	**Date Sampled:**	05/23/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127303.D	1	05/26/16	HA	n/a	n/a	V3B5699
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB052316M01		
Lab Sample ID:	JC20918-3	**Date Sampled:**	05/23/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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:	FB052316M01		
Lab Sample ID:	JC20918-4	**Date Sampled:**	05/23/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127304.D	1	05/26/16	HA	n/a	n/a	V3B5699
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	FB052316M01		
Lab Sample ID:	JC20918-4	**Date Sampled:**	05/23/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/24/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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:	RE-107D1		
Lab Sample ID:	JC20918-1	**Date Sampled:**	05/23/16
Matrix:	AQ - Ground Water	**Date Received:**	05/24/16
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	4M65794.D	1	06/06/16	LK	05/26/16	OP94287A	E4M2953
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	4.83	0.11	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		24-125%
321-60-8	2-Fluorobiphenyl	58%		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:	RE-107D2		
Lab Sample ID:	JC20918-2	**Date Sampled:**	05/23/16
Matrix:	AQ - Ground Water	**Date Received:**	05/24/16
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	P105479.D	1	06/07/16	AD	05/26/16	OP94287A	EP4650
Run #2	4M65795.D	1	06/07/16	LK	05/26/16	OP94287A	E4M2953

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2	920 ml	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	9.72	1.1	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%	57%	24-125%
321-60-8	2-Fluorobiphenyl	63%	52%	19-127%
1718-51-0	Terphenyl-d14	56%	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:	FB052316M01		
Lab Sample ID:	JC20918-4	**Date Sampled:**	05/23/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/24/16
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	4M65796.D	1	06/07/16	LK	05/26/16	OP94287A	E4M2953
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.052	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		24-125%
321-60-8	2-Fluorobiphenyl	59%		19-127%
1718-51-0	Terphenyl-d14	95%		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
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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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC20990

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Abina Radzepasic, Mike Orobara Phone #: 5/24/2016

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-1070 3		5/24/16	1252	MO/AR	GW	15	9				6				9	6	E1
2	TB052416MO1		5/24/16	1000	—	TB	2	2								2		V218
3	FB052416MO1		5/24/16	1005	MO/AR	FB	5	3				2				3	2	

INITIAL ASESSMENT AMP
LABEL VERIFICATION CB

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

RL reporting for metals

Please use RE-1070 3 as a QA/QC MS/MSD sample.

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	05/24/16 1205	1 Chris Kau 5/25/16 Time: 11:00	2 Chris Kau	5/25/16 1235	2
3		3	4		4
5		5	Custody Seal #	Intact / Not intact	Preserved where applicable

On Ice: X Cooler Temp: 1.0°, 1.8°, 1.1° CFP

JC20990: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-107D3		
Lab Sample ID:	JC20990-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127324.D	1	05/27/16	HA	n/a	n/a	V3B5700
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	1.6	5.0	1.2	ug/l	J
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	0.35	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-107D3		
Lab Sample ID:	JC20990-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

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:	TB052416MO1		
Lab Sample ID:	JC20990-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127332.D	1	05/27/16	HA	n/a	n/a	V3B5700
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB052416MO1		
Lab Sample ID:	JC20990-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	107%		73-122%
2037-26-5	Toluene-D8	102%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

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:	FB052416MO1		
Lab Sample ID:	JC20990-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B127333.D	1	05/27/16	HA	n/a	n/a	V3B5700
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	FB052416MO1		
Lab Sample ID:	JC20990-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	107%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

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:	RE-107D3		
Lab Sample ID:	JC20990-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
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	4P16726.D	1	06/07/16	LK	05/27/16	OP94306A	E4P889
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	0.054	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		24-125%
321-60-8	2-Fluorobiphenyl	43%		19-127%
1718-51-0	Terphenyl-d14	61%		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:	FB052416MO1		
Lab Sample ID:	JC20990-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/25/16
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	4P16727.D	1	06/07/16	LK	05/27/16	OP94306A	E4P889
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	0.051	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		24-125%
321-60-8	2-Fluorobiphenyl	76%		19-127%
1718-51-0	Terphenyl-d14	112%		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 Semi-volatile Analyses

SDGs #JC21215 and JC21421

Analyses Performed By:
Accutest-SGS Laboratories
Dayton, New Jersey

Report #25838R
Review Level: Tier II
Project: NY001496.NV15.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC21215 and JC21421 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:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC21215	RE-114D1	JC21215-1	Water	5/26/2016		X	X			
	RE-114D2	JC21215-2	Water	5/26/2016		X	X			
	RE-114D3	JC21215-3	Water	5/26/2016		X	X			
	REP052616AR1	JC21215-4	Water	5/26/2016	RE-114D1	X	X			
	FB052616MO1	JC21215-5	Water	5/26/2016		X	X			
	TB052616MO1	JC21215-6	Water	5/26/2016		X				
JC21421	RE-121D2	JC21421-1	Water	6/1/2016		X	X			
	RE-121D1	JC21421-2	Water	6/1/2016		X	X			
	FT060116MO1	JC21421-3	Water	6/1/2016		X	X			
	TB060116MO1	JC21421-4	Water	6/1/2016		X				

Note:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location RE-114D3 (SDG JC21215) for VOC.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

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. Master tracking list		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		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 8260C 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 COMPOUNDS (VOC) 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 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.

Note:

s.u. Standard units

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 in SDG JC21215.

Compounds were detected in the associated QA blanks for SDG JC21421; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required with SDG JC21421.

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 in all SDGs.

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.

The MS/MSD was not performed on a sample location associated with SDG JC21421.

The MS exhibited acceptable recoveries in SDG JC21215.

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 for all SDGs.

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.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
RE-114D1/ REP052616AR1	Carbon tetrachloride	2.6	2.7	AC
	Chloroform	2.7	3.0	AC
	1,1-Dichloroethane	1.2	1.3	AC
	1,1-Dichloroethene	3.5	3.7	AC
	cis-1,2-Dichloroethene	4.6	4.8	AC
	Freon 113	19.5	18.8	AC
	Toluene	0.28 J	0.28 J	AC
	1,1,1-Tricholorethane	0.52 J	0.56 J	AC
	1,1,2-Tricholorethane	1.5	1.5	AC
	Trichloroethene	339	353	4.0%

Notes:

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

A field duplicate was not collected with a sample location associated with SDG JC21421.

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.

The laboratory duplicate sample results exhibited RPD within the control limit.

8. System Performance and Overall Assessment

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
RE-114D1 (SDG #JC21215)	Trichloroethene	--	339 D	339 D
REP052616MO1 (SDG #JC21215)	Trichloroethene	--	353 D	353 D
RE-121D2 (SDG #JC21421)	Trichloroethene	--	422 D	422 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

Tentatively identified compounds (TICs) were not detected in any of the sample locations.

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 VOCs

VOCs: SW-846 8260C	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		
C. Trip 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
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (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 in SDGs JC21215 and JC21421.

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 in all SDGs.

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.

The MS/MSD was not performed on a sample location associated with SDGs JC21215 and JC21421.

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 for all SDGs.

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.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
RE-114D1/ REP052616AR1	1,4-Dioxane	4.64	4.80	3.4%

The calculated RPD between the parent sample and field duplicate was acceptable.

A field duplicate was not collected with a sample location associated with SDG JC21421.

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		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: Lisa Horton

DATE: July 5, 2016

PEER REVIEW: Todd Church

DATE: July 6, 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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC21215

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
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): MOrabon A. REDZEPAGIC Phone #: 516-661-7061

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-11401		5/26/16	1335	AR	GW	5	3				2				3	2	
2	RE-11402		5/26/16	1433	MO	GW	5	3				2				3	2	E27
3	RE-11403		5/26/16	1710	AR	GW	5	3				2				3	2	V252
4	REP052616AR1		5/26/16	—		GW	5	3				2				3	2	
5	FB052616MO1		5/26/16	1140	MO	FB	5	3				2				3	2	
6	TB052616MO1		5/26/16	1100	—	TB	2	2								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 ZA
LABEL VERIFICATION OK

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

RL reporting for metals

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	5/26/16 1930	1 Chris Lau 5/27/16 9:15	2 Chris Lau	5/27/16 1735	2
3		3	4		4
5		5			

Relinquished by: 5

Custody Seal # [x] Intact [ ] Not Intact

Preserved where applicable [ ]

On Ice [x] Cooler Temp. 1.4, 1.5, 4.5° CFP

JC21215: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-114D1		
Lab Sample ID:	JC21215-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168549.D	1	06/02/16	TK	n/a	n/a	V2A7158
Run #2	2A168521.D	10	06/01/16	TK	n/a	n/a	V2A7157

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	2.6	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	2.7	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	1.2	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	3.5	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.6	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	19.5	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	0.28	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	0.52	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	1.5	1.0	0.28	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:	RE-114D1		
Lab Sample ID:	JC21215-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	339 [a]	10	2.6	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	107%	76-120%
17060-07-0	1,2-Dichloroethane-D4	108%	108%	73-122%
2037-26-5	Toluene-D8	97%	98%	84-119%
460-00-4	4-Bromofluorobenzene	106%	102%	78-117%

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

(a) Result is from Run# 2

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:	RE-114D2		
Lab Sample ID:	JC21215-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168518.D	1	06/01/16	TK	n/a	n/a	V2A7157
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.32	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	0.50	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.63	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	0.90	1.0	0.31	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	6.1	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	0.35	1.0	0.28	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:	RE-114D2		
Lab Sample ID:	JC21215-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	52.3	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	105%		73-122%
2037-26-5	Toluene-D8	97%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

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:	RE-114D3		
Lab Sample ID:	JC21215-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168519.D	1	06/01/16	TK	n/a	n/a	V2A7157
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.76	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	0.67	1.0	0.31	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	10.3	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-114D3		
Lab Sample ID:	JC21215-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	34.0	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	107%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

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:	REP052616AR1		
Lab Sample ID:	JC21215-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168550.D	1	06/02/16	TK	n/a	n/a	V2A7158
Run #2	2A168523.D	10	06/01/16	TK	n/a	n/a	V2A7157

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	2.7	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	3.0	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	1.3	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	3.7	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.8	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	18.8	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	0.28	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	0.56	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	1.5	1.0	0.28	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:	REP052616AR1		
Lab Sample ID:	JC21215-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	353 [a]	10	2.6	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	107%	76-120%
17060-07-0	1,2-Dichloroethane-D4	109%	108%	73-122%
2037-26-5	Toluene-D8	96%	97%	84-119%
460-00-4	4-Bromofluorobenzene	104%	102%	78-117%

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

(a) Result is from Run# 2

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:	FB052616MO1		
Lab Sample ID:	JC21215-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168529.D	1	06/02/16	TK	n/a	n/a	V2A7157
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	FB052616MO1		
Lab Sample ID:	JC21215-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		76-120%
17060-07-0	1,2-Dichloroethane-D4	110%		73-122%
2037-26-5	Toluene-D8	97%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

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:	TB052616MO1		
Lab Sample ID:	JC21215-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A168530.D	1	06/02/16	TK	n/a	n/a	V2A7157
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB052616MO1		
Lab Sample ID:	JC21215-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		76-120%
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

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:	RE-114D1		
Lab Sample ID:	JC21215-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
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	4M65880.D	1	06/09/16	JJ	06/02/16	OP94381A	E4M2957
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	4.64	0.11	0.054	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		24-125%
321-60-8	2-Fluorobiphenyl	94%		19-127%
1718-51-0	Terphenyl-d14	53%		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:	RE-114D2		
Lab Sample ID:	JC21215-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
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	4M65879.D	1	06/09/16	JJ	06/02/16	OP94381A	E4M2957
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	3.47	0.11	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		24-125%
321-60-8	2-Fluorobiphenyl	92%		19-127%
1718-51-0	Terphenyl-d14	53%		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:	RE-114D3		
Lab Sample ID:	JC21215-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
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	4M65878.D	1	06/09/16	JJ	06/02/16	OP94381A	E4M2957
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	2.57	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		24-125%
321-60-8	2-Fluorobiphenyl	99%		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:	REP052616AR1		
Lab Sample ID:	JC21215-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
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	4M65877.D	1	06/09/16	JJ	06/02/16	OP94381A	E4M2957
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	4.80	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		24-125%
321-60-8	2-Fluorobiphenyl	99%		19-127%
1718-51-0	Terphenyl-d14	77%		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:	FB052616MO1		
Lab Sample ID:	JC21215-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Field Blank Water	**Date Received:**	05/27/16
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	4M65876.D	1	06/09/16	JJ	06/02/16	OP94381A	E4M2957
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.052	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		24-125%
321-60-8	2-Fluorobiphenyl	114%		19-127%
1718-51-0	Terphenyl-d14	91%		10-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

ACCUTEST LABORATORIES

GW
FB
WB

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 # #5
Bottle Order Control #
Accutest Quote #
Accutest Job # JC21421

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 #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Orobona-Prezorski Phone #: 516-66-2041

Project Information

Project Name: AGMNYM62235 // OU2 Monitoring Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.NV15.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	VC82602NG36GW+40	1,4-dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-121D2		6/1/16	1728	MO	GW	5	3				2				3	2	E32
2	RE-121D1		6/1/16	1440	MO	GW	5	3				2				3	2	V271
3	TB060116MO1		6/1/16	1145	—	TB	2	2								2		
4	FB060116MO1		6/1/16	1315	PP	FB	5	3				2				3	2	

Turnaround Time (Business days)

- ☐ Std. 15 Business Days
- ☒ 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
- ☒ Other COMMC+

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

Comments / Special Instructions

RL reporting for metals

INITIAL ASSESSMENT AMB

LABEL VERIFICATION

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	6/1/16 2030	1	2	6/2/16 1715	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. 3.8°C, 4.2°C

2 coolers

5.1 5

JC21421: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE-121D2		
Lab Sample ID:	JC21421-1	**Date Sampled:**	06/01/16
Matrix:	AQ - Ground Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D119850.D	1	06/06/16	XC	n/a	n/a	V3D5113
Run #2	4D69100.D	10	06/08/16	XC	n/a	n/a	V4D3037

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	2.9	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	1.5	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	0.62	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	2.8	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.8	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	12.7	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.38	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	0.51	1.0	0.28	ug/l	J

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:	RE-121D2		
Lab Sample ID:	JC21421-1	**Date Sampled:**	06/01/16
Matrix:	AQ - Ground Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	422 [a]	10	2.6	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	103%	76-120%
17060-07-0	1,2-Dichloroethane-D4	98%	106%	73-122%
2037-26-5	Toluene-D8	101%	100%	84-119%
460-00-4	4-Bromofluorobenzene	99%	101%	78-117%

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

(a) Result is from Run# 2

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:	RE-121D1		
Lab Sample ID:	JC21421-2	**Date Sampled:**	06/01/16
Matrix:	AQ - Ground Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D119849.D	1	06/06/16	XC	n/a	n/a	V3D5113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.31	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	1.4	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	0.88	1.0	0.31	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	6.0	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.28	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	RE-121D1		
Lab Sample ID:	JC21421-2	**Date Sampled:**	06/01/16
Matrix:	AQ - Ground Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	18.9	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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:	TB060116M01		
Lab Sample ID:	JC21421-3	**Date Sampled:**	06/01/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D119847.D	1	06/06/16	XC	n/a	n/a	V3D5113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.8	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	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:	TB060116M01		
Lab Sample ID:	JC21421-3	**Date Sampled:**	06/01/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	98%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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:	FB060116M01		
Lab Sample ID:	JC21421-4	**Date Sampled:**	06/01/16
Matrix:	AQ - Field Blank Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D119848.D	1	06/06/16	XC	n/a	n/a	V3D5113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	5.3	10	3.8	ug/l	J
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.35	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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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:	FB060116M01		
Lab Sample ID:	JC21421-4	**Date Sampled:**	06/01/16
Matrix:	AQ - Field Blank Water	**Date Received:**	06/02/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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:	RE-121D2		
Lab Sample ID:	JC21421-1	**Date Sampled:**	06/01/16
Matrix:	AQ - Ground Water	**Date Received:**	06/02/16
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	4M65952.D	1	06/13/16	LK	06/03/16	OP94463A	E4M2961
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	2.84	0.11	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		24-125%
321-60-8	2-Fluorobiphenyl	64%		19-127%
1718-51-0	Terphenyl-d14	88%		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:	RE-121D1		
Lab Sample ID:	JC21421-2	**Date Sampled:**	06/01/16
Matrix:	AQ - Ground Water	**Date Received:**	06/02/16
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	4M65982.D	1	06/14/16	LK	06/03/16	OP94463A	E4M2962
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	3.64	0.11	0.053	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	47%		24-125%
321-60-8	2-Fluorobiphenyl	41%		19-127%
1718-51-0	Terphenyl-d14	78%		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:	FB060116M01		
Lab Sample ID:	JC21421-4	**Date Sampled:**	06/01/16
Matrix:	AQ - Field Blank Water	**Date Received:**	06/02/16
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	4M65954.D	1	06/13/16	LK	06/03/16	OP94463A	E4M2961
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	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		24-125%
321-60-8	2-Fluorobiphenyl	73%		19-127%
1718-51-0	Terphenyl-d14	104%		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

Appendix 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