SEPT-OCT (3Q) 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

May 2017

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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 September and October 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 51 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 September and October 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 September and October 2016 quarterly round consisted of a total of 51 wells (Table 1). Of these, 38 groundwater wells were sampled by Resolution Consultants and 13 were sampled by ARCADIS, the NG consultant.

2.1 Sampling

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

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

Five wells were selected for comparative analysis of 1,4-dioxane by both Method 8270D SIM and Method 522: RE103D1, RE120D1, RE120D2, RE122D2 and RE131D2. Results of the comparative 1,4-dioxane analysis are included in Appendix C.

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

Additional Navy-owned wells are sampled by ARCADIS as part of separate and ongoing OU2 monitoring programs, as summarized in the sampling schedule in Appendix D. ARCADIS will document these activities and results in their 2016 Annual Groundwater Monitoring Report, scheduled for submission to New York State Department of Environmental Conservation in the summer of 2017.

2.2 Investigation Derived Waste

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

Resolution Consultants transported purge water from point of generation to the designated staging area at NWIRP in Department of Transportation (DOT) approved 5-gallon pails. Purge water was then containerized in a frac tank and stored at NWIRP Bethpage for characterization and ultimate disposal to the Nassau County Publicly Owned Treatment Works (POTW) in accordance with the facility's existing discharge permit. A representative water sample was collected from each of the frac tanks and submitted to Katahdin for analysis of VOCs via Method SW 624, pH via Method SW 9040B, 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. Results of the comparative 1,4-dioxane analysis are included in Appendix C.

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

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

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
RE108D1	555	530	550	540	5	VPB142	Resolution
RE108D2	655	630	650	640	5		Resolution
RE120D1	655	630	650	640	5	VPB154	Resolution
RE120D2	713	690	710	700	3		Resolution
RE120D3	765	740	760	750	5		Resolution
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
RE124D1	685	660	680	670	5	VPB158	Resolution
RE124D2	755	730	750	740	5		Resolution
RE126D1	525	500	520	510	5	VPB160	Resolution
RE126D2	580	555	575	565	5		Resolution
RE126D3	665	640	660	650	5		Resolution
RE127D1	685	660	680	670	5	VPB161	Resolution
RE127D2	780	755	775	767	5		Resolution
RE129D1	715	690	710	700	5	VPB163	Resolution
RE129D2	830	805	825	815	5		Resolution
RE130D1	580	555	575	565	5	VPB164	Resolution
RE130D2	665	640	660	650	5		Resolution
RE131D1	455	430	450	440	5	VPB165	Resolution
RE131D2	595	565	590	577.5	5		Resolution
RE131D3	685	660	680	670	5		Resolution
RE133D1	585	560	580	570	5	VPB167	Resolution
RE133D2	805	780	800	790	5		Resolution
TT101D	350	325	345	335	5	VPB129	Resolution
TT101D1	595	570	590	580	5		Resolution
TT101D2	765	740	760	750	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
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)	RE122D1	RE122D2	RE122D3	RE104D1
Sample Date		9/19/2016	9/19/2016	9/19/2016	9/19/2016
Sample ID		RE122D1-GW-091916	RE122D2-GW-091916	RE122D3-GW-091916	RE104D1-GW-091916
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**3.8**	**21 J**	<0.50 U	**2.9**
1,1,2-TRICHLOROETHANE	1	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	**0.81 J**	***<10 U***	<0.50 U	**0.61 J**
1,2,4-TRICHLOROBENZENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<1.5 U***	***<15 UJ***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<1.0 U	<10 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.2 J**	***<20 U***	<1.0 U	**0.94 J**
1,2-DICHLOROPROPANE	1	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<1.0 U	***<10 U***	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<1.0 UJ	***<10 UJ***	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**8.6**	**16**	<0.17 U	**11**
2-BUTANONE	50	<5.0 UJ	<50 UJ	<2.5 U	<2.5 U
2-HEXANONE	50	<5.0 U	<50 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<5.0 U	<50 U	<2.5 U	<2.5 U
ACETONE	50	<5.0 UJ	<50 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<1.0 U	***<10 U***	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<1.0 U	<10 U	<0.50 U	<0.50 U
BROMOFORM	50	<1.0 U	<10 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<2.0 U	***<20 U***	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<1.0 UJ	<10 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
CHLOROBENZENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
CHLOROETHANE	5	<2.0 U	***<20 U***	<1.0 U	<1.0 U
CHLOROFORM	7	<1.0 U	***<10 U***	<0.50 U	<0.50 U
CHLOROMETHANE	5	<2.0 U	***<20 U***	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.2 J**	***<10 U***	<0.50 U	**0.94 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<1.0 U***	***<10 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<1.0 U	<10 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<1.0 UJ	***<10 UJ***	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<2.0 U	***<20 U***	<1.0 U	<1.0 U
ETHYLBENZENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<2.0 U	<20 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<1.5 U	<15 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<1.0 U	<10 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<1.0 U	<10 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<5.0 U	***<50 U***	<2.5 U	<2.5 U
O-XYLENE	NL	<1.0 U	<10 U	<0.50 U	<0.50 U
STYRENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**1.6 J**	***<10 U***	<0.50 U	**2.2**
TOLUENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<1.0 U	***<10 U***	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<1.0 U***	***<10 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**510**	**4600**	**3.8**	**93**
TRICHLOROFLUOROMETHANE	5	<2.0 U	***<20 U***	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<2.0 U	***<20 U***	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<3.0 U	***<30 U***	<1.5 U	<1.5 U
1,4-DIOXANE (Method 522)	NL	NA	**17.7**	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE104D2	RE104D3	RE103D1	RE103D2
Sample Date		9/19/2016	9/19/2016	9/20/2016	9/20/2016
Sample ID		RE104D2-GW-091916	RE104D3-GW-091916	RE103D1-GW-092016	RE103D2-GW-092016
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 U	<0.50 U	**9.3**	**4.8 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	**0.94 J**	<1.0 U
1,1-DICHLOROETHENE	5	<0.50 U	<0.50 U	**7.7**	**1.2 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<1.5 U***	***<1.5 UJ***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,2-DICHLOROETHENE, TOTAL	5	**5.2**	<1.0 U	**3.4 J**	**1.5 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<1.0 U	<1.0 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<1.0 UJ	<1.0 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<1.0 U	<1.0 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**0.52**	<0.20 U	**19**	**2.8**
2-BUTANONE	50	<2.5 U	<2.5 U	<5.0 UJ	<5.0 UJ
2-HEXANONE	50	<2.5 U	<2.5 U	<5.0 UJ	<5.0 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<5.0 U	<5.0 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<5.0 UJ	<5.0 UJ
BENZENE	1	<0.50 U	<0.50 U	<1.0 UJ	<1.0 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<1.0 U	<1.0 U
BROMOFORM	50	<0.50 U	<0.50 U	<1.0 U	<1.0 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<2.0 U	<2.0 U
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<1.0 U	<1.0 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	**0.52 J**	<1.0 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<2.0 U	<2.0 U
CHLOROFORM	7	**0.88 J**	<0.50 U	**0.81 J**	**0.99 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<2.0 U	<2.0 U
CIS-1,2-DICHLOROETHENE	5	**5.2**	<0.50 U	**3.4**	**1.5 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<1.0 UJ***	***<1.0 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<1.0 U	<1.0 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<1.0 UJ	<1.0 UJ
DICHLORODIFLUOROMETHANE	5	<1.0 U	<1.0 U	<2.0 UJ	<2.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<1.0 UJ	<1.0 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<2.0 UJ	<2.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<1.5 U	<1.5 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<1.0 U	<1.0 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<1.0 U	<1.0 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<5.0 U	<5.0 U
O-XYLENE	NL	<0.50 U	<0.50 U	<1.0 UJ	<1.0 U
STYRENE	5	<0.50 U	<0.50 U	<1.0 UJ	<1.0 U
TETRACHLOROETHENE	5	<0.50 U	<0.50 U	**4.6 J**	**1.0 J**
TOLUENE	5	<0.50 U	<0.50 U	<1.0 U	<1.0 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<1.0 UJ	<1.0 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<1.0 UJ***	***<1.0 U***
TRICHLOROETHENE	5	**12**	<0.50 U	**860**	**810**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<2.0 U	<2.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<2.0 U	<2.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<3.0 UJ	<3.0 U
1,4-DIOXANE (Method 522)	NL	NA	NA	**22**	NA

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	RE133D1	RE133D2
Sample Date		9/20/2016	9/20/2016	9/20/2016	9/20/2016
Sample ID		RE103D3-GW-092016	DUP01-GW-092016	RE133D1-GW-092016	RE133D2-GW-092016
Sample type code		Groundwater	FD	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**2.2**	**2.2**	<0.50 U	<0.50 U
1,1,2-TRICHLOROETHANE	1	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	<1.0 U	**0.50 J**	<0.50 U	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<1.5 UJ***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**0.77 J**	**0.86 J**	<1.0 U	<1.0 U
1,2-DICHLOROPROPANE	1	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<1.0 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<1.0 UJ	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**1.3**	**1.1**	**0.16 J**	<0.17 U
2-BUTANONE	50	<5.0 UJ	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<5.0 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<5.0 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<5.0 UJ	**3.6 J**	**4.1 J**	<2.5 UJ
BENZENE	1	<1.0 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<1.0 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<1.0 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<2.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<1.0 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<2.0 U	<1.0 U	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	**0.77 J**	**0.64 J**	<0.50 U	<0.50 U
CHLOROMETHANE	5	<2.0 U	<1.0 UJ	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**0.77 J**	**0.86 J**	<0.50 U	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<1.0 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<1.0 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<1.0 UJ	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<2.0 U	<1.0 U	<1.0 U	<1.0 U
ETHYLBENZENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<2.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<1.5 U	<0.75 U	<0.75 UJ	<0.75 UJ
METHYL CYCLOHEXANE	NL	<1.0 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<1.0 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<5.0 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<1.0 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
TOLUENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<1.0 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<1.0 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**490**	**570**	<0.50 U	<0.50 U
TRICHLOROFLUOROMETHANE	5	<2.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<2.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<3.0 U	<1.5 U	<1.5 U	<1.5 U
1,4-DIOXANE (Method 522)	NL	NA	NA	NA	NA

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	RE123D1
Sample Date		9/21/2016	9/21/2016	9/21/2016	9/21/2016
Sample ID		RE120D1-GW-092116	RE120D2-GW-092116	RE120D3-GW-092116	RE123D1-GW-092116
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**27**	**18**	**1.2**	<0.50 U
1,1,2-TRICHLOROETHANE	1	***<5.0 U***	***<5.0 U***	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
1,1-DICHLOROETHENE	5	**18**	**7.5 J**	**0.47 J**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<7.5 U***	***<7.5 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<5.0 U	<5.0 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	***<5.0 U***	***<5.0 U***	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**3.6 J**	***<10 U***	**0.23 J**	<1.0 U
1,2-DICHLOROPROPANE	1	***<5.0 U***	***<5.0 U***	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	***<5.0 UJ***	***<5.0 UJ***	<0.50 UJ	<0.50 UJ
1,4-DICHLOROBENZENE	3	***<5.0 U***	***<5.0 U***	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**22**	**13**	**0.40**	**4.7**
2-BUTANONE	50	<25 UJ	<25 UJ	<2.5 UJ	<2.5 UJ
2-HEXANONE	50	<25 UJ	<25 UJ	<2.5 UJ	<2.5 UJ
4-METHYL-2-PENTANONE	NL	<25 U	<25 U	<2.5 U	<2.5 U
ACETONE	50	<25 UJ	<25 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	***<5.0 UJ***	***<5.0 UJ***	<0.50 UJ	<0.50 UJ
BROMODICHLOROMETHANE	50	<5.0 U	<5.0 U	<0.50 U	<0.50 U
BROMOFORM	50	<5.0 U	<5.0 U	<0.50 U	<0.50 U
BROMOMETHANE	5	***<10 U***	***<10 U***	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<5.0 U	<5.0 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
CHLOROETHANE	5	***<10 U***	***<10 U***	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	<5.0 U	<5.0 U	<0.50 U	<0.50 U
CHLOROMETHANE	5	***<10 U***	***<10 U***	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**3.6 J**	<5.0 U	**0.23 J**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<5.0 UJ***	***<5.0 UJ***	***<0.50 UJ***	***<0.50 UJ***
CYCLOHEXANE	NL	<5.0 U	<5.0 U	<0.50 UJ	<0.50 UJ
DIBROMOCHLOROMETHANE	5	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
DICHLORODIFLUOROMETHANE	5	***<10 UJ***	***<10 UJ***	<1.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
M- AND P-XYLENE	NL	<10 UJ	<10 UJ	<1.0 UJ	<1.0 UJ
METHYL ACETATE	NL	<7.5 U	<7.5 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<5.0 U	<5.0 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<5.0 U	<5.0 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	***<25 U***	***<25 U***	<2.5 U	<2.5 U
O-XYLENE	NL	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
STYRENE	5	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
TETRACHLOROETHENE	5	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
TOLUENE	5	<5.0 U	<5.0 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<5.0 UJ	<5.0 UJ	<0.50 UJ	<0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***<5.0 UJ***	***<5.0 UJ***	***<0.50 UJ***	***<0.50 UJ***
TRICHLOROETHENE	5	**1400**	**1000**	**57**	**9.6**
TRICHLOROFLUOROMETHANE	5	***<10 U***	***<10 U***	<1.0 U	<1.0 U
VINYL CHLORIDE	2	***<10 U***	***<10 U***	<1.0 U	<1.0 U
XYLENES, TOTAL	5	***<15 UJ***	***<15 UJ***	<1.5 UJ	<1.5 UJ
1,4-DIOXANE (Method 522)	NL	**25.7**	**21**	NA	NA

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	TT101D1	TT101D1
Sample Date		9/21/2016	9/21/2016	9/21/2016	9/21/2016
Sample ID		RE123D2-GW-092116	RE123D3-GW-092116	TT101D1-GW-092116	DUP02-GW-092116
Sample type code		Groundwater	Groundwater	Groundwater	FD
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	**0.73 J**	**0.71 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	<0.50 U	<0.50 U	**13**	**14**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	**0.52 J**	**0.75 J**
1,1-DICHLOROETHANE	5	<0.50 UJ	<0.50 UJ	**1.1 J**	**1.2 J**
1,1-DICHLOROETHENE	5	<0.50 U	<0.50 U	**6.4**	**6.7**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	<1.0 U	**2.5 J**	**2.4 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	<0.17 U	<0.17 U	**9.8**	**10**
2-BUTANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
2-HEXANONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	**2.1**	**1.8**
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	<0.50 U	<0.50 U	**1.0**	**1.0**
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	**2.5**	**2.4**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 UJ***	***<0.50 UJ***	***<0.50 UJ***	***<0.50 UJ***
CYCLOHEXANE	NL	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
DIBROMOCHLOROMETHANE	5	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	**1.5 J**	**1.4 J**
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
M- AND P-XYLENE	NL	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
METHYL ACETATE	NL	<0.75 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 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
STYRENE	5	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
TETRACHLOROETHENE	5	**1.0 J**	<0.50 UJ	<0.50 UJ	<0.50 UJ
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 UJ***	***<0.50 UJ***	***<0.50 UJ***	***<0.50 UJ***
TRICHLOROETHENE	5	**2.1**	<0.50 U	**220**	**210**
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 UJ	<1.5 UJ	<1.5 UJ	<1.5 UJ
1,4-DIOXANE (Method 522)	NL	NA	NA	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE131D1	RE131D2	RE131D3	RE129D1
Sample Date		9/22/2016	9/22/2016	9/22/2016	9/22/2016
Sample ID		RE131D1-GW-092216	RE131D2-GW-092216	RE131D3-GW-092216	RE129D1-GW-092216
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	**0.30 J**	<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	**4.1**	**240**	**87**	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	**0.98 J**	<0.50 U	<0.50 UJ	<0.50 UJ
1,1-DICHLOROETHENE	5	**1.2**	**0.44 J**	**0.90 J**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 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	**4.9 J**	**3.3 J**	**0.48 J**	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**18**	**17**	**1.8**	<0.17 U
2-BUTANONE	50	<2.5 UJ	<2.5 U	<2.5 UJ	<2.5 UJ
2-HEXANONE	50	<2.5 UJ	<2.5 U	<2.5 UJ	<2.5 UJ
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	**2.6 J**	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<1.0 U	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	**4.4**	**0.42 J**	<0.50 U	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**4.9**	**3.3 J**	**0.48 J**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 UJ***	***<0.50 U***	***<0.50 UJ***	***<0.50 UJ***
CYCLOHEXANE	NL	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
DIBROMOCHLOROMETHANE	5	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
DICHLORODIFLUOROMETHANE	5	**0.30 J**	**0.60 J**	<1.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
M- AND P-XYLENE	NL	<1.0 UJ	<1.0 U	<1.0 UJ	<1.0 UJ
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	**0.52 J**	<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 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
STYRENE	5	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
TETRACHLOROETHENE	5	**8.2 J**	**3.8 J**	**0.91 J**	<0.50 UJ
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 UJ	<0.50 U	<0.50 UJ	<0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 UJ***	***<0.50 U***	***<0.50 UJ***	***<0.50 UJ***
TRICHLOROETHENE	5	**110**	**42 J**	**6.1**	<0.50 U
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 UJ	<1.5 U	<1.5 UJ	<1.5 UJ
1,4-DIOXANE (Method 522)	NL	NA	**17.4**	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE129D2	RE126D1	RE126D2	RE126D
Sample Date		9/22/2016	9/23/2016	9/23/2016	9/23/2016
Sample ID		RE129D2-GW-092216	RE126D1-GW-092316	RE126D2-GW-092316	RE126D3-GW-092316
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	**1.0 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	<0.50 U	<0.50 U	**0.94 J**	**0.33 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 UJ	<0.50 U	**3.0 J**	<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	**2.4 J**	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 UJ	<0.50 UJ	<0.50 U	<0.50 UJ
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	<0.17 U	**8.8**	**8.7 J**	**2.3**
2-BUTANONE	50	<2.5 UJ	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 UJ	<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 UJ	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 UJ	<1.0 U	<1.0 UJ
CHLOROFORM	7	<0.50 U	<0.50 U	**0.66 J**	<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	**2.4 J**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 UJ***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 UJ	<0.50 UJ	<0.50 U	<0.50 UJ
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 U	<1.0 UJ	<1.0 U
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 UJ	<0.50 UJ	<0.50 U	<0.50 UJ
M- AND P-XYLENE	NL	<1.0 UJ	<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 UJ	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 UJ	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 UJ	**0.74 J**	<0.50 U	**1.5**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 UJ	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 UJ***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	<0.50 U	**23**	**520**	**3.9**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 UJ	<1.5 U	<1.5 U	<1.5 U
1,4-DIOXANE (Method 522)	NL	NA	NA	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE127D1	RE127D2	RE108D1	RE108D2
Sample Date		9/23/2016	9/23/2016	9/26/2016	9/26/2016
Sample ID		RE127D1-GW-092316	RE127D2-GW-092316	RE108D1-GW-092616	RE108D2-GW-092616
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 U	<0.50 U	**0.40 J**	<5.0 UJ
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	***<5.0 UJ***
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	**4.1 J**
1,1-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	**5.6 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<7.5 UJ***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	***<5.0 UJ***
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	<1.0 U	<1.0 U	**6.8 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	***<5.0 UJ***
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 UJ	***<5.0 UJ***
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	***<5.0 UJ***
1,4-DIOXANE (Method 8270D_SIM)	NL	<0.17 U	<0.18 U	**8.5**	**7.1**
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U	<25 UJ
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U	<25 UJ
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<25 UJ
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<25 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	***<5.0 UJ***
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	***<10 UJ***
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 UJ	***<10 UJ***
CHLOROFORM	7	<0.50 U	<0.50 U	<0.50 U	**3.3 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	***<10 UJ***
CIS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	**6.8 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<5.0 UJ***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 UJ	<5.0 UJ
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 U	***<10 UJ***
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 UJ	<5.0 UJ
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<10 UJ
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<7.5 UJ
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	***<25 UJ***
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
TETRACHLOROETHENE	5	<0.50 U	<0.50 U	**1.1**	<5.0 UJ
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<5.0 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<5.0 UJ***
TRICHLOROETHENE	5	<0.50 U	<0.50 U	**50**	**3000**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	***<10 UJ***
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	***<10 UJ***
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	***<15 UJ***
1,4-DIOXANE (Method 522)	NL	NA	NA	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE105D1	RE105D2	TT101D	TT101D2
Sample Date		9/26/2016	9/26/2016	9/26/2016	9/26/2016
Sample ID		RE105D1-GW-092616	RE105D2-GW-092616	TT101D-GW-092616	TT101D2-GW-092616
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	**0.40 J**	<2.5 UJ	<0.50 U	<5.0 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**6.1**	**16 J**	**12**	**16**
1,1,2-TRICHLOROETHANE	1	<0.50 U	***<2.5 UJ***	<0.50 U	***<5.0 U***
1,1-DICHLOROETHANE	5	<0.50 U	<2.5 UJ	**0.75 J**	<5.0 U
1,1-DICHLOROETHENE	5	**1.1**	**6.9 J**	**3.3**	**4.9 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<3.8 UJ***	***<0.75 U***	***<7.5 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
1,2-DICHLOROBENZENE	3	<0.50 U	<2.5 UJ	<0.50 U	***<5.0 U***
1,2-DICHLOROETHANE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
1,2-DICHLOROETHENE, TOTAL	5	**1.5 J**	**3.5 J**	**2.8**	***<10 U***
1,2-DICHLOROPROPANE	1	<0.50 U	***<2.5 UJ***	<0.50 U	***<5.0 U***
1,3-DICHLOROBENZENE	3	<0.50 UJ	<2.5 UJ	<0.50 UJ	***<5.0 UJ***
1,4-DICHLOROBENZENE	3	<0.50 U	<2.5 UJ	<0.50 U	***<5.0 U***
1,4-DIOXANE (Method 8270D_SIM)	NL	**16**	**9.7**	**12**	**3.8**
2-BUTANONE	50	<2.5 U	<12 UJ	<2.5 U	<25 U
2-HEXANONE	50	<2.5 U	<12 UJ	<2.5 U	<25 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<12 UJ	<2.5 U	<25 U
ACETONE	50	<2.5 UJ	<12 UJ	<2.5 UJ	<25 UJ
BENZENE	1	<0.50 U	***<2.5 UJ***	<0.50 U	***<5.0 U***
BROMODICHLOROMETHANE	50	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
BROMOFORM	50	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
BROMOMETHANE	5	<1.0 U	<5.0 UJ	<1.0 U	***<10 U***
CARBON DISULFIDE	60	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
CARBON TETRACHLORIDE	5	**0.22 J**	**2.8 J**	<0.50 U	<5.0 U
CHLOROBENZENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
CHLOROETHANE	5	<1.0 UJ	<5.0 UJ	<1.0 UJ	***<10 UJ***
CHLOROFORM	7	<0.50 U	<2.5 UJ	**0.48 J**	<5.0 U
CHLOROMETHANE	5	<1.0 U	<5.0 UJ	<1.0 U	***<10 U***
CIS-1,2-DICHLOROETHENE	5	**1.5**	**3.5 J**	**2.8**	<5.0 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<2.5 UJ***	***<0.50 U***	***<5.0 U***
CYCLOHEXANE	NL	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
DIBROMOCHLOROMETHANE	5	<0.50 UJ	<2.5 UJ	<0.50 UJ	<5.0 UJ
DICHLORODIFLUOROMETHANE	5	**0.64 J**	<5.0 UJ	**2.3**	***<10 U***
ETHYLBENZENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
ISOPROPYLBENZENE	5	<0.50 UJ	<2.5 UJ	<0.50 UJ	<5.0 UJ
M- AND P-XYLENE	NL	<1.0 U	<5.0 UJ	<1.0 U	<10 U
METHYL ACETATE	NL	<0.75 U	<3.8 UJ	<0.75 U	<7.5 U
METHYL CYCLOHEXANE	NL	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
METHYLENE CHLORIDE	5	<2.5 U	***<12 UJ***	<2.5 U	***<25 U***
O-XYLENE	NL	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
STYRENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
TETRACHLOROETHENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
TOLUENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<2.5 UJ	<0.50 U	<5.0 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<2.5 UJ***	***<0.50 U***	***<5.0 U***
TRICHLOROETHENE	5	**100**	**2000**	**69**	**680**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<5.0 UJ	<1.0 U	***<10 U***
VINYL CHLORIDE	2	<1.0 U	***<5.0 UJ***	<1.0 U	***<10 U***
XYLENES, TOTAL	5	<1.5 U	***<7.5 UJ***	<1.5 U	***<15 U***
1,4-DIOXANE (Method 522)	NL	NA	NA	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE124D1	RE124D2	RE130D1	RE130D2
Sample Date		10/18/2016	10/18/2016	10/18/2016	10/18/2016
Sample ID		RE124D1-GW-101816	RE124D2-GW-101816	RE130D1-GW-101816	RE130D2-GW-101816
Sample type code		Groundwater	Groundwater	Groundwater	Groundwater
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	**33**	<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	**0.29 J**	<1.0 U	<1.0 U	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**2.5**	<0.17 U	<0.18 U	<0.17 U
2-BUTANONE	50	<2.5 UJ	<2.5 U	<2.5 UJ	<2.5 UJ
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	**3.3 J**	**2.4 J**	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 UJ	<0.50 UJ	<0.50 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<1.0 U	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROMETHANE	5	<1.0 UJ	<1.0 U	<1.0 UJ	<1.0 UJ
CIS-1,2-DICHLOROETHENE	5	**0.29 J**	<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 UJ	<1.0 U	<1.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TOLUENE	5	<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	**1.7**	<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
1,4-DIOXANE (Method 522)	NL	NA	NA	NA	NA

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

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE130D2
Sample Date		10/18/2016
Sample ID		DUP1-GW-101816
Sample type code		FD
VOC 8260C (ug/L)		
1,1,1-TRICHLOROETHANE	5	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U
1,1-DICHLOROETHENE	5	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	<0.18 U
2-BUTANONE	50	<2.5 UJ
2-HEXANONE	50	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U
ACETONE	50	<2.5 UJ
BENZENE	1	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U
BROMOFORM	50	<0.50 U
BROMOMETHANE	5	<1.0 U
CARBON DISULFIDE	60	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U
CHLOROBENZENE	5	<0.50 U
CHLOROETHANE	5	<1.0 UJ
CHLOROFORM	7	<0.50 U
CHLOROMETHANE	5	<1.0 UJ
CIS-1,2-DICHLOROETHENE	5	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ
ETHYLBENZENE	5	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U
M- AND P-XYLENE	NL	<1.0 U
METHYL ACETATE	NL	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U
O-XYLENE	NL	<0.50 U
STYRENE	5	<0.50 U
TETRACHLOROETHENE	5	<0.50 U
TOLUENE	5	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***
TRICHLOROETHENE	5	<0.50 U
TRICHLOROFLUOROMETHANE	5	<1.0 U
VINYL CHLORIDE	2	<1.0 U
XYLENES, TOTAL	5	<1.5 U
1,4-DIOXANE (Method 522)	NL	NA

Notes:

1 New York State Department of Environmental Conservation Division of Water Technical and Operation Guidance series (6 NYCRR 700-706, Part 703.5 summarized in TOGS 1.1.1)
Ambient water quality standards and groundwater effluent limitations, class GA; NL = Not Listed

Bold = Detected; ***Bold and Italics*** =Not detected exceeds NYS Groundwater Standards or guidance value
Yellow highlighted values exceed Groundwater Standards or guidance value

Sample type codes: N - normal environmental sample, FD - field duplicate

U = Nondetected result. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte.
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
M = the matrix spike or matrix spike duplicate did not meet recovery or precision requirements.

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

Well	Date	Temperature (°C)	pH	Specific Conductance (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Depth to water (ft bgs)	Flow rate (ml/min)
TT101D	9/26/2016	15.82	4.42	0.091	0.46	218.1	0.87	36.89	550
TT101D1	9/21/2016	15.45	4.40	0.079	0.59	145.5	0.91	38.19	750
TT101D2	9/26/2016	15.71	4.56	0.038	6.32	37.60	0.87	39.42	700
RE103D1	9/20/2016	15.92	4.55	0.088	4.34	201.1	0.6	43.80	600
RE103D2	9/20/2016	16.94	4.99	0.042	7.04	156.8	0.78	43.56	500
RE103D3	9/20/2016	16.34	3.48	0.030	5.46	96.20	0.52	43.97	500
RE104D1	9/19/2016	15.66	4.71	0.078	5.41	139.3	0.54	39.90	700
RE104D2	9/19/2016	14.84	4.51	0.022	6.62	132.2	2.27	44.03	650
RE104D3	9/19/2016	15.45	3.64	0.018	5.61	240.1	5.50	44.68	450
RE105D1	9/26/2016	15.61	4.78	0.094	3.55	24.50	1.55	42.15	500
RE105D2	9/26/2016	15.35	4.62	0.067	4.40	162.4	0.23	43.22	700
RE108D1	9/26/2016	15.34	4.51	0.089	7.42	160.1	0.41	43.72	550
RE108D2	9/26/2016	15.78	4.44	0.073	6.17	42.10	2.88	45.34	650
RE120D1	9/21/2016	16.66	4.67	0.106	2.73	146.2	0.64	40.47	500
RE120D2	9/21/2016	16.65	4.38	0.070	5.17	114.2	0.52	40.28	500
RE120D3	9/21/2016	16.08	3.35	0.022	3.59	263.1	0.51	40.60	550
RE122D1	9/19/2016	15.82	4.86	0.090	4.28	82.50	0.71	46.45	600
RE122D2	9/19/2016	17.79	4.74	102.0	4.87	659.9	1.16	46.13	450
RE122D3	9/19/2016	17.06	3.78	0.021	2.71	239.5	10.0	47.88	510
RE123D1	9/21/2016	20.11	4.63	0.108	8.10	105.4	4.78	50.90	500
RE123D2	9/21/2016	20.80	4.61	0.026	7.11	231.9	4.63	51.58	600
RE123D3	9/21/2016	19.22	5.53	0.046	0.34	63.60	18.6	52.16	550
RE126D1	9/23/2016	15.19	5.04	0.093	7.15	47.60	1.16	49.58	650
RE126D2	9/23/2016	16.24	5.47	0.105	1.97	101.7	0.88	51.35	600
RE126D3	9/23/2016	17.25	4.72	0.039	5.77	45.80	1.73	42.29	600
RE127D1	9/23/2016	17.58	4.80	0.026	0.31	7.400	41.0	28.68	600
RE127D2	9/23/2016	16.68	4.00	0.020	3.54	220.7	17.2	29.47	500
RE129D1	9/22/2016	16.52	4.17	0.030	0.45	182.6	5.16	27.22	700
RE129D2	9/22/2016	16.20	4.50	0.036	0.64	102.7	11.1	27.50	600
RE131D1	9/22/2016	15.50	4.18	0.109	2.05	101.3	0.91	40.12	700
RE131D2	9/22/2016	15.09	4.70	0.080	3.35	154.0	1.97	39.26	650
RE131D3	9/22/2016	16.07	4.66	0.036	5.99	203.7	0.62	41.20	500
RE133D1	9/20/2016	15.60	4.84	0.132	0.32	105.9	26.3	25.86	650
RE133D2	9/20/2016	17.69	4.72	0.037	0.79	136.9	83.0	26.94	600
RE124D1	10/18/2016	17.41	3.01	0.058	3.54	84.1	58.4	36.75	550
RE124D2	10/18/2016	15.71	5.80	0.046	4.41	108.7	68.9	37.5	600
RE130D1	10/18/2016	16.73	5.28	0.121	1.53	82.7	10.94	26.84	650
RE130D2	10/18/2016	17.22	2.45	0.072	1.01	-11.9	33.1	26.15	500

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

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

Well: / Sample ID: / CONSTITUENT / Date: / Units (ug/L)	BPOW 5-1 / BPOW 5-1 / 8/17/2016	BPOW 5-2 / BPOW 5-2 / 8/17/2016	BPOW 5-3 / BPOW 5-3 / 8/17/2016	BPOW 5-4 / BPOW 5-4 / 8/19/2016	BPOW 5-5 / BPOW 5-5 / 8/15/2016	BPOW 5-6 / BPOW 5-6 / 8/15/2016	BPOW 5-7 / BPOW 5-7 / 8/16/2016
Volatile Organic Compounds (VOCs) [1]							
1,1,1-Trichloroethane	<0.50	<0.50 U	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	<0.50	<0.50 U	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-trichloro-1,2,2-trifluroethane	<1.0	<1.0 U	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	<0.50	<0.50 U	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	<0.50	<0.50 U	<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	**0.81 J**	<5.0	<5.0
2-Hexanone	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-methyl-2-pentanone (MIK)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Acetone	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Benzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Disulfide	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-dichloroethene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-dichloropropene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
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	**0.81**	0	0
1,4-Dioxane [3]	<0.200	<0.200	**1.19**	**1.25**	**1.25**	**0.127 J**	<0.200

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,
Third Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Notes and Abbreviations:

(1) Samples were analyzed for the TCL VOCs using USEPA Method 524.2.

(2) Total VOCs are rounded to two significant figures.

(3) Samples were analyzed for 1,4-Dioxane using USEPA Method 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, Third Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Well: / Sample ID: / CONSTITUENT / Date: / Units (ug/L)	BPOW 6-1 / BPOW 6-1 / 8/22/2016	BPOW 6-2 / BPOW 6-2 / 8/22/2016	BPOW 6-3 / BPOW 6-3 / 8/31/2016	BPOW 6-4 / BPOW 6-4 / 8/24/2016	BPOW 6-5 / BPOW 6-5 / 8/23/2016	BPOW 6-6 / BPOW 6-6 / 8/31/2016	BPOW 6-6 / REP060816AR1 / 8/31/2016
Volatile Organic Compounds (VOCs) [1]							
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
1,1,2,2-Tetrachloroethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
1,1,2-trichloro-1,2,2-trifluroethane	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
1,1,2-Trichloroethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
1,1-Dichloroethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
1,1-Dichloroethene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
1,2-Dichloroethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
1,2-Dichloropropane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
2-Butanone (MEK)	<5.0	**0.72 J**	**0.61 J**	<5.0	<10 U	<5.0	<5.0
2-Hexanone	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<2.0
4-methyl-2-pentanone (MIK)	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<2.0
Acetone	<5.0	<5.0	<5.0	<5.0	<10 U	<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	<1.0	<0.50	<0.50
Bromoform	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Bromomethane	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50
Carbon Disulfide	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50
Carbon tetrachloride	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Chloroethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Chloroform	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Chloromethane	<0.50	**0.11 J**	<0.50	<0.50	<1.0	<0.50	<0.50
cis-1,2-dichloroethene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
cis-1,3-dichloropropene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Ethylbenzene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Methylene Chloride	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50
Styrene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Toluene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
trans-1,2-dichloroethene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
trans-1,3-dichloropropene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Trichloroethylene	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Vinyl Chloride	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Xylene-o	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Xylenes - m,p	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50
Total VOCs [2]	0	**0.83**	**0.61**	0	0	0	0
1,4-Dioxane [3]	<0.200 J	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200

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, Third Quarter 2016
Operable Unit 2 (Groundwater),
Bethpage, New York

Notes and Abbreviations:

(1) Samples were analyzed for the TCL VOCs using USEPA Method 524.2.

(2) Total VOCs are rounded to two significant figures.

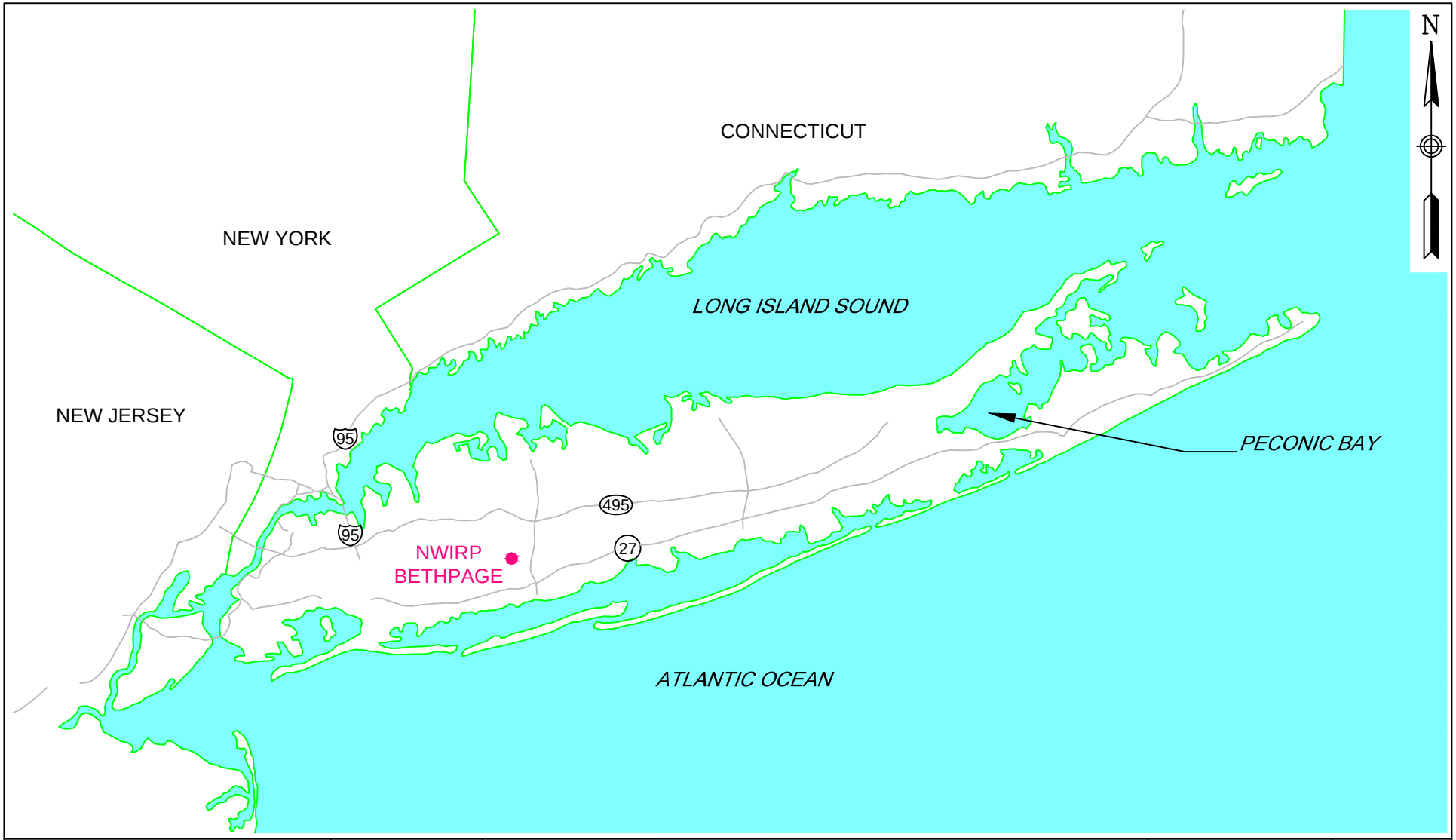
(3) Samples were analyzed for 1,4-Dioxane using USEPA Method 522.

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

Figures

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



0 15 30

SCALE IN MILES

NAVFAC

GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

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

Former Northrop Grumman Site

Former Northrop Grumman Site

RE123D1 RE123D2 RE123D3

RE122D1 RE122D2 RE122D3

VPB160 RE126D1 RE126D2 RE126D3

RE108D1 RE108D2

RE104D1 RE104D2 RE104D3

RE103D1 RE103D2 RE103D3

RE105D1 RE105D2

RE131D1 RE131D2 RE131D3

VPB154 RE120D1 RE120D2 RE120D3

TT101D TT101D1 TT101D2

RE124D1 RE124D2

RE129D1 RE129D2

BPOW5-1 BPOW5-2 BPOW5-3

BPOW5-4

BPOW5-5 BPOW5-6

RE133D1 RE133D2

BPOW6-3 BPOW6-4

BPOW6-5 BPOW6-6

BPOW6-1 BPOW6-2

RE127D1 RE127D2

RE130D1 RE130D2

RE114D1 RE114D2 RE114D3

RE107D1 RE107D2 RE107D3

RE106D1 RE106D3

VPB156 VPB142 VPB137 VPB117 VPB138 VPB123 VPB168 VPB122 VPB159 RE125D2 RE125D3 VPB165 VPB139 VPB40 VPB119 VPB77 VPB127 VPB43 BPOW1-4 BPOW1-5 BPOW1-6 VPB155 RE121D1 RE121D2 VPB166 VPB158 VPB150 VPB45 BPOW1-1 BPOW1-2 BPOW1-3 LWD 8279 LWD 7525 VPB148 VPB46 BPOW4-2R BPOW4-1R LWD-5303 VPB149 VPB44 VPB162 RE128D1 RE128D2 VPB131 VPB50 VPB128 BPOW3-3 BPOW3-4 VPB126 VPB130 BPOW2-1 BPOW2-2 BPOW2-3 SFWD-6150 VPB125 BPOW3-1 BPOW3-2 VPB164 RE130D1 RE130D2 ANY-8480 ANY-9338 VPB152 VPB124 VPB153 RE119D1 BPOW5-4 RE117D1 RE117D2 VPB151 SFWD N-8664 SFWD N-8665 VPB133 TT102D TT102D2 VPB167 VPB146 VPB147 VPB145 VPB161 VPB141 RE107D1 RE107D2 RE107D3 VPB104 VPB143 GM-37D GM-37D2 GM-71D2 GM-70D2 VPB117 MW-117-5 N-10821 VPB138 RW3-MW3 RW3-MW4 BWD-6915 BWD-6916 VPB51 RW1-MW3 RW2-MW1 RW3-MW1 RW3-MW2 RW-3 GM-38D GM-38D2 RW1-MW1 RW1-MW2 BWD-8941 BWD-3876 VPB48 VPB38 RW-1 VPB118 VPB47 MW-118-5 BWD-8004 MW-116-5 GM-34D GM-34D2 VPB122 VPB159 RE125D2 RE125D3 VPB154 RE120D1 VPB171 VPB376 VPB129 TT101D TT101D1 TT101D2 VPB155 RE121D1 RE121D2 VPB166 VPB158 VPB150 VPB45 VPB148 RE114D1 RE114D2 RE114D3 VPB46 BPOW4-2R BPOW4-1R LWD-5303 VPB149 VPB44 VPB162 RE128D1 RE128D2 VPB131 VPB50 VPB128 BPOW3-3 BPOW3-4 VPB126 VPB130 BPOW2-1 BPOW2-2 BPOW2-3 SFWD-6150 VPB125 BPOW3-1 BPOW3-2 VPB164 RE130D1 RE130D2 ANY-8480 ANY-9338 VPB152 VPB124 VPB153 RE119D1 BPOW5-4 RE117D1 RE117D2 VPB151 SFWD N-8664 SFWD N-8665 VPB133 TT102D TT102D2 VPB167 VPB146 VPB147 VPB145 VPB161 MW-2GF GM-18S GM-18I GM-18D VPB144 VPB39 GM-39D GM-39D2 GM-33D2 N-10631 MW-3R WELL 17 N-10600 GM-78S GM-78I VPB140 RE106D1 RE106D3 N-9921 VPB141 GM-75D2 N-10624 N-10627 VPB170 VPB157 GM-73D GM-73D2 GM-73D3 GM-20I GM-20D WELL 18 GM-21S GM-21I GM-21D N-10633 N-1063 VPB143 MW-2 MW-4 MW-5 MW-6 GM-19I GM-15S GM-15I GM-15D MW-3 VPB110R VPB110 WELL 19 GM-74I GM-74D GM-74D2 GM-74D3 MW-111-4 GM-79I GM-79D N-10628 Powell Ave Broadway Plainview Rd Central Ave Access Rd Old Bethpage Bethpage Hicksville Rd Wantagh Ave Stewart Ave Seamans Neck Rd Hempstead Tpke Union Ave State Hwy 135 Bethpage State Pkwy Levittown Miller Pl Boundary Ave Plainedge Southern State Pkwy N Jerusalem Rd North Wantagh

N

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

Legend

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

0 750 1,500 3,000 Feet

F:\Projects\Navy\Bethpage WXE08\7.0 Deliverables\7.2 CADD\GIS files\BethpageMAP DOCS\MXD\MISC\2014 03 Wells Sampled\F2 GW Samples 2016 12 05.mxd

NAVFAC

LOCATION MAP
SEPT-OCT (3Q) 2016 GROUNDWATER SAMPLING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: EV	DATE: 12/5/2016
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendices

Appendix A

Groundwater Sampling Forms – Resolution Consultants

Well ID: RE122D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/19/16 Time: Start 9:15 am/pm
Project No: 60266526 Finish 11:15 am/pm
Site Location: RE122 D1
Weather Conds: 76°-68° Light Rain, Wind SW 5mph 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 416.46 d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	22091
	Geotech	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0915	Start									
0930	-	16.01	0.094	5.78	4.28	41.6	-	600	416.54	clear
0935	-	15.91	0.091	5.25	4.22	78.0	0.80	600	-	clear
0940	-	15.93	0.092	5.20	4.36	78.7	0.91	600	416.56	clear
0945	-	15.82	0.090	5.19	4.23	80.8	0.86	600	416.57	clear
0950	5 Gal	15.82	0.092	5.53	4.39	80.6	0.81	600	416.50	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)

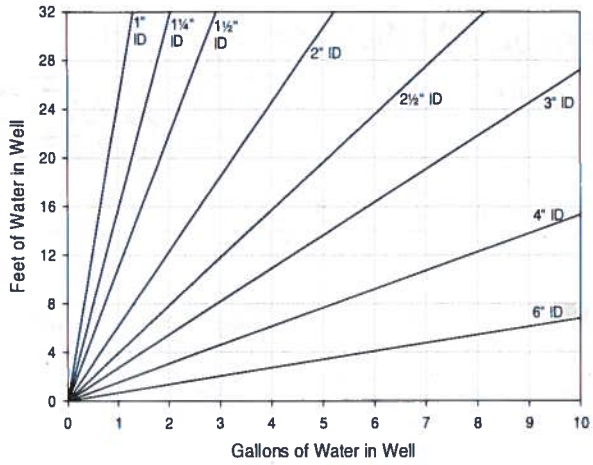
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D1-GW-091916	40-mL vials	3	HCl	VOCs	1100
RE122D1-GW-091916	1-L amber	2	none	1,4-Dioxane	

Comments When sampling, reduced flowrate to 200 ml/min

Signature _____ Date 9-19-16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0955	—	15.79	4.26	0.091	5.27	81.5	—	600	46.49	clear
1000	-	15.73	4.21	0.090	5.21	84.2	-	600	46.49	clear
1005	-	15.86	4.48	0.089	5.09	87.5	—	600	46.49	clear
1010	—	—	—	—	—	—	—	—	—	—
1015	—	15.41	4.83	0.090	4.60	83.6	—	600	46.48	
1020	10 Gal	15.76	4.84	0.090	4.56	83.6	—	600	46.48	
1025		15.77	4.85	0.090	4.61	83.4	—	600	46.47	
1030		15.79	4.86	0.090	4.48	83.1	0.74	600	46.47	
1035		15.79	4.87	0.090	4.37	83.1	-	600	46.47	
1040		15.80	4.86	0.090	4.31	82.7	—	600	46.47	
1045	14 Gal	15.83	4.86	0.090	4.28	82.5	0.71	600	46.45	clear
Sample time 11:00								200		

RESOLUTION CONSULTANTS

Well ID: RE122D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/19/16 Time: Start 1030 am/pm
Project No: 60266526 Finish 1300 am/pm
Site Location: Curtis & Haydon
Weather Conds: rain, humid 75° Collector(s): PK

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

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

b. Water Table Depth 45.95 d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	14G103484
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1035										ON
1055		19.69	141	7.65	5.84	129.9		400		
1100		19.88	111	5.06	4.90	161.3			45.98	
1105		19.03	108	4.12	4.76	164.7				
1110		18.17	105	3.62	4.67	166.3				
1115		17.93	103	4.01	4.67	164.9		450	45.91	

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

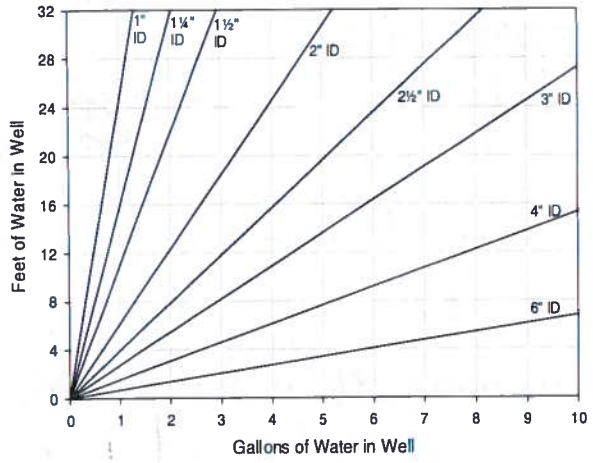
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D2-GW-091916	40-mL vials	3	HCl	VOCs	1240
RE122D2-GW-091916	1-L amber	2	none	1,4-Dioxane	1240
(GEL) "	900mL amber	2	none	1,4Dioxane	1240

Comments

Signature Paul Kuntz Date 9/19/16

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	Conduct. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1120		17.70	4.69	101	3.58	163.7	0.16	450	45.98	
1125		17.61	4.66	101	3.87	163.6				
1130		17.72	4.68	101	4.05	162.4				
1135	5gal	17.65	4.70	101	4.19	163.1		450	46.02	
1140		17.64	4.73	100	4.28	162.4				
1145		17.98	4.56	102	4.49	172.5	0.05			
1150		17.85		102					46.10	Meter shut off
1155		17.66	3.54	103	4.97	614.0		450		readings jumped when turned back on
1200		17.12	2.11	103	4.93	296.7				
1205		17.65	4.63	103	4.91	170.6				
1210	10gal	17.64	4.68	102	4.93	168.7				
1215		17.82	4.69	103	4.94	168.2		450	46.12	
1220		17.81	4.71	103	4.91	167.8				
1225		17.72	4.74	103	4.89	166.3				
1230		17.69	4.74	102	4.93	165.8	1.16	450	46.13	
1235		17.79	4.74	102	4.87	659.9				
								~~450~~		
1240								150		Sample

Well ID: RE122D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/19/16 Time: Start 1050 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Curtis & Hayden
Weather Conds: Rain 75° Collector(s): SC

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

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
- Conductivity ± 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	RFW 24697
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1100		16.80	0.021	1.78	1.81	302.5	7.0	500	47.82	clear
1105		16.88	0.022	1.66	2.55	299.7	10.0	495	47.85	No odor
1110	2.5g	16.88	0.022	1.92	3.12	284.2		500	47.92	↓
1115		16.75	0.021	2.48	2.81	294.2	15	500	47.95	
1125	5G	16.92	0.021	2.70	3.14	272.5	12	500	47.94	
1135		16.97	0.021	2.71	3.39	259.4		500	47.85	

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)

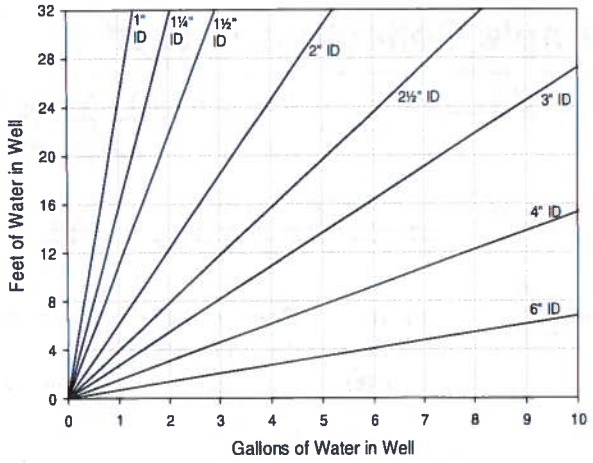
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D3-GW-091916	40-mL vials	3	HCl	VOCs	1235
RE122D3-GW-091916	1-L amber	2	none	1,4-Dioxane	1235

Comments

Signature [signature] Date 9/16/16

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1140	6.59	16.87	3.31	0.021	2.76	262.1	11	510	47.85	clear, NO odor
1150		17.08	3.65	0.021	2.74	244.5		510	47.87	"
1200	109	17.06	3.73	0.021	2.72	238.3	15	510	47.88	"
1210		17.04	3.76	0.021	2.72	235.2				"
1220	139	17.05	3.75	0.021	2.77	238.4	10	510	47.89	"
1230	169	17.06	3.78	0.021	2.71	239.5		510	47.88	
1235	Sample collected							200		

RESOLUTION CONSULTANTS

Well ID: RE104D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/19/16 Time: Start 15 00 am/pm
Project No: 60266526 Finish 1800 am/pm
Site Location: RE104-D1, Hilltop Rd
Weather Conds: 71°; Rain Showers, Wind SSE 9 mph Collector(s): T. Bull

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

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
- Conductivity ± 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	14G103484
	LaMotte	7020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
Start time		1300,	Had difficult time w/ Flow Rate, very low							
1545	-	16.45	0.082	5.55	4.97	111.9	-	500	-	Clear
1550	-	16.47	0.081	5.45	4.96	112.8	1.55	500	40.26	Clear
1555	-	16.48	0.081	5.48	4.79	124.1	-	500	40.25	clear
1600	-	16.53	0.081	5.45	4.78	125.3	-	500	40.25	clear
1605	-	16.56	0.081	5.44	4.78	125.7	-	500	40.25	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)

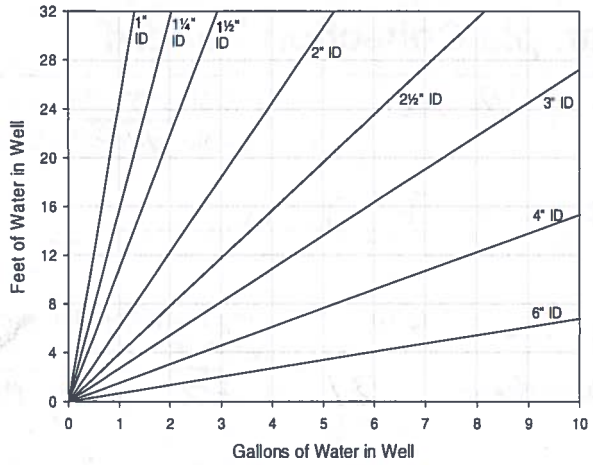
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D1-GW-091916	40-mL vials	3	HCl	VOCs	1750
RE104D1-GW-091916	1-L amber	2	none	1,4-Dioxane	

Comments

Signature _____ Date 9-19-16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1610	–	16.70	4.74	0.081	5.30	129.9	1.09	500	40.26	clear
1615	5 Gal	16.81	4.75	0.081	5.25	130.5	1.01	500	40.24	clear
1620		16.84	4.75	0.081	5.18	131.5	–	475	40.22	clear
1625	–	17.06	4.76	0.081	5.18	131.4	–	300	40.15	clear
1630	–	17.16	4.76	0.081	5.07	131.3	–	300	40.11	clear
1635	–	–	–	–	–	–	–	–	–	–
1640	–	16.46	4.79	0.080	5.25	131.2	0.96	500	40.00	clear
1645	–	16.47	4.78	0.081	5.19	131.0	–	400	39.99	clear
1650	–	16.48	4.78	0.081	5.07	131.0	–	200	39.97	clear
1655	–	16.52	4.79	0.081	5.06	129.8	–	200	39.97	clear
1700	–	15.78	4.77	0.079	6.72	135.6	–	300	39.97	clear
1705	10 Gal	15.75	4.75	0.078	5.77	137.5	0.38	700	[illegible]	xed out MP10
1710	–	15.70	4.73	0.079	5.55	139.0	–	700	39.95	clear
1715	–	15.70	4.73	0.078	5.53	138.9	–	700	39.92	clear
1720	–	15.65	4.71	0.078	5.45	139.5	0.60	700	39.90	clear
1725	13.5 Gal	15.66	4.71	0.078	5.41	139.3	0.54	700	39.90	clear
1750	sample time							200		

RESOLUTION CONSULTANTS

Well ID: RE104D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/19/16 Time: Start 1300 am/pm
Project No: 60266526 Finish 1700 am/pm
Site Location: Hill top
Weather Conds: 70, rain Collector(s): Paul Kaveth

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 43.97 d. Calculated System Volume (see back) _____ gal. 20 screen length (ft)

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
- Conductivity ± 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	22091
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1510								650	6	ON
1520		14.89	0.023	6.54	4.62	68.4				
1525		14.86	0.022	7.18	4.42	83.8			44.92	
1530		14.89	0.022	7.15	4.38	90.7			43.92	
1535	5G	14.88	0.022	7.51	4.54	95.9				
1540		14.88	0.022	7.38	4.54	93.7	3.07			

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)

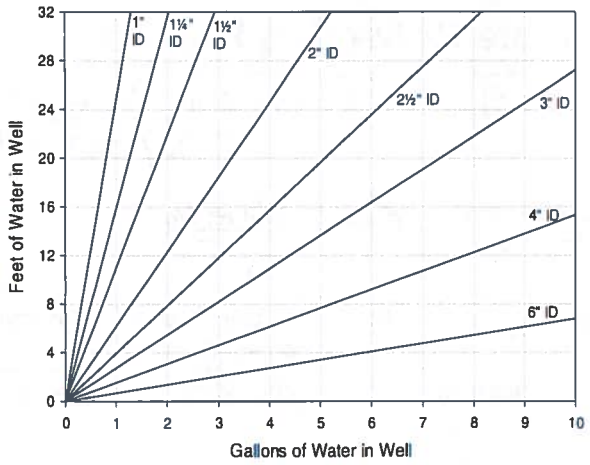
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D2-GW-091916	40-mL vials	3	HCl	VOCs	1630
"	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaveth Date 9/19/16

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: RE104D2 @ 15:10

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1545		14.88	4.57	0.022	7.18	101.5		650	43.96	
1550		14.89	4.54	0.022	7.04	113.4				
1555		14.88	4.08	0.022	6.97	120.0				
1600	10gal	14.87	4.51	0.22	6.87	121.0				
1605		14.88	4.48	0.022	6.84	123.7	2.64	650	44.02	
1610		14.86	4.52	0.022	6.59	128.3				
1615		14.89	4.49	0.022	6.64	129.8				
1620	13 gal	14.84	4.51	0.022	6.62	132.2	2.27	650	44.03	
1630	Sample							200		

RESOLUTION CONSULTANTS

Well ID: RE10403

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/19/16 Time: Start 1500 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: hill top
Weather Conds: 70° rain 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 44.45 d. Calculated System Volume (see back) _____ gal. 20 screen length (ft)

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
- Conductivity ± 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	RFW24697
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1505		15.60	0.019	7.68	1.90	362.2	5.82	450		
1510		15.52	0.018	5.76	2.28	315.8	7.72	450	44.58	
1515	3G	15.57	0.018	4.81	2.86	280.7	2.41	450	44.59	
1520		16.70	0.019	4.56	3.90	227		450	44.61	
1525		15.85	0.018	5.13	4.07	218.3	4.51	450		
1530	5G	15.74	0.018	5.34	3.86	230.4		450	44.67	

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)

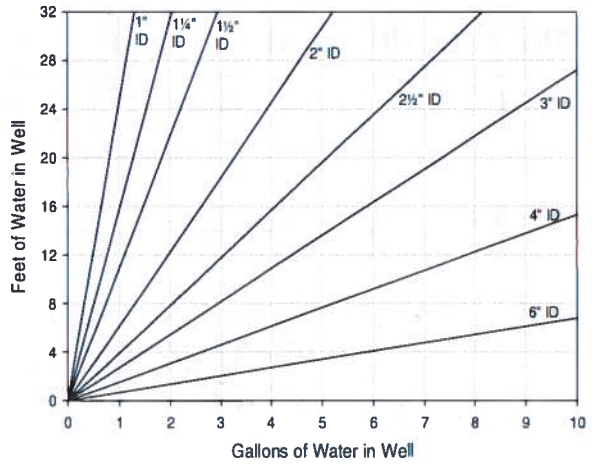
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE 104 D3-GW-091916	40-mL vials	3	HCl	VOCs	1635
RE 104 D3-GW-091916	1-L amber	2	none	1,4-Dioxane	

Comments

Signature _____ Date 9/16/16

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1535		15.79	3.67	0.018	5.40	240.1	7.7	450	44.65	
1540		15.74	3.66	0.018	5.43	240.1				
1545		15.84	3.72	0.018	5.41	236.2			44.65	
1550		15.57	3.69	0.018	5.64	240.1	5.3	450		
1555	8 G	15.44	3.45	0.018	5.60	251.5			44.66	
1605	10 G	15.41	3.60	0.018	5.66	244.7				
1610		15.51	3.61	0.018	5.57	240.3	5.5	450	44.67	
1620		15.48	3.65	0.018	5.57	240.7			44.68	
1625		15.45	3.64	0.018	5.61	240.1		450	44.68	
1630	13 G									
Sample collected				~~1630~~		1635		200		

Well ID: RE133D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 9/20/16
Time: Start 840 am/pm
Finish 1100 am/pm
Project No: 60266526
Site Location: Wicks & Howard
Weather Conds: Cloudy 70°
Collector(s): Paul Kareth

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

a. Total Well Length 598
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 25.87
d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	RFW24647

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
930								650		OK
940		15.66	0.104	2.61	2.60	271.3	1.25		25.82	
945		15.50	0.121	1.42	3.51	190.5	92.3		25.83	
950										
955	5 Gal	15.64	0.130	0.69	4.37	137.4	25.2	650	25.84	
1000	—	15.62	0.133	0.54	4.76	115.0				

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)

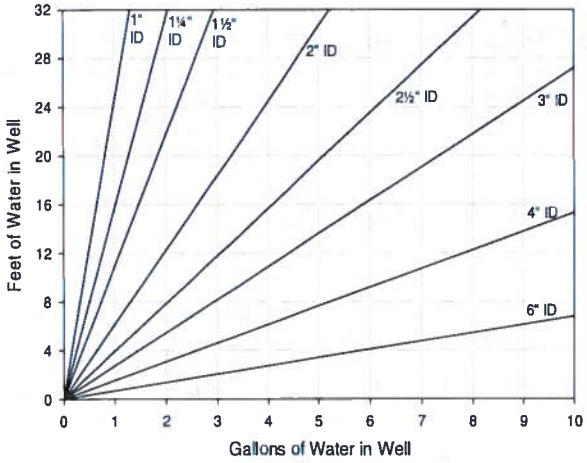
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE 133D1	40-mL vials	3	HCl	VOCs	1045
	1-L amber	2	none	1,4-Dioxane	1045

Comments: hit bottom, stirred up the water column, high turbidity readings
splits with Massapaqua WD

Signature: Paul Kareth
Date: 9/20/16

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: RE 13301

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1005		15.67	4.66	0.134	0.50	118.0				
1010	1.5	15.59	4.71	0.134	0.47	116.7	37.4	650	25.86	
1015	10gal	15.50	4.79	0.133	0.42	110.4	39.4			
1020		15.56	4.76	0.133	0.39	110.0	29.8			
1025		15.52	4.94	0.133	0.37	101.3	26.7			
1030		15.54	4.79	0.132	0.34	106.7	27.6			
1035	15gal	15.60	4.84	0.132	0.32	105.9	26.3			
1045								200		Sample

Well ID: RE133D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/20/16 Time: Start 840 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Wicks & Howard
Weather Conds: cloudy 70° Collector(s): F. Bell, Paeck, Soby C.

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

a. Total Well Length 8/8 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 47.25 d. Calculated System Volume (see back) 131 gal. 20 screen length (ft)

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
- Conductivity ± 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	14G103484
La Motte	2020WE	3674-3813

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1000								600	26.46	ON
1005		17.34	0.043	2.12	4.83	126.7			26.49	cloudy
1010		17.33	0.042	2.07	4.54	141.7	49.9			
1015		17.09	0.041	1.66	4.26	152.2		~600	26.51	
1020		17.02	0.041	1.17	4.31	148.4	86.7			
1025	5G	16.97	0.037	0.96	4.30	139.4		600	26.52	

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)

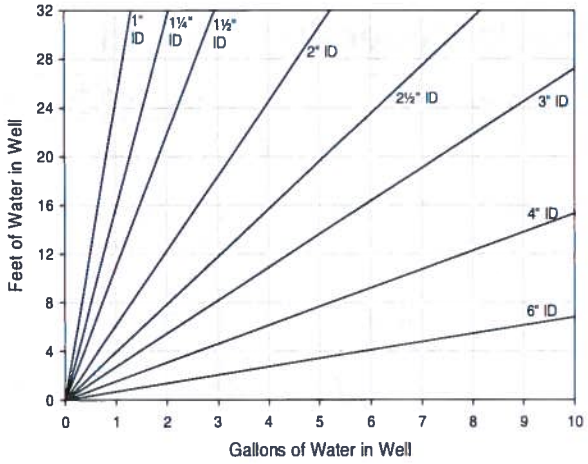
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE133D2-GW-092016	40-mL vials	3	HCl	VOCs	1130
RE133D2-GW-092016	1-L amber	2	none	1,4-Dioxane	1130

Comments

Signature _____ Date 09-20-16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1030	–	17.07	4.32	0.037	0.96	139.4	840	650	26.49	Cloudy
1035	–	16.98	4.35	0.036	0.93	138.6	795	700	26.52	Cloudy
1040	–	17.83	4.44	0.037	0.86	137.4	–	600	26.51	Cloudy
1045	–	17.93	4.49	0.037	0.84	135.8	–	600	26.82	clean about flow cell
1050	–	19.11	4.98	0.039	0.33	111.5	607	600	26.84	
1055	–	17.45	4.76	0.038	0.89	125.3	666	600	26.93	
1100	10Gal	17.57	4.73	0.037	0.88	130.5	87	600	26.96	
1105	–	17.78	4.73	0.037	0.83	136.7	78	600	26.94	
1110	–	17.80	4.74	0.037	0.15	133.3	77	600	26.95	
1115	–	17.69	4.72	0.037	0.79	136.9	83	600	26.92	
1130	Sample time							100		

RESOLUTION CONSULTANTS

Well ID: RE03D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/20/16 Time: Start 1300 am/pm
Project No: 60266526 Finish 1515 am/pm
Site Location: Aroca & Martin
Weather Conds: sunny 80° Collector(s): Paul Kaneth

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

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

b. Water Table Depth 43.87 d. Calculated System Volume (see back) 9.8 gal. 15 screen length (ft)

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
- Conductivity ± 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	RFW24697
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1320								600		OW
1330		16.15	0.085	11.01	3.99	215.7			43.82	
1335		16.12	0.085	2.53	4.14	202.0				
1340		16.06	0.087	3.56	4.24	192.2	2.78			
1345		16.02	0.087	4.04	4.31	192.5			43.83	
1350	5gal	16.03	0.087	4.03	4.42	192.3		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)

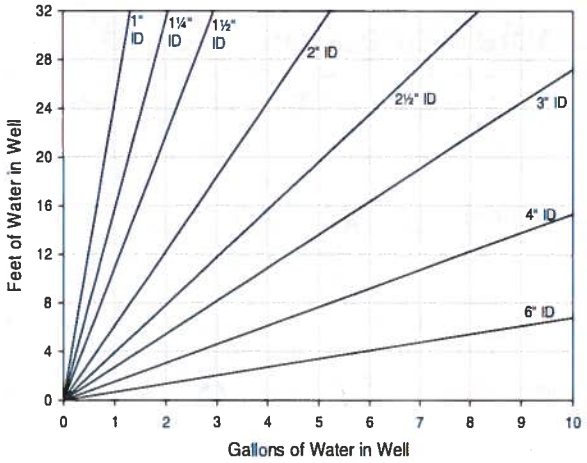
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10301-GW-092016	40-mL vials	3	HCl	VOCs	1420
"	1-L amber	2	none	1,4-Dioxane	1420
"	2.5 oz amber	2	none	1,4-Dioxane	1420

Comments MS, MSD, GEL sample

Signature Paul Kaneth Date 9/20/16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1355		15.94	4.39	0.087	4.12	198.7	0.64			
1400		15.95	4.46	0.087	4.13	199.5		600		
1405		15.91	4.51	0.087	4.19	199.7	0.60		43.82	
1410		15.89	4.54	0.087	4.24	199.1				
1415		15.92	4.55	0.088	4.34	201.1			43.80	
1420								150		Sample
1500		end purge for sampling					MS, MSD, GEL			

LowFlow-GWa - Sept 2016.xlsx

RESOLUTION CONSULTANTS

Well ID: RE103D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/20/16 | Time: Start 1330 am/pm | Finish _____ am/pm
Project No: 60266526
Site Location: Avoca & Martin
Weather Conds: Sunny 80° | Collector(s): SC

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

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
- Conductivity ± 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	14G103484
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1340		21.22	0.058	7.22	5.56	78.5		250	43.54	clear
1345		19.42	0.055	9.00	5.35	101.8		300		
1350		19.12	0.055	8.26	5.21	108.0	0.03		43.55	
1355		18.56	0.053	8.15	5.07	122.8		300	43.55	
1400		18.55	0.053	5.69	5.11	125.6	0.53			
1405		18.31	0.050	4.98	5.31	131.9		350	43.56	

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)

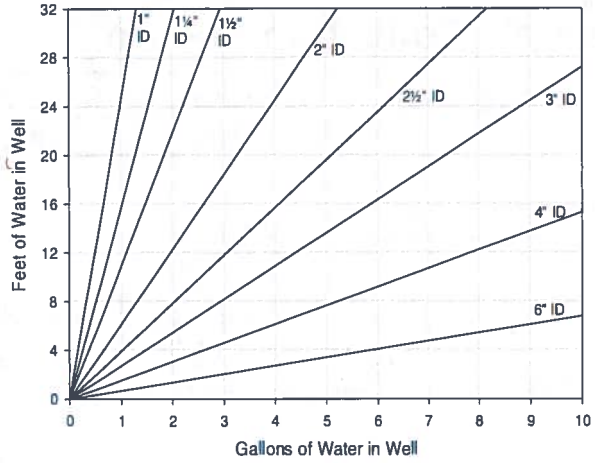
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D2-GW-092016	40-mL vials	3	HCl	VOCs	1600
RE103D2-GW-092016	1-L amber	2	none	1,4-Dioxane	

Comments

Signature _____ Date 9/20/16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1410		18.61	5.15	0.046	6.06	133.9	0.058	350	43.56	clear
1420		18.62	5.10	0.045	6.57	139.7		350		
1425		18.63	5.10	0.045	6.65	139.6	0.71			
1430	5G	18.62	5.00	0.044	6.89	141.2		350	43.56	
1435		18.62	5.04	0.043	7.11	144.4	0.85			
1440		18.25	5.04	0.043	6.72	147.3				
1450		17.79	4.98	0.042	7.23	150.1		500		clanged controller-
1500		19.14	5.12	0.043	6.27	145.3	0.75			clear.
1505		16.91	4.97	0.041	7.31	155.6		500		
1510		16.90	4.97	0.041	7.29	157.3			43.56	
1515	10G	17.05	4.97	0.041	7.04	155.1	0.78			
1520		17.07	4.98	0.042	6.99	157.4				
1525	11.5	17.08	4.97	0.042	6.91	156.3			43.56	
1530		17.08	4.97	0.041	7.02	156.8				
1535		16.99	4.97	0.042	7.05	156.1			43.56	
1540		16.99	4.98	0.042	7.04	156.5				
1545		16.94	4.99	0.042	7.04	156.8			43.56	
Sample collected at 1600								200		

Well ID: RE103D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/20/16 Time: Start 1330 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Arnold & Marbin
Weather Conds: Sunny 80° Collector(s): T. Bell, Paul K.

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

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
- Conductivity ± 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	22091
	LaMotte	2020WE	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1330							Start time			
1335	-	16.59	0.031	8.50	2.42	130.7	0.96	450	44.08	clear
1340	-	16.33	0.031	6.30	2.00	142.6	-	550	44.07	clear
1345	-	16.19	0.031	5.19	2.12	137.4	-	550	-	clear
1350	-	16.19	0.033	3.21	3.07	141.9	0.12	550	44.09	clear
1355	-	16.20	0.031	3.24	3.21	122.5	-	550	44.06	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:

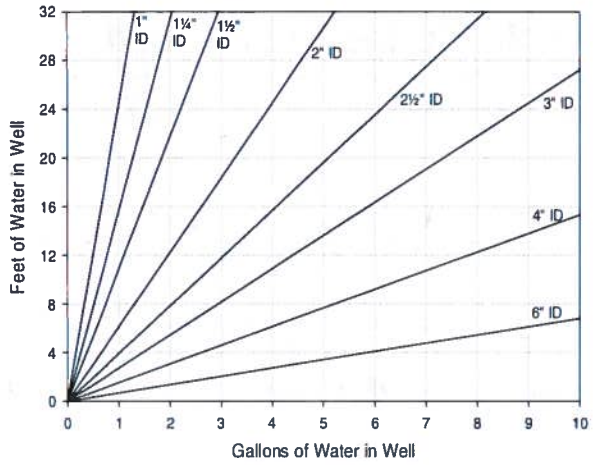
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D3-GW-092016	40-mL vials	3	HCl	VOCs	1500
RE103D3-GW-092016	1-L amber	2	none	1,4-Dioxane	1500
Dup01-GW-092016	40 ml vials	3	HCl	VOCs	1500
Dup01-GW-092016	1-Lamber	2	None	1,4-Dioxane	1500

Comments
Flowrate when sampling was 250 ml/min

Signature _____ Date 9-20-2016

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1400	–	16.11	3.06	0.031	4.53	85.6	0.76	600	4.05	clear
1405	5Gal	16.26	3.15	0.031	4.86	90.6	–	600	–	cl
1410	–	16.36	3.27	0.031	5.90	117.4	–	600	–	clear
1415	–	16.29	3.29	0.031	5.76	117.1	0.69	600	4.03	
1420	–	16.40								
1425										
1430	–	16.28	3.44	0.030	5.42	96.7	0.57	500	3.98	clear
1435		16.27	3.48	0.030	5.48	94.3	–	500	–	
1440	–	16.30	3.46	0.030	5.46	91.9	0.54	500	3.98	clear
1445	10Gal	16.34	3.48	0.030	5.46	96.2	0.52	500	3.97	Clear
1500	Sample time							250		

Well ID: RE120D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/21/16 Time: Start 800 am/pm
Project No: 60266526 Finish 1100 am/pm
Site Location: Sleatby
Weather Conds: 70° mostly sunny Collector(s): Paul Kaneth

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

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
- Conductivity ± 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	14G103484
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
850								550		OX
0900		16.80	0.111	3.87	4.88	165.8			40.23	
0905		16.72	0.108	2.52	4.63	163.8	0.42		40.34	
0910		16.71	0.106	2.71	4.50	161.6			40.42	
0915		16.71	0.106	3.08	4.40	161.9		500		
0920		16.62	0.106	3.10	4.39	157.1			40.44	

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

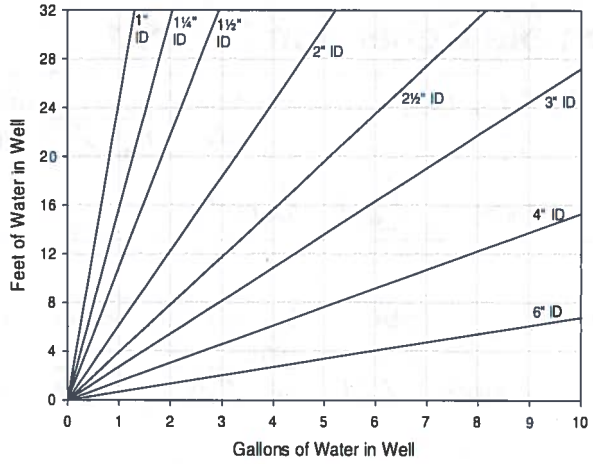
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D1-GW-092116	40-mL vials	3	HCl	VOCs	1030
	1-L amber	2	none	1,4-Dioxane	

GEL

Comments: GEL sample for 1,4 Dioxane method 522

Signature: Paul Kaneth Date: 9/21/16

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: RE180001 @0850

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
925	5gal	16.63	4.46	0.105	3.04	153.9		500	40.44	
930		16.60	4.50	0.106	3.28	152.8	0.79			
935		16.63	4.54	0.105	3.28	151.6				
940		16.58	4.60	0.106	3.00	149.0			40.46	
945		16.65	4.64	0.105	2.88	147.5				
~~950~~ 1000		16.65	4.52	0.105	2.85	153.1		500		
955	10gal	16.61	4.37	0.106	2.82	155.1				YSI shut off
1000		16.58	4.71	0.105	2.83	144.3				
1005		16.61	4.75	0.105	3.04	142.9	0.52		40.48	
~~1010~~ 1010		16.66	4.70	0.106	2.78	145.0				
1015		16.69	4.68	0.105	2.75	145.2			40.47	
1020	13gal	16.66	4.67	0.106	2.73	146.2	0.64	500		
1030								450		Sample and sampling
1055										

RESOLUTION CONSULTANTS

Well ID: RE12002

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Shelby
Weather Conds: 70° sunny
Date: 9/21/16
Time: Start 800 am/pm
Finish 1100 am/pm
Collector(s):

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

a. Total Well Length 7.13
b. Water Table Depth 40.09
c. Length of Water Column _____ (a-b)
d. Calculated System Volume (see back) 131 gal.
Casing Diameter/Material: 4-inch PVC
20 screen length (ft)

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
- Conductivity ± 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	22091
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
8:30	Started pumping									
9:00	—	17.65	0.088	9.26	3.92	152.9	—	500	40.19	Clear
905	—	17.83	0.088	9.00	3.70	155.9	—	150		
910	Air leak w/ bonded tubing									
915	—	16.57	0.076	3.24	2.45	141.3	—	525	40.21	Clear
920	—	16.65	0.076	2.51	2.78	135.4	0.06	400	41.23	

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: Geotech bladder pump with drop tube assembly

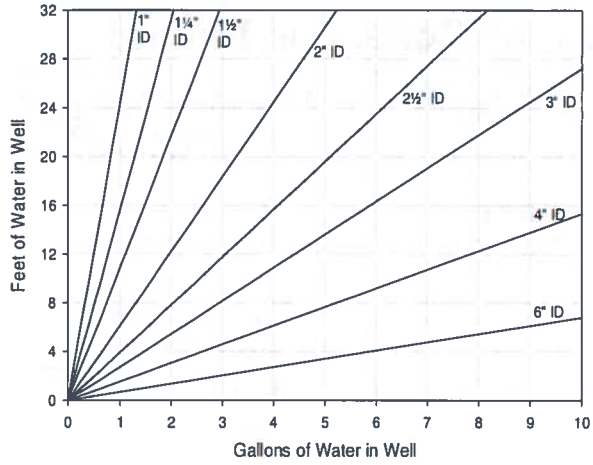
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12002-GW-092116	40-mL vials	3	HCl	VOCs	1045
RE12002-GW-092116	1-L amber	2	none	1,4-Dioxane	1045
RE12002-GW-092116	500ml amber	2	none	method 522 1,4-Dioxane	1045

Comments: ~~Sampled for~~ Sampled for GEL method 522, 1,4-Dioxane

Signature _____ Date 9-21-16

GEL

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
925	–	16.44	3.01	0.072	2.19	117.4	–	–	40.23	
930	–	16.51	3.07	0.074	2.20	116.1	–	400	40.25	clear
935	–	16.44	3.03	0.073	2.63	120.4	0.44	550	40.27	
940	–	16.42	3.49	0.071	4.66	126.3	–	–	40.28	
945	5 Gal	16.42	3.62	0.071	4.81	125.9	1.03	525	40.30	clear
950	"	16.40	3.69	0.070	5.00	111.9	–	525	40.27	
955		16.41	3.69	0.071	5.04	113.8	–	525	40.27	clear
1000	–	16.47	4.04	0.070	7.40	110.6	–	500	40.29	
1005	–	16.48	4.10	0.071	5.35	114.2	1.05	500	40.29	clear
1010	–	16.57	4.10	0.071	5.45	115.2	–	500	–	clear
1015	–	16.53	4.11	0.071	5.29	115.3	0.80	500	40.27	clear
1020	–	16.57	4.21	0.071	5.07	114.5	–	500	40.28	clear
1025	–	16.57	4.24	0.070	5.17	113.5	0.58	500	40.27	clear
1030	–	16.61	4.37	0.070	5.18	114.5	0.64	500	40.27	clear
1035	3.1 Gal	16.65	4.38	0.070	5.17	114.2	0.52	500	40.28	clear
Sample time 1045								200		

RESOLUTION CONSULTANTS

Well ID: RE120D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/21/16 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Shelby
Weather Conds: 70° mostly sunny Collector(s): Saby Chatterjee

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 40.48 d. Calculated System Volume (see back) _____ gal. _____ screen length (ft)

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
- Conductivity ± 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	RFW 24697

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0840										Pump Start
0850		16.24	0.022	6.89	2.03	363.1		350	40.52	clear
0855		16.07	0.022	3.98	2.53	342.7	1.47	550	40.59	
0900		16.02	0.021	3.51	2.64	329				
0905		15.96	0.022	3.51	2.61	317.2			~~40.59~~ 40.61	
0910	5G	16.03	0.022	3.55	2.74	304.7	0.77	550		

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)

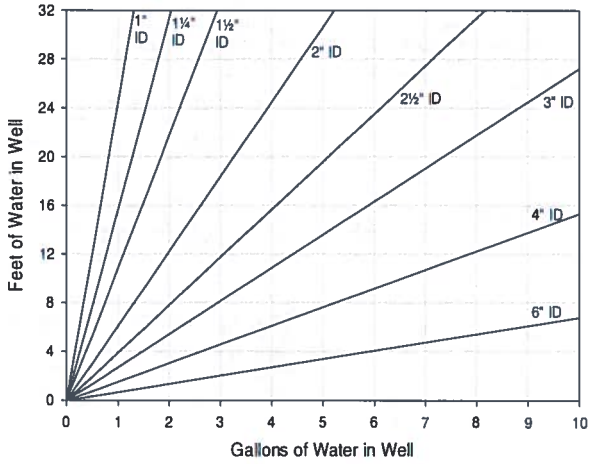
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
GW-RE120D3092116	40-mL vials	3	HCl	VOCs	1005
RE120D3-GW-092116	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Saby Chatt Date 9/21/16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0915		16.03	2.99	0.022	3.58	289.7		550	40.61	clear
0920		16.06	3.01	0.022	3.59	288.2				"
0925		16.05	3.19	0.022	3.58	279.2	0.71		40.60	"
0930		16.10	3.23	0.022	3.57	276.6		550		"
0935	1	16.04	3.25	0.022	3.58	274.1				
0940	10 G	16.09	3.30	0.022	3.55	275.3	0.75		40.60	
0945		16.06	3.35	0.022	3.58	269.4				
0950		16.09	3.38	0.022	3.59	265.5	0.52	550	40.60	
0955		16.11	3.40	0.022	3.57	264.8				
1000		16.08	3.35	0.022	3.59	263.1	~~8.05~~ 1		40.60	
Sample taken at 1005								200		

Well ID: RE123D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/21/16 | Time: Start 1230 am/pm | Finish ____ am/pm
Project No: 60266526
Site Location: MW EIRR Yard
Weather Conds: 80° sunny | Collector(s): Suby Chatterjee

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

a. Total Well Length 50.58 ft | c. Length of Water Column ____ (a-b) | Casing Diameter/Material 4-inch PVC
b. Water Table Depth 50.95 | d. Calculated System Volume (see back) 13.1 gal. | 20 screen length (ft)

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
- Conductivity ± 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	16G103784
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1300	-	21.69	0.106	7.41	5.46	93.3	3.85	350	50.95	clear
1305	-	21.33	0.106	7.05	4.57	100.6	2.53	500	50.92	clear
1310	-	21.40	0.109	7.87	3.88	106.9	2.87	500	50.91	
1315	-	20.27	0.109	8.05	3.96	109.1	-	500	50.90	clear
1320	-	20.37	0.109	8.21	4.39	106.1	-	500	50.90	clear
1325	-	20.33	0.108	8.00	4.42	106.1	2.93	500	50.90	

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)

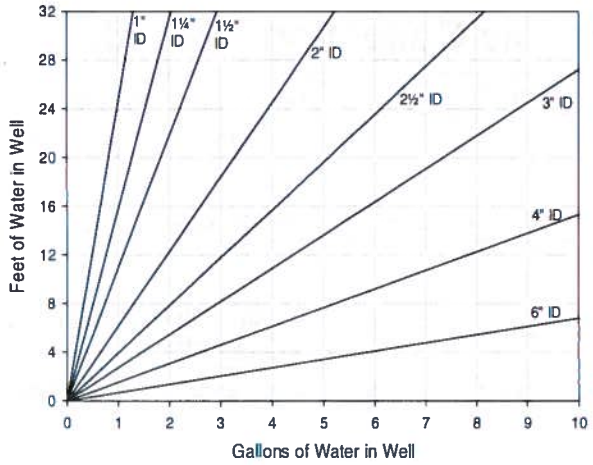
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D1-GW-092116	40-mL vials	3	HCl	VOCs	1440
RE123D1-GW-092116	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Suby Chatterjee | Date 9/21/16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1330	—	20.34	4.44	~~0.~~107	7.96	105.2	3.22	500	50.90	clear
1335	5G	20.22	4.46	0.109	8.05	105.5		500	50.90	
1340		19.71	4.28	0.108	8.21	107.8	3.54			
1345		20.07	4.44	0.108	8.10	106.6			50.90	
1350		20.14	4.57	0.108	8.07	105.3	4.02			
1355		20.02	4.61	0.109	8.16	105.1			50.90	
1400	10G	20.07	4.60	0.108	8.17	105.3	4.05			
1405		20.27	4.61	0.109	8.16	105.0	4.83		50.90	
1410		20.01	4.62	0.108	8.14	105.4	4.79		50.90	
1415		20.05	4.63	0.108	8.12	104.7	4.85			
1420		20.08	4.65	0.108	8.14	105.1	4.75		50.90	
1425		20.10	4.62	0.108	8.13	105.3	4.78		50.90	
1430		20.11	4.63	0.108	8.10	105.4	4.78		50.90	
	Sample	fine.		1440				200		

Well ID: RE123D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/ 21 /16 Time: Start 1230 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: LIRR Yard
Weather Conds: sunny 80° Collector(s): [illegible]

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

a. Total Well Length 660 ft c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 52.21 d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	08K101396
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1250	Start pumping							600		
1300	–	21.29	0.026	3.93	3.16	248.6	1.38	650	51.62	Clear
1305	–	21.30	0.028	5.28	4.04	263.9	1.89	650	51.59	
1310	–	21.15	0.026	6.67	3.90	257.9	2.58	650	51.59	
1315	5 Gal	21.15	0.026	6.68	4.15	246.7	–	650	51.61	
1320	–	21.15	0.026	6.75	4.18	246.7	–	650	–	Clear

(continued on back)

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

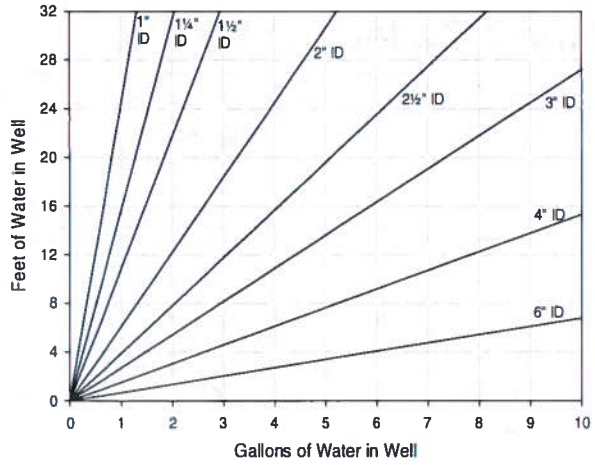
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D2-GW-092116	40-mL vials	3	HCl	VOCs	1410
RE123D2-GW-092116	1-L amber	2	none	1,4-Dioxane	1410

Comments

Signature [signature] Date 9-21-16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1325	—	21.15	4.18	0.026	7.03	245.5	4.25	650	51.58	clear
1330	—	21.04	4.26	0.026	7.15	244.0	—	650	—	
1335	—	20.60	3.84	0.025	7.24	267.7	4.63	650	51.57	clear
1340	10 Gal	20.30	3.99	0.025	7.27	256.7	4.10	600	51.56	clear
1345	—	20.83	4.19	0.026	7.04	238.6	—	600	—	clear
1350	—	20.69	4.58	0.026	7.07	285.1	4.02	600	51.56	clear
1355	13.5 Gal	20.80	4.61	0.026	7.11	231.9	4.63	600	51.58	clear
Sample Time 1410								200		

Well ID: RE123D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 9 / 21 / 16
Time: Start 1215 am/pm
Finish 1500 am/pm
Project No: 60266526
Site Location: ~~KITSAP Yard~~ MTA Yard
Weather Conds: Sunny 80°
Collector(s):

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

a. Total Well Length 84.07
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 52.01
d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	22091
		23193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1235								550		ON
1250	1c	19.75	0.051	0.66	5.64	-82.6			52.10	
1255		19.69	0.049	0.56	5.64	-88.9			52.12	
1300		19.67	0.049	0.51	5.62	-95.3	11.7			
1305		19.53	0.056	0.46	5.73	-89.4				
1310	5gal	19.54	0.056	0.43	5.74	-79.2		550	52.11	

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:

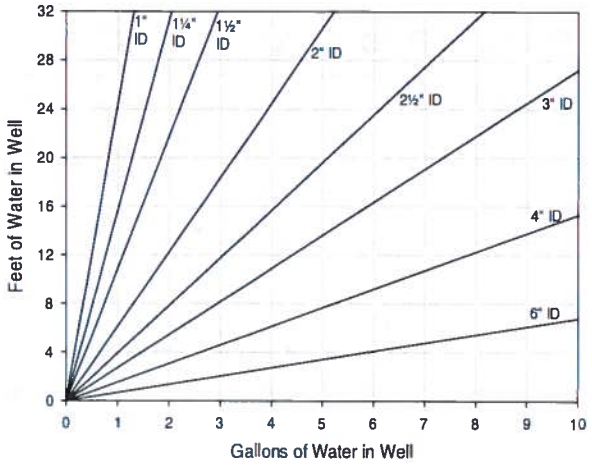
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D3-GW-092116	40-mL vials	3	HCl	VOCs	1435
"	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Hawks
Date 9/21/16

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: RE12303

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1315		19.43	5.72	0.055	0.42	-77.6				
1320		19.27	5.71	0.054	0.40	-73.1				
1325		19.22	5.71	0.054	0.40	-70.7	21.1	550	52.16	
1330		19.25	5.67	0.052	0.38	-70.3				
1335		19.22	5.62	0.051	0.69	-65.6				
1340	10gal	18.98	5.64	0.050	0.44	-66.1			52.13	
1345		18.93	5.60	0.049	0.39	-64.3	18.3	550		
1350		19.16	5.57	0.048	0.35	-62.9	17.9		52.15	
1355		19.07	5.53	0.047	0.34	-62.7	17.7			
1400	13gal	19.22	5.53	0.046	0.34	-63.6	18.6		52.16	
~~1415~~	1415						200			Sample
										Sample collection
										1420 - 1425

LowFlow-GWa - Sept 2016.xlsx

Note:
The sample collected at TT101D (9/21/16) was lost by the currier. The well was resampled on 9/26/16.

Well ID: TT101D

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/21/16 Time: Start 1600 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Wadsworth
Weather Conds: 80° Sunny Collector(s): SC

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

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
- Conductivity ± 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	22091
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1615										Start
1620		16.87	0.081	0.34	4.09	71.0		450		
1625		16.74	0.082	0.30	4.12	71.2	0.74	550	36.49	clear
1630		16.31	0.080	0.21	4.19	71.8			36.49	
1635		16.15	0.081	0.20	4.19	72.3	0.75	550		
1640		16.03	0.081	0.17	4.28	72.2	1.48			

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)

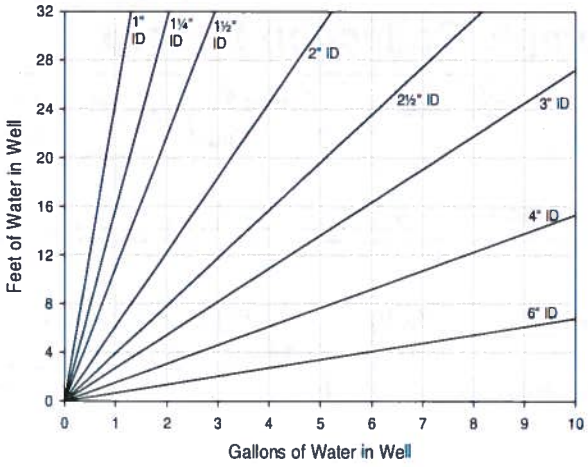
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D-GW-092116	40-mL vials	3	HCl	VOCs	1735
TT101D-GW-092116	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kraft Date 9/21/16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1645		16.02	4.36	0.080	0.15	71.8	1.59	550	36.49	clear
1650	5G	15.80	4.31	0.080	0.13	73.0	1.07	800	36.49	
1655		15.83	4.32	0.081	0.12	75.4		800	36.49	
1700		15.82	4.31	0.081	0.14	75.6	1.05			
1705		15.77	4.34	0.081	0.14	75.7				
1710	10G	15.76	4.33	0.081	0.13	76.1	0.69		36.49	
1715		15.79	4.31	0.082	0.14	74.7	0.71		36.49	
1720		15.77	4.33	0.081	0.15	73.3	0.65		36.49	
1725		15.80	4.31	0.081	0.15	72.9	0.68		36.49	
1730	13G	15.79	4.32	0.081	0.14	73.1	0.68		36.49	
	Sample	at	1735				200			

RESOLUTION CONSULTANTS

Well ID: TT10IDI

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/21/16 | Time: Start 1600 am/pm
Project No: 60266526 | Finish _____ am/pm
Site Location: TT10IDI
Weather Conds: 83°F, Sunny, Wind N 6 mph | Collector(s): T. B, P. K, D. C

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

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
- Conductivity ± 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	08K101396
Flowcell		16003360-4M

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1620	-	15.57	0.079	0.52	3.57	190.8	0.74	800	38.19	Clear
1625	-	15.51	0.079	0.48	3.59	187.5	-	800	38.20	clear
1630	5 Gal	15.53	0.079	0.41	3.73	171.6	-	800	38.20	clear
1635	-	15.67	0.079	0.62	4.15	149.3	1.27	700	38.18	clear
1640	-	15.59	0.079	0.64	4.26	148.6	-	800	38.19	clear
1645	-	15.58	0.079	0.63	4.24	149.7	-	800	38.19	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

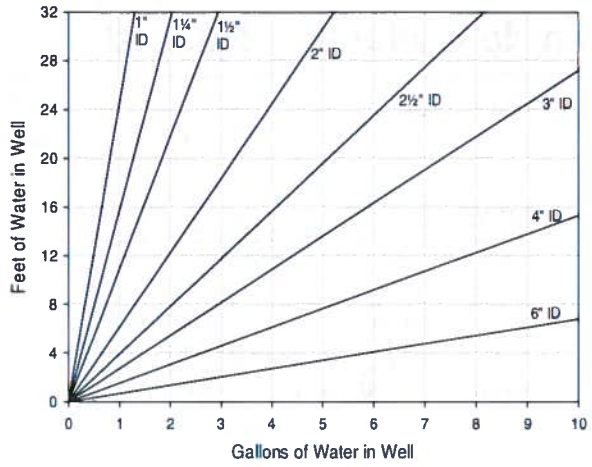
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT10IDI-GW-092116	40-mL vials	3	HCl	VOCs	1715
TT10IDI-GW-092116	1-L amber	2	none	1,4-Dioxane	1715
Dup02-GW-092116	40-mL vials	3	HCl	VOCs	1715
Dup02-GW-092116	1L-Amber	2	none	1,4-Dioxane	1715

Comments

Duplicate 02 was sampled @ TT10IDI

Signature _____ Date 9/21/16

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:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1650	–	15.51	4.21	0.079	0.60	152.9	0.92	800	38.18	Clear
1655	10Gal	15.48	4.29	0.079	0.61	150.0	–	750	38.18	
1700	–	15.53	4.35	0.079	0.60	147.4	0.86	750	38.19	clear
1705	15.5Ga	15.45	4.40	0.079	0.59	145.5	0.91	750	38.19	Clear
Sample time 1715								200		

Note:
The sample collected at TT101D2 (9/21/16) was lost by the currier. The well was resampled on 9/26/16.

Well ID: TT101D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/21/16 Time: Start 1660 am/pm
Project No: 60266526 Finish 1815 am/pm
Site Location: Walsworth
Weather Conds: 80° sunny Collector(s): Paul Kaveph

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

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
- Conductivity ± 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	14G103484
LaMotte	2020	26862

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1620								1600		ON
1625		15.71	0.053	2.20	~1.58	406.1		700		
1630		15.97	0.050	2.09	4.72	92.2	0.15	700	38.82	
1635	5gal	15.97	0.049	2.25	4.82	88.4		700		
1640		15.96	0.048	2.72	4.49	82.9			38.82	
1645		15.94	0.047	3.16	5.15	78.7				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

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

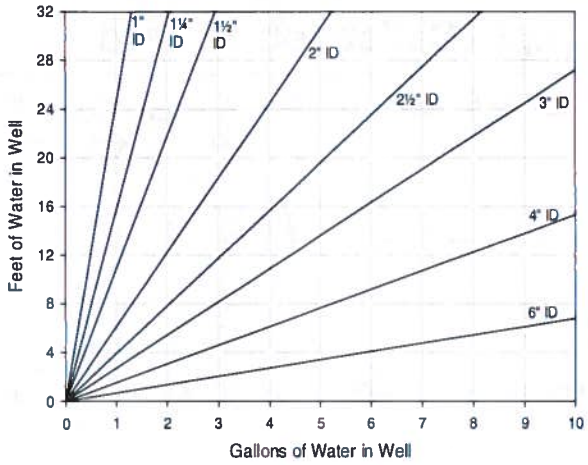
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D2-GW-092116	40-mL vials	3	HCl	VOCs	1730
"	1-L amber	2	none	1,4-Dioxane	

Comments MS, MSD

FB01-WQ-092116 @ 1800

Signature Paul Kaveph Date 9/21/16

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: TT10102

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1650		15.91	5.36	0.046	3.93	72.3	0.95	700	38.81	
1655		13.89	5.50	0.046	4.14	66.3				
1700	10gal	15.42	5.56	0.046	4.47	67.3				
1705		15.83	5.60	0.046	4.70	66.4	0.51	700	38.81	
1710		15.82	5.73	0.046	4.86	62.0			38.82	
1715	13gal	15.83	5.72	0.046	4.89	63.2				
1720		15.83	5.80	0.046	4.95	60.9	0.55	700	38.82	
		✓	✓	✓	—	✓	—			
1730								200		Sample
										Start sampling 1720
										end ~1800

RESOLUTION CONSULTANTS

Well ID: RE131D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 9/22/16
Time: Start 810 am/pm
Finish 1030 am/pm
Project No: 60266526
Site Location: Oriole Road
Weather Conds: Sunny 65-75°
Collector(s): T. B.

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

a. Total Well Length 45.5
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 40.00
d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	22091
	LaMotte	2020	73143

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0845		Start Pumping								
900	-	15.92	0.114	3.94	2.87	98.4	-	700	40.10	Clear
905	-	15.89	0.116	2.99	2.95	101.4	1.78	700	40.09	Clear
910	-	15.79	0.115	2.66	3.04	103.7	1.78	700	40.10	Clear
915	-	15.63	0.113	2.40	3.33	108.1	1.36	700	40.09	Clear
920	5 Gal	15.64	0.111	2.28	3.80	108.1	-	700	40.09	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

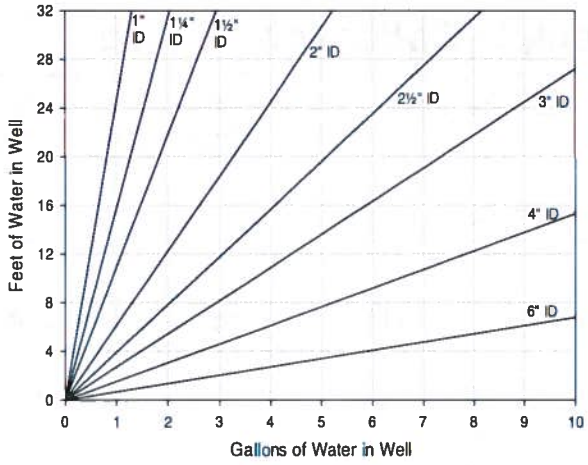
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE131D1-GW-092216	40-mL vials	3	HCl	VOCs	1015
RE131D1-GW-092216	1-L amber	2	none	1,4-Dioxane	1015
GEL	500ml amber	2	none		

Comments

Signature _____ Date 9-22-16

GEL

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
9:25	–	15.56	3.80	0.111	2.37	103.5	–	700	40.10	
9:30	–	15.52	3.81	0.111	2.29	101.6	–	700	–	
9:35	–	15.49	3.85	0.110	2.28	99.9	–	700	40.11	
9:40	–	15.46	3.88	0.110	2.22	98.4	0.89	700	40.12	Clear
9:45	10 Gal	15.50	4.01	0.110	2.18	98.6	–	700	40.11	Clear
9:50	–	15.59	~~4.00~~	0.110	2.06	98.6	–	700	40.12	Clear
9:55	–	15.52	4.15	0.109	2.18	99.3	0.95	700	40.12	
10:00	–	15.50	4.18	0.109	2.05	101.3	0.91	700	40.12	clear
10:05	Sample time									

RESOLUTION CONSULTANTS

Well ID: RE13102

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9 / 22 / 16 Time: Start 810 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Oriole Road
Weather Conds: Sunny 65-75° 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 40.68 d. Calculated System Volume (see back) 16.3 gal. 25 screen length (ft)

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
- Conductivity ± 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	14E 03481
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
840								600		
850		15.36	0.077	7.21	4.32	161.6				
855		15.34	0.076	6.00	4.23	160.1			39.22	
900		15.26	0.077	5.36	4.32	159.3	4.87		39.34	
905	5gal	15.27	0.077	5.26	4.37	158.9		650		
910		15.18	0.077	5.06	4.42	159.8				

(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.

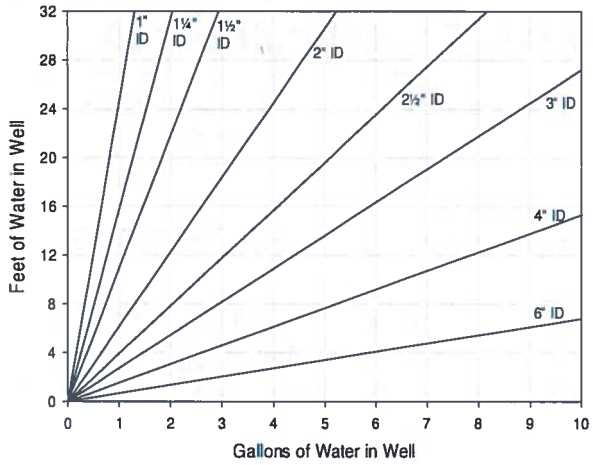
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13102-GW-092216	40-mL vials	3	HCl	VOCs	1020
	1-L amber	2	none	1,4-Dioxane	

Comments: Field Blank bailer from 9/21/16

Signature: Paul Kaucher Date: 9/22/16

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: RE131D2 @ 840

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
915		15.14	4.48	0.077	4.80	159.8	4.02	650	39.30	
920		15.12	4.51	0.077	4.72	159.3				
925		15.17	4.55	0.078	4.44	159.0				
930		15.07	4.58	0.078	4.30	158.4				
935	10gal	15.09	4.61	0.078	4.14	157.7	4.31	650	39.28	
940		15.04	4.64	0.079	3.92	156.6				
945		15.05	4.66	0.079	3.78	156.2				
950		15.05	4.67	0.079	3.60	155.5	3.18			
955		15.08	4.69	0.080	3.53	154.7		650	39.25	
1000	15gal	15.02	4.69	0.080	3.43	154.3				
1005		14.99	4.69	0.080	3.39	154.3	1.97			
1010	17gal	15.09	4.70	0.080	3.35	154.0			39.26	
1025								260		Sample
										1015 ~ 1030

RESOLUTION CONSULTANTS

Well ID: RE13103

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/22/16 | Time: Start 840 am/pm
Project No: 60266526 | Finish _____ am/pm
Site Location: Oriole Road
Weather Conds: Sunny 65°-75° | 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 41.15 | d. Calculated System Volume (see back) 13.1 gal. | 20 screen length (ft)

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% | - Turbidity ± 10% | - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit | - ORP ± 10mV | Remove a minimum 1 screen volume
- Conductivity ± 3% | - Drawdown < 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RFW 24697
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0840										Start pump
0850		16.31	0.044	9.36	3.02	339.5	11.18	450	41.20	Clear
0855		15.91	0.042	6.18	2.58	310	2.38	500		
0900		15.86	0.040	5.99	3.01	272.9		500		
0905		15.84	0.037	6.02	3.50	240.8	8.37		41.20	
0910		15.79	0.036	6.05	3.36	246.9				

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)

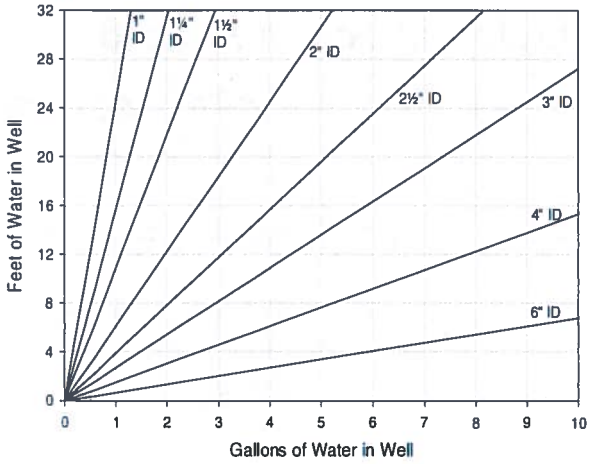
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13103-GW-092216	40-mL vials	3	HCl	VOCs	1035
RE13103-GW-092216	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature _____ Date 9/22/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0915		15.84	3.61	0.035	6.15	235.8		500	41.20	clear
0920	5G	15.72	3.47	0.035	6.29	245.2	1.14		41.20	
0925		15.80	3.77	0.035	6.16	231.8		500		
0930		15.60	3.79	0.035	6.15	233.6	0.52			
0935		15.68	3.98	0.035	6.11	224.4		500	41.20	
0940		15.69	4.05	0.035	6.22	222.7	0.65			
0945		15.72	4.13	0.035	6.12	219.7			41.20	
0950		15.94	4.43	0.035	6.09	209.9	0.56			
0955	10G	15.98	4.45	0.036	6.09	209.6		500	41.20	
1000		16.00	4.47	0.036	6.07	209.9				
1005		16.05	4.68	0.036	5.98	207.3	0.58		41.2	
1010		16.07	4.68	0.036	5.97	203.7	0.61		41.2	
1015		16.06	4.69	0.036	6.01	203.8		500	41.2	
1020		16.09	4.66	0.036	6.01	202.9	0.65		41.2	
1025		16.07	4.66	0.036	5.99	203.7	0.62		41.2	
	Sample at 1035							200		

RESOLUTION CONSULTANTS

Well ID: RE129 D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/ 22 /16 | Time: Start 1215 am/pm
Project No: 60266526 | Finish _____ am/pm
Site Location: Wpine birch Ln.
Weather Conds: 83°F Sunny, Wind ESE/2 mph | Collector(s): T. Bell

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

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

b. Water Table Depth 27.75 | d. Calculated System Volume (see back) _____ gal. _____ screen length (ft)

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
- Conductivity ± 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	08K101396
	Flowcell		600336-4N

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1300	–	17.16	0.037	2.24	3.73	193.1	–	675	27.62	clear
1305	-	17.13	0.036	1.54	3.96	176.3	27.6	675	27.58	clear
1310	-	17.13	0.036	1.42	4.03	172.1	–	675	27.57	clear
1315	-	16.99	0.031	1.00	4.19	161.7	12.9	675	27.53	clear
1320	5 Gal	–	–	–	–	–	–	675	–	
1325		16.85	0.031	0.66	4.20	165.4	–	675	27.43	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)

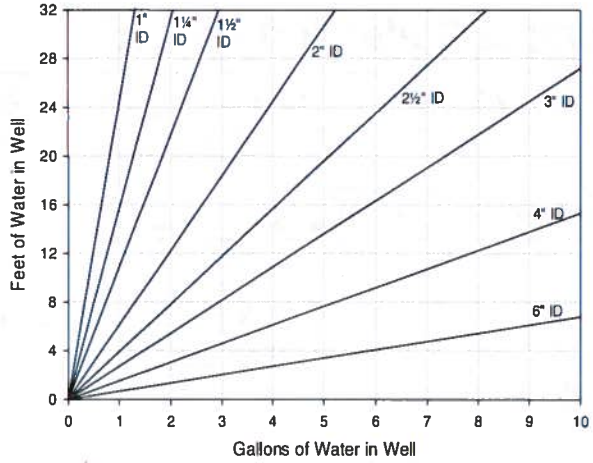
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE129D1-GW-092216	40-mL vials	3	HCl	VOCs	1430
RE129D1-GW-092216	1-L amber	2	none	1,4-Dioxane	1430

Comments

Signature _____ Date 9-22-16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1330	–	16.74	3.83	0.031	0.60	185.3	10.63	675	27.40	
1335	–	16.75	4.12	0.030	0.57	178.6	–	675	27.39	
1340	–	16.72	4.20	0.030	0.55	172.3	10.63	675	27.37	
1345	–	16.69	4.36	0.030	0.52	166.1	–	700	27.34	
1350	–	16.75	4.27	0.030	0.50	171.4	6.29	700	27.31	
1355	10Gal	16.67	4.12	0.030	0.46	184.7	–	700	27.29	
1400	–	16.50	4.08	0.030	0.47	193.0	–	700	27.27	
1405	–	16.50	4.13	0.030	0.47	190.4	5.84	700	27.24	
1410	13.2 Gal	16.52	4.17	0.030	0.45	182.6	5.16	700	27.22	Clear
Sample time				1430				200		

RESOLUTION CONSULTANTS

Well ID: RE12902

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/22/16 | Time: Start 1230 am/pm
Project No: 60266526 | Finish _____ am/pm
Site Location: White Birch Lane
Weather Conds: Sunny 80° | Collector(s): Paul Kareth

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

a. Total Well Length 830 | c. Length of Water Column _____ (a-b) | Casing Diameter/Material 4-inch PVC

b. Water Table Depth 27.69 | d. Calculated System Volume (see back) _____ gal. _____ screen length (ft)

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
- Conductivity ± 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	14G 103484
	~~Horiba~~		
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1245								600		clear ✓
1300		16.68	0.044	1.38	4.30	107.9				
1305		16.60	0.041	1.19	4.04	128.5			27.55	↓
1310		16.60	0.040	1.08	4.07	129.5	17.2			
1315		16.51	0.038	1.03	4.12	126.5				
1320	5 gal	16.38	0.037	0.86	4.26	116.8	18.3	600	27.58	

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)

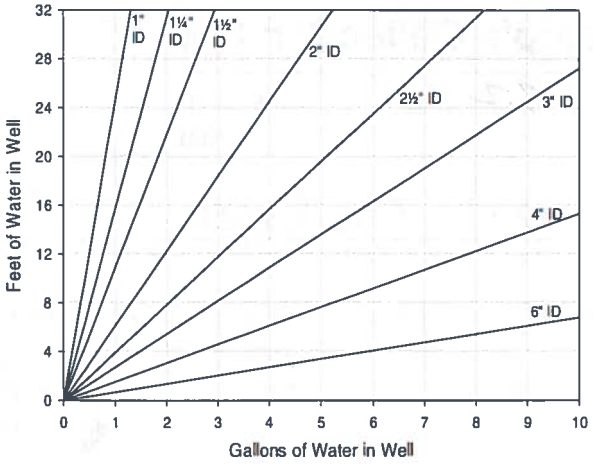
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12902-GW-092216	40-mL vials	3	HCl	VOCs	1410
RE12902-GW-092216	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kareth Date 9/22/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1325		16.45	4.35	0.037	0.79	112.0				
1330		16.21	4.47	0.036	0.72	104.8		600	27.54	
1335		16.20	4.51	0.036	0.70	103.9				
1340	10 gal	16.19	4.53	0.036	0.68	100.9			27.56	
1345		16.22	4.45	0.036	0.66	105.3	11.8		27.50.	
1350		16.24	4.47	0036	0.66	104.0		600		
1355		16.22	4.51	0.036	0.64	102.1	10.3			
1400		16.23	4.54	0.036	0.63	101.3			27.50	
1405	13 G	16.20	4.50	0.036	0.64	102.7	11.1		27.5	Slowed to 200ml/m for Sampling
	Sample	at	1410					200		

RESOLUTION CONSULTANTS

Well ID: RE126D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/23/16 Time: Start 810 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Lynn & S. Nassau
Weather Conds: 60° mostly sunny Collector(s): Paul Kaeth

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

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
- Conductivity ± 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	14G103483
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
835								600		OH
840		15.39	0.096	9.72	5.49	81.0			49.65	
845		15.21	0.093	8.47	6.09	29.1	4.45	650		
850		15.22	0.093	8.17	6.00	21.1				
855		15.23	0.093	8.14	5.95	18.9			49.63	
900		15.16	0.093	8.07	4.97	65.9				

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)

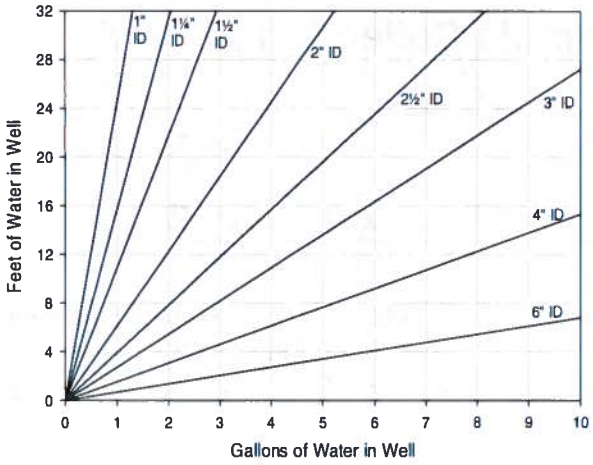
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D1-GW-092316	40-mL vials	3	HCl	VOCs	950
"	1-L amber	2	none	1,4-Dioxane	950

Comments

Signature Paul Kaeth Date 9/23/16

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: RE126D1 2835

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
905	5gal	15.17	4.95	0.093	7.99	63.3		650	49.64	
910		15.21	4.93	0.092	7.87	60.7	2.96			
915		15.16	4.93	0.092	7.76	57.8			49.63	
920		15.18	4.97	0.093	7.67	54.3		650		
925		15.26	5.00	0.093	7.45	51.2	1.25			
930	10gal	15.16	5.01	0.092	7.44	50.1				
935		15.27	5.02	0.093	7.34	49.3			49.58	
940		15.29	5.03	0.093	7.26	48.3	1.16	650		
945	13gal	15.19	5.04	0.093	7.15	47.6				
950								150		Sample
										950–1010

Well ID: RE126D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9 / 23 / 16 Time: Start 810 am/pm
Project No: 60266526 Finish · am/pm
Site Location: Lynn & S. Nassau
Weather Conds: 60°, mostly sunny 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 50.35 d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	08K101396
Leaks Air →	QED	[redacted] MP10	U56543X
	Flowcell		60336-4M-12M01
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
820	–	21.06	0.151	7.59	7.72	1421.3	–	400	51.38	clear
825	–	16.43	0.109	2.[illegible]	3.79	211.4	–	400	51.38	clear
830	–	16.41	0.107	2.44	3.84	197.1	1.02	400	–	–
0835	–	16.27	0.106	2.23	4.20	161.7	–	400	51.39	clear
0840	–	16.38	0.106	2.30	4.77	129.2	–	400	–	
0845	–	16.08	0.105	1.87	4.75	128.6	–	600	51.38	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

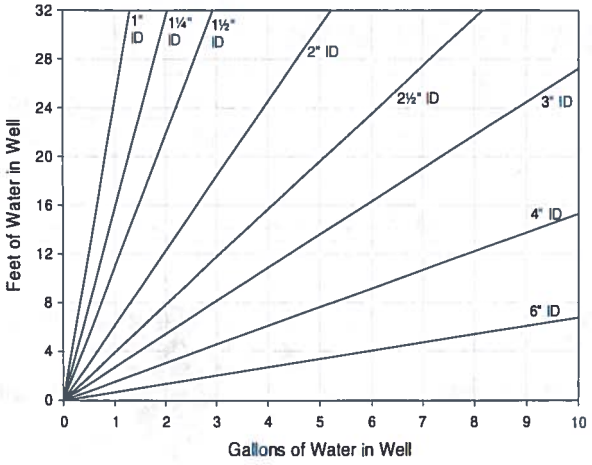
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D2-GW-092316	40-mL vials	3	HCl	VOCs	1015
RE126D2-GW-092316	1-L amber	2	none	1,4-Dioxane	1015

Comments

Signature [signature] Date 09-23-2016

LowFlow-GWa - Sept 2016.xlsx

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0850	–	16.00	4.64	0.106	2.17	132.9	0.95	600	51.38	clear
0855	5Gal	16.05	5.13	0.108	1.48	100.7	–	600	51.37	clear
0900	–	16.04	5.09	0.105	1.48	103.6	–	600	51.36	clear
~~0905~~	–	16.09	5.39	0.105	1.56	91.41	–	600	–	clear
0910	–	16.10	5.33	0.106	1.55	92.9	–	600	51.37	clear
0915	–	16.13	5.36	0.107	1.62	92.4	–	600	51.37	clear
0920	10Gal	16.14	5.44	0.105	1.74	92.2	0.86	600	51.37	clear
0925	–	16.07	5.41	0.106	1.78	94.4	0.90	600	51.38	clear
0930	–	16.14	5.44	0.106	1.87	95.1	0.91	600	51.37	clear
0935	–	16.16	5.43	0.104	1.90	98.2	0.86	600	51.35	clear
0940	–	16.11	5.43	0.103	1.94	100.3	0.84	600	51.34	clear
0945	13.5Gal	16.24	5.47	0.105	1.97	101.7	0.88	600	51.35	clear
/										
~~1015~~	Sampling time.							200		

LowFlow-GWa - Sept 2016.xlsx

RESOLUTION CONSULTANTS

Well ID: RE126D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Date: 9/23/16
Time: Start 810 am/pm
Project No: 60266526
Finish _____ am/pm
Site Location: Lynn & S. Nassau
Weather Conds: 60° mostly sunny
Collector(s): SG

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

a. Total Well Length 66.5
c. Length of Water Column _____ (a-b)
Casing Diameter/Material 4-inch PVC
b. Water Table Depth 50.03
d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	22091
	LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
856								600	ON	clear
0840		16.01	0.047	5.73	2.01	64.7			49.45	
0845		15.99	0.047	5.52	2.20	66.2	4.48	600	49.35	
0850		16.13	0.044	6.39	3.04	53.4	10.07			
0900	5G	16.60	0.043	6.55	4.03	48.8		60550	49.29	
0905		16.72	0.042	6.72	4.33	53.0	5.51			

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)

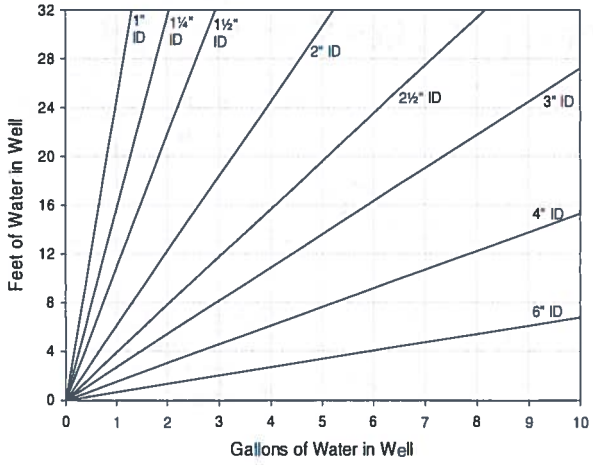
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D3-GW-092316	40-mL vials	3	HCl	VOCs	1000
RE126D3-GW-092316	1-L amber	2	none	1,4-Dioxane	

Comments

Signature [signature] Date 9/23/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0910		16.82	4.40	0.041	6.59	44.5	2.50	600	42.29	clear
0915		16.79	4.43	0.041	6.50	41.3				
0920		17.05	4.51	0.041	6.10	32.4	1.75		42.29	
0925		17.07	4.53	0.040	6.07	32.2		600		
0930	10 G	17.18	4.64	0.040	5.97	26.2	1.85		42.29	
0935		17.14	4.67	0.039	6.48	35.3	2.02	600		
0940		17.18	4.72	0.039	5.83	43.4			42.29	
0945		17.27	4.74	0.039	5.75	45.3	1.95			
0950		17.28	4.75	0.039	5.71	47.5		600		
0955		17.25	4.72	0.039	5.77	45.8	1.73		42.29	
	Sampled at 1000									

RESOLUTION CONSULTANTS

Well ID: R-12701

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/23/16 | Time: Start 1120 am/pm | Finish _____ am/pm
Project No: 60266526
Site Location: Woodward & Michigan
Weather Conds: 80° sunny | Collector(s): _____

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

a. Total Well Length 69.8ft | c. Length of Water Column _____ (a-b) | Casing Diameter/Material 4-inch PVC
b. Water Table Depth 29.92 | d. Calculated System Volume (see back) 13.1 gal. | 20 screen length (ft)

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% | - Turbidity ± 10% | - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit | - ORP ± 10mV | Remove a minimum 1 screen volume
- Conductivity ± 3% | - Drawdown < 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	22091
	LaMotte	2020	73189

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1200										OH
1205		17.96	0.031	4.27	3.98	33.9		600		cloudy
1210		17.61	0.031	1.72	2.05	58.7				
1215		17.77	0.030	1.25	2.81	54.3			28.58	
1220		18.09	0.029	0.98	4.34	41.3		600		
1225	5gal	18.32	0.028	0.77	4.53	40.5	38.9			

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)

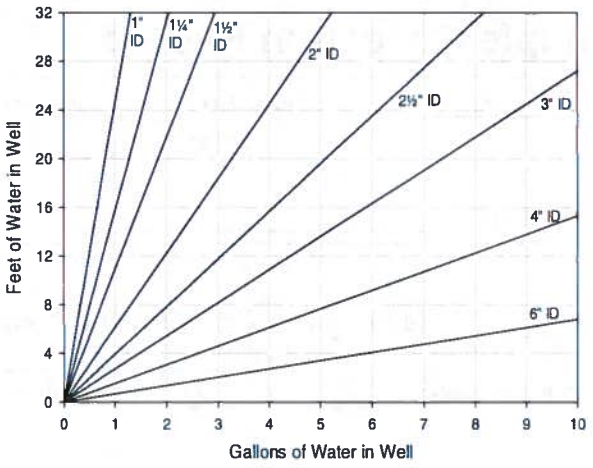
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	40-mL vials	3	HCl	VOCs	1325
	1-L amber	2	none	1,4-Dioxane	1325

Comments: hit bottom while installing new tubing

Signature: Paul Kanefsky | Date: 9/23/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1230	~~5gal~~	17.84	4.68	0.027	0.43	36.		600	28.72	Cloudy
1235		17.91	4.68	0.026	0.42	33.6				
1240		17.95	4.70	0.027	0.42	32.1	34.4		28.72	
1245		17.84	4.71	0.026	0.40	26.0				
1250		17.71	4.64	0.026	~~0.35~~	18.6				
1255	10gal	17.33	4.55	0.026	~~0.026~~ 0.35	14.1	38.6			
1300		17.69	4.79	0.026	~~0.356~~	10.0	36.4			
1305		17.68	4.77	0.026	0.31	8.7	38.8	600		
1310		17.52	4.76	0.026	0.30	7.9	40.1		28.68	
1315	13gal	17.58	4.80	0.026	0.31	7.4	41.0			
1325								200		Sample

RESOLUTION CONSULTANTS

Well ID: RE12702

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/23/16 Time: Start 1120 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: N. Woodward Rd, RE127D2
Weather Conds: Sunny 80° Collector(s): F. Dell

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

a. Total Well Length 79.3 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC
b. Water Table Depth 29.55 d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% - Turbidity ± 10% - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit - ORP ± 10mV Remove a minimum 1 screen volume
- Conductivity ± 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RFW24697
	CaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1205								600	29.54	ON
1210		18.69	0.028	7.66	5.71	79.4				
1215		12.73	0.024	10.06	3.09	200.9				
1220		17.86	0.024	10.05	3.43	197.5		600	29.52	
1225		18.17	0.023	8.72	3.55	199.2				
1230	Bladder fell off the pump - replaced it									

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)

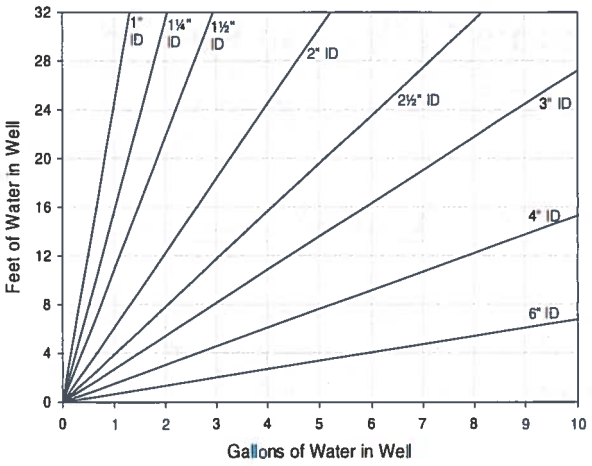
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12702-GW-092316	40-mL vials	3	HCl	VOCs	1535
RE12702-GW-092316	1-L amber	2	none	1,4-Dioxane	1535

Comments: hit bottom while installing new tubing

Signature _____ Date 9-25-16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1240	—	—	—	—	—	—	—	—	—	—
1245	5 Gal	17.81	4.72	0.021	3.76	158.9	~~17.7~~	700	09.47	C
1250	—	17.32	2.70	0.021	3.52	261.9	—	700	29.48	
1255	—	17.47	2.95	0.021	3.45	248.4	—	700	29.48	
1300	—	17.37	3.70	0.021	3.38	215.6	—	700	29.49	
1305	10 Gal	17.07	3.40	0.021	3.74	218.7	17.9	700	29.46	
1310	—	17.20	3.66	0.021	3.47	224.1	—	700	29.47	
1315	—	16.99	4.03	0.020	3.45	208.1	17.6	~~500~~	29.46	
1320	—	16.87	4.02	0.020	3.52	214.7	17.4	500	29.46	
1325	13.5	16.68	4.00	0.020	3.54	220.7	17.2	500	29.47	
Sampling time				1335				200		

Well ID: RE108D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/26/16 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Lincoln Corona
Weather Conds: sunny 55° Collector(s): SC

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

a. Total Well Length 55.5 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 44.98 d. Calculated System Volume (see back) _____ gal. _____ screen length (ft)

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
- Conductivity ± 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	14G103484
	Cardone	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0825								450		start pump
0830		16.21	0.095	14.40	6.42	152.6			43.78	clear
0835		15.62	0.090	8.89	4.72	161.1	10.29	500		"
0840		15.59	0.090	7.24	4.56	159.1		500	43.72	"
0845		15.57	0.090	7.05	4.47	157.2	9.51			
0850		15.50	0.089	7.61	4.40	158.4		550	43.72	

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)

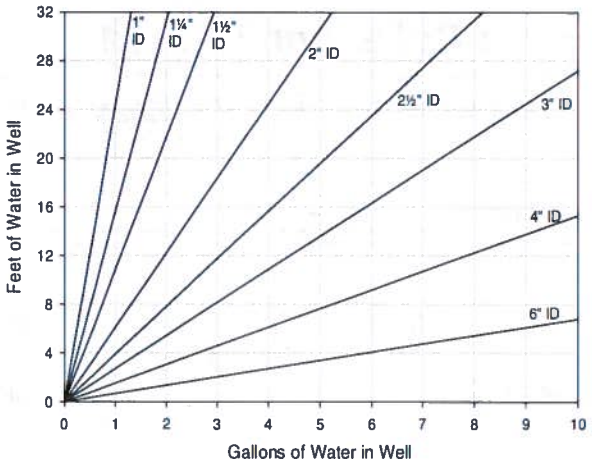
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108D1-GW092616	40-mL vials	3	HCl	VOCs	955
RE108D1-GW-092616	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Gaby Castro Date 9/26/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0855		15.38	4.40	0.089	7.56	160.8	1.45	550		Clear
0900	5G	15.37	4.41	0.089	7.57	161.6		550	43.72	"
0905		15.38	4.43	0.089	7.56	162	1.55			"
0910		15.38	4.43	0.089	7.47	161.9		550		"
0915		15.38	4.45	0.089	7.46	161.9	0.21		43.72	"
0920		15.36	4.46	0.089	7.47	161.9		550		
0925	10G	15.32	4.52	0.089	7.52	160.6	0.25		43.72	
0930		15.33	4.53	0.089	7.55	160.8		550		
0935		15.35	4.55	0.089	7.46	160.7			43.72	
0940		15.35	4.55	0.089	7.45	160.7	0.35	550		
0945		15.34	4.51	0.089	7.42	160.1	0.41	550	43.72	
0950										
		Sample	at	0955				200		

Well ID: RE108D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/26/16 Time: Start 0800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Riverside Corona
Weather Conds: Sunny 55° Collector(s): Paul Kaeth

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

a. Total Well Length 65 c. Length of Water Column _____ (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 45.95 d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

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
- Conductivity ± 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	Z2091
	LaMotte	2026	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
815								650		OX
825		15.54	0.080	6.08	5.29	66.2			45.44	
830		15.57	0.080	4.17	2.89	46.3		650		
835		15.49	0.078	5.49	3.50	46.7	9.30		45.40	
840		15.47	0.077	5.91	3.84	49.3				
845	5gal	15.46	0.076	5.96	3.93	49.3				

(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.

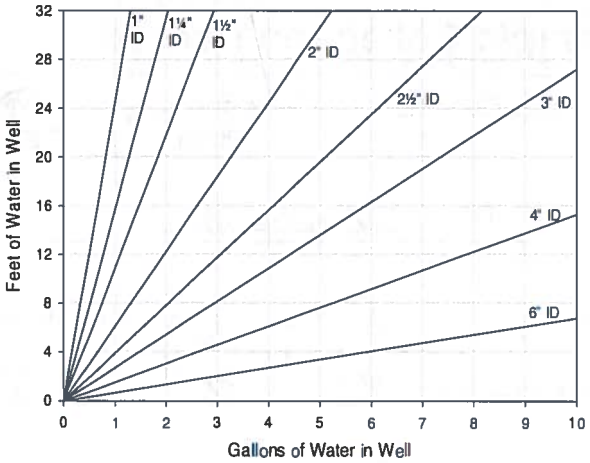
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108D2-GW-092616	40-mL vials	3	HCl	VOCs	940
RE108D2-GW-092616	1-L amber	2	none	1,4-Dioxane	940

Comments

Signature Paul Kaeth Date 9/26/16

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: RE106D2 @8:15

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
850		15.55	4.03	0.076	6.15	50.2			45.40	
855		15.50	4.11	0.075	5.97	46.1		650		
900		15.54	4.11	0.075	6.02	47.1				
905		15.64	4.21	0.074	6.20	45.4	3.65		45.39	
910		15.75	4.29	0.073	6.24	44.8				
915	10gal	15.63	4.30	0.074	6.25	42.2				
920		15.78	4.32	0.073	6.27	34.5				
925	12gal	15.81	4.38	0.073	6.21	42.4	2.88	650	45.34	
930		15.75	4.42	0.073	6.15	43.9				
935	13gal	15.78	4.44	0.073	6.17	42.1				
940								200		Sample
										940. 955

RESOLUTION CONSULTANTS

Well ID: RC10501

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/26/16 Time: Start 1145 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Lincoln
Weather Conds: 70° sunny Collector(s): _____

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

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

b. Water Table Depth 42.29 d. Calculated System Volume (see back) _____ gal. _____ screen length (ft)

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
- Conductivity ± 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	02091
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1145										OH
1150		15.71	0.099	7.38	5.05	22.6		500	42.25	
1155		15.59	0.098	7.95	4.03	28.0	2.64		42.15	clear
1200		15.79	0.096	5.46	4.55	24.7		500		"
1210		15.85	0.096	3.82	4.62	23.9	3.18		42.15	"
1215		15.86	0.095	3.52	4.69	23.2	1.89			

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)

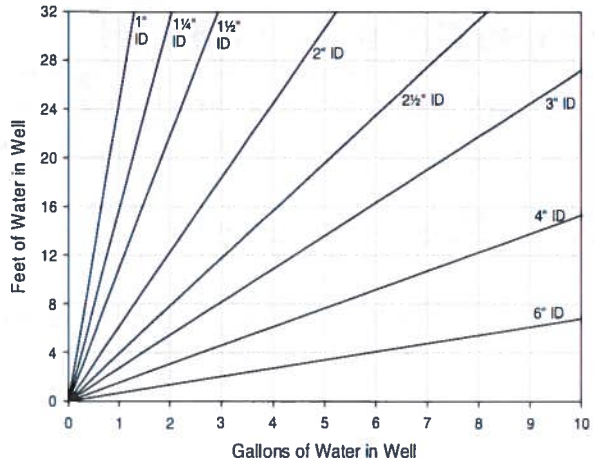
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RC-10501-GW-092616	40-mL vials	3	HCl	VOCs	1310
"	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature _____ Date 9/26/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1220	5G	15.55	4.67	0.095	3.44	22.5		500	42.15	clear ✓
1225		15.40	4.67	0.094	3.60	21.4	1.56			
1230		15.70	4.75	0.094	3.58	19.8		500	42.15	
1235		15.49	4.75	0.095	3.52	21.1	1.36			
1240	.	15.69	4.79	0.095	3.55	22.7		500	42.15	
1245	10G	15.71	4.78	0.095	3.49	23.1	1.41	500		
1250		15.70	4.79	0.095	3.55	23.8				
1255		15.65	4.78	0.094	3.59	24.1	1.38	500	42.15	
1300		15.68	4.78	0.094	3.51	24.3	1.47	500	42.15	
1305		15.61	4.78	0.094	3.55	24.5	1.55	500	42.15	
	Sample	time	at	1310				200		

RESOLUTION CONSULTANTS

Well ID: RE10502

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Lincoln
Weather Conds: 70° sunny

Date: 9 / 26 / 16
Time: Start 1115 am/pm
Finish 1330 am/pm
Collector(s): Paul Kaweth

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

a. Total Well Length 75.5
b. Water Table Depth 43.32
c. Length of Water Column _____ (a-b)
d. Calculated System Volume (see back) 13.1 gal.
Casing Diameter/Material 4-inch PVC
20 screen length (ft)

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
- Conductivity ± 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	14610348H
LaMotte	2020	73189

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1140								350		OH
1150		15.84	0.070	4.09	4.81	131.3		650	43.34	
1155		15.71	0.070	4.33	4.77	135.2				
1200		15.45	0.068	3.31	4.80	142.2			43.32	
1205		15.49	0.064	2.55	4.90	150.5				
1210		15.50	0.069	4.18	4.68	149.8	0.47	650		

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)

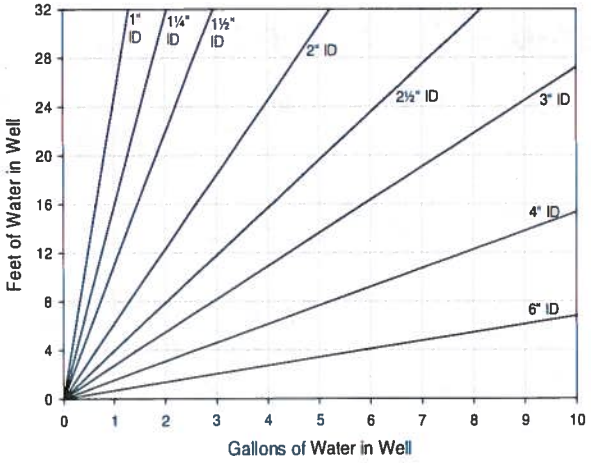
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10502-GW-092616	40-mL vials	3	HCl	VOCs	1300
	1-L amber	2	none	1,4-Dioxane	1300

Comments

Signature Paul Kaweth Date 9/26/16

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: RE10502 1140

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1215	5gal	15.52	4.67	0.070	4.41	150.5	0.35	~~700~~	43.32	
1220		15.33	4.65	0.069	4.64	153.4				
1225		15.31	4.54	0.068	4.59	157.0			~~43~~.30	
1230		15.39	4.54	0.068	4.63	161.0		700		
1235		15.46	4.51	0.068	4.54	163.8	0.43			
1240	10gal	15.36	4.50	0.068	4.55	164.8			43.25	
1245		15.42	4.57	0.068	4.48	163.2		700		
1250		15.35	4.59	0.067	4.45	161.9				
1255	13gal	15.35	4.62	0.067	4.40	162.4	0.23		43.22	
1300								200		Sample
										1300 - 1315

RESOLUTION CONSULTANTS

Well ID: TT101D

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/26/16 | Time: Start 1415 am/pm | Finish ____ am/pm
Project No: 60266526
Site Location: Wadsworth
Weather Conds: sunny 70° | Collector(s): Suby Chatterjee

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

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% | - Turbidity ± 10% | - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit | - ORP ± 10mV | Remove a minimum 1 screen volume
- Conductivity ± 3% | - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	14G103484
LaMotte	2020	73193

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1420									Start	pump
1430		16.30	0.097	1.41	4.38	157.8		550	36.87	clear ✓
1435		16.20	0.097	1.23	4.37	160	0.48			"
1440		16.07	0.096	0.92	4.35	168.1		550	36.89	"
1445		16.01	0.093	0.71	4.40	177.8	0.75			
1450		15.97	0.092	0.62	4.42	182.6	0.51			

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)

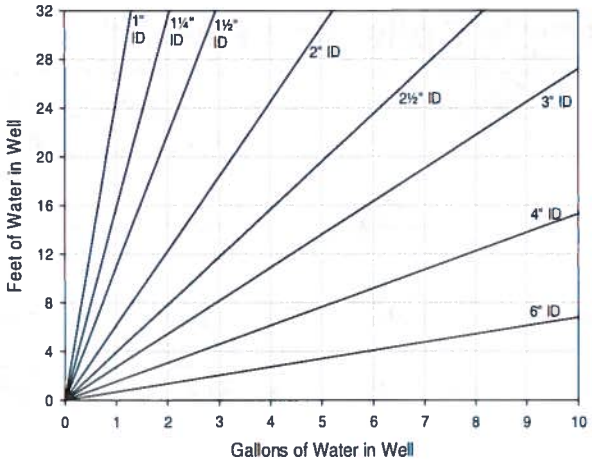
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D-GW-092616	40-mL vials	3	HCl	VOCs	1550
	1-L amber	2	none	1,4-Dioxane	

Comments: resampled - Fedex lost the cooler with the original samples

Signature: Suby Chatterjee | Date: 9/26/16

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	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1455	5G	15.98	4.44	0.092	0.57	186.4		550	36.89	Clear
1500		15.99	4.44	0.091	0.53	192.8	0.58		36.89	
1505		15.88	4.43	0.092	0.48	204		550		
1510	10G	15.90	4.42	0.092	0.46	209	0.75		36.89	
1515		15.85	4.43	0.092	0.44	215.3				
1520		15.87	4.42	0.092	0.44	217.2	0.85	550	36.89	
1525		15.83	4.42	0.092	0.44	218.1	0.89	550	36.89	
1530		15.83	4.42	0.092	0.44	218.7				
1535		15.82	4.43	0.092	0.46	218.3	0.90	550	36.89	
1540		15.83	4.42	0.092	0.46	218.5				
1545		15.82	4.42	0.091	0.46	218.1	0.87	550	36.89	
~~1550~~		Sample	taken	at	1550			200		

RESOLUTION CONSULTANTS

Well ID: TT101D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/26/16 Time: Start 1415 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Wadsworth
Weather Conds: sunny 70° Collector(s): Paul Karuth

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 39.40 d. Calculated System Volume (see back) _____ gal. _____ screen length (ft)

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	22091
	LaMotte	2020	73139

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1430								1008		
1435		15.96	0.039	4.51	4.41	6.3		700		
1440		15.85	0.039	3.76	4.04	20.8			39.43	
1445		15.87	0.039	3.70	4.36	15.5	0.69			
1450	5gal	15.82	0.039	3.99	4.50	17.9			39.44	
1455		15.80	0.039	4.33	4.47	20.8		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)

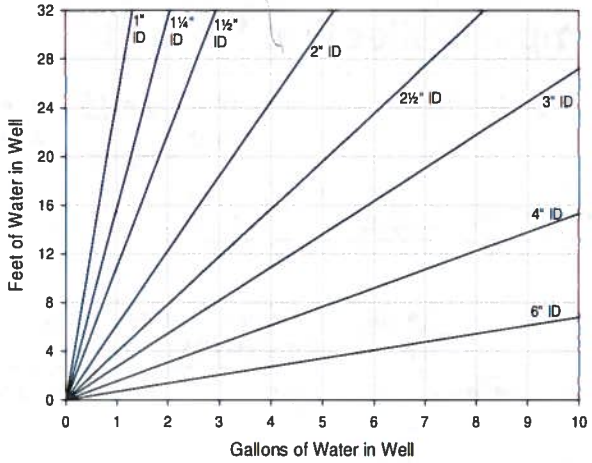
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D2-GW-092616	40-mL vials	~~3~~ 4	HCl	VOCs	1540
	1-L amber	~~2~~ 6	none	1,4-Dioxane	1540

Comments: MS/MSD, resampled-Fedex lost the cooler with the original samples

Signature Paul Karuth Date 9/26/16

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: TT10102-GW-092616

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Conduct. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1500		15.81	4.52	0.039	5.50	28.3	0.59	700	39.43	
1505		15.78	4.61	0.039	5.56	30.5				
1510		15.76	4.57	0.039	5.73	35.5				
1515	10gal	15.75	4.57	0.039	5.79	35.8	0.87		39.41	
1520		15.76	4.51	0.039	6.07	36.1				
1525		15.72	4.56	0.038	6.29	35.8				
1530	13gal	15.71	4.56	0.038	6.32	37.6		700	39.42	
1540								180		Sample
										1535 - 1615
										~~1530~~

Well ID: RE130P1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: NWIRP Bethpage | Date: 10·18·16 | Time: Start 1330 am/pm | Finish 1615 am/pm
Project No: 60266526
Site Location: Red Maple N
Weather Conds: sunny 80° | Collector(s): Paul Kaveth

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

a. Total Well Length 580 ft | c. Length of Water Column _____ ft (a-b) | Casing Diameter/Material 4-inch PVC
b. Water Table Depth 26.89 ft | d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% | - Turbidity ± 10% | - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit | - ORP ± 10mV | Remove a minimum 1 screen volume
- Conductivity ± 3% | - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15A28
LaMotte	2020	82080

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1405										ON
1420		17.57	0.114	3.75	5.05	100.9		600		
1425		17.35	0.117	2.65	5.10	103.4			26.89	
1430		17.32	0.127	2.45	5.35	94.2				
1435		17.31	0.125	2.24	5.23	97.9				
1440	5 gal	17.24	0.124	2.04	5.22	94.2	18.2			

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)

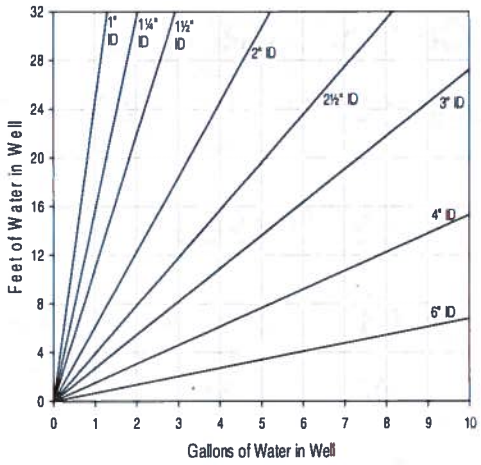
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE130D1-GW-101816	40-mL vials	3	HCl	VOCs	1530
	1-L amber	2	none	1,4-Dioxane	

Comments: bit bottom with tubing

Signature: Paul Kaveth | Date: 10/18/16

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: RE130 D1 14:15

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1445		17.05	0.123	1.84	5.14	98.2	11.0	650	26.88	
1450		17.11	0.123	1.77	5.19	98.6	14.36			
1455		17.09	0.122	1.82	5.22	99.4	10.70			
1500		17.09	0.123	1.79	5.22	96.6	19.0			
1505	10gal	16.98	0.122	1.62	5.23	93.0	12.27	650	26.89	
1510		16.77	0.122	1.70	5.24	84.5	20.6			
1515		16.83	0.122	1.60	5.28	81.9	11.64			
1520	13gal	16.84	0.122	1.56	5.29	80.8	11.00		26.84	
1525		16.76	0.121	1.53	5.29	81.7	11.79			
1530	15gal	16.77	0.121	1.53	5.28	82.7	10.94			
1530								200		Sample.
										1530-1545 purge

RESOLUTION CONSULTANTS

Well ID: RE130D2

Low Flow Ground Water Sample Collection Record

Client: NWIRP Bethpage | Date: 10-18-16 | Time: Start 1400 am/pm | Finish 1615 am/pm
Project No: 60266526
Site Location: Red Maple N
Weather Conds: Sunny 80° | Collector(s): Paul Kravetz

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

a. Total Well Length 66.5 ft | c. Length of Water Column _____ ft (a-b) | Casing Diameter/Material 4-inch PVC
b. Water Table Depth 26.45 ft | d. Calculated System Volume (see back) 13.1 gal. | 20 screen length (ft)

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% | - Turbidity ± 10% | - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit | - ORP ± 10mV | Remove a minimum 1 screen volume
- Conductivity ± 3% | - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	74830
LaMotte	2020	82040

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1405		17.86	0.074		1.64	59.6				start pump, clear No odor
1425		17.68	0.075	3.17	1.68	38.8		500		
1430		17.81	0.083	2.23	2.13	10.5			26.10	
1435		17.60	0.080	1.89	2.09	10.9	56	500		
	56									
1440		17.41	0.073	1.32	1.96	20.1	48	500	26.15	

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)

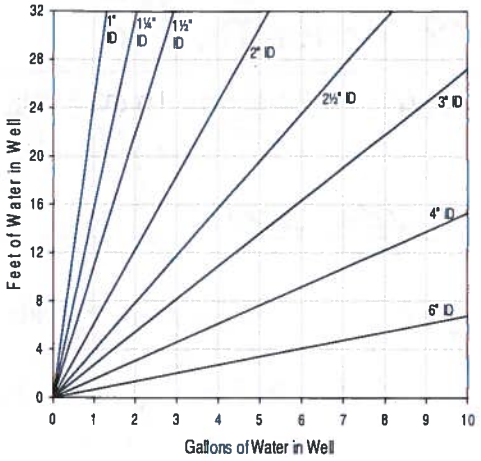
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE130D2-GW-101816	40-mL vials	3	HCl	VOCs	1535
RE130D2-GW-101816	1-L amber	2	none	1,4-Dioxane	
DUP1-GW-101816					1545

Comments

Signature [signature] Date 10/18/16

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 (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1445		17.47	0.073	1.26	1.99	16.0	49	500	26.15	Slight cloudy
1450		17.52	0.073	1.19	2.20	3.4		500	26.15	no odor
1455		17.51	0.073	1.17	2.23	0.7	38			
1500		17.36	0.073	1.10	2.29	-3.6	28.3	500	26.15	
1505	10G	17.20	0.072	1.09	2.36	-9.6				
1510		17.15	0.072	1.03	2.38	-11.9	34.3	500	26.15	
1515		17.25	0.072	1.05	2.45	-13.5	30.5			
1520		17.23	0.072	1.03	2.49	-10.8	35.3	500	26.15	
1525		17.18	0.072	1.05	2.47	-12.5	37.2			
1530		17.22	0.072	1.01	2.45	-11.9	33.1	500	26.15	
	Sample at 1535									
	Dup at 1545									

RESOLUTION CONSULTANTS

Well ID: RE 1241

Low Flow Ground Water Sample Collection Record

Client: NWIRP Bethpage | Date: 10/18/16 | Time: Start 0920 am/pm | Finish 1132 am/pm
Project No: 60266526
Site Location: Forge
Weather Conds: Sunny 70° | Collector(s): Saby Chatterjee

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

a. Total Well Length 68.5 ft | c. Length of Water Column _____ ft (a-b) | Casing Diameter/Material 4-inch PVC

b. Water Table Depth 37.45 ft | d. Calculated System Volume (see back) 17.1 gal. | 20 screen length (ft)

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
- Conductivity ± 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	74830
LaMotte	2020	82080

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
0920										Start
0925		17.84	0.063	4.71	4.40	66	~~38.1~~ 38.8	550	36.55	cloudy
0930		17.51	0.060	5.65	4.45	169	58.4			no odor
0935		17.41	0.059	4.78	2.72	71.6	~~38.5~~	550	36.75	
0940		17.34	0.058	4.44	2.22	91.3				
0945		17.33	0.058	4.47	2.19	94.1	55.4	550	36.75	

(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.

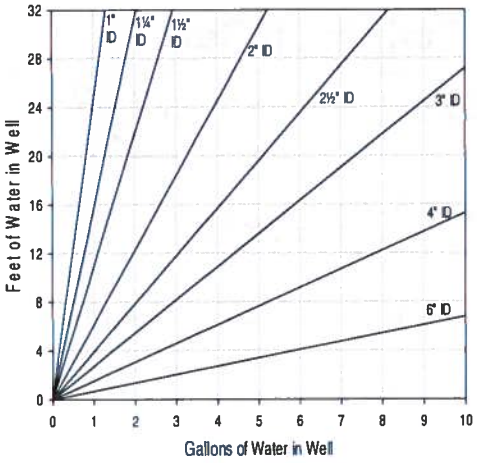
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE1241D1-GW101816	40-mL vials	3	HCl	VOCs	1050
RE1241D1-GW-101816	1-L amber	2	none	1,4-Dioxane	

Comments: bit bottom, turbid, 45ft of drop tube is ½ inch ID poly - NEED TO REPLACE

Signature: Saby Chatterjee | Date: 10/18/16

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 (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
0950		17.28	0.058	4.56	2.09	93.1	55.7	550		Cloudy
0955		17.38	0.059	4.49	2.05	90.7				no odor
1000	5G	17.44	0.059	4.53	2.08	83.3		550	36.75	
1005		17.39	0.058	4.13	2.19	65.4	66.4			
1010		17.45	0.058	4.04	2.26	56.2	[illegible]		36.75	
1015		17.49	0.058	3.80	2.44	57.5	69.5	550		
1020		17.47	0.058	3.78	2.58	79.7		550	36.75	
1025	10G	17.37	0.058	3.44	2.84	82.4	59.5		36.75	
1030		17.39	0.058	3.49	2.99	85.3		550		
1035		17.43	0.059	3.51	2.98	80.3	64.1	550	36.75	
1040		17.41	0.058	3.54	3.01	84.1	58.4	550	36.75	
1045										
Sample time 1050								200		

RESOLUTION CONSULTANTS

Well ID: RE12402

Low Flow Ground Water Sample Collection Record

Client: NWIRP Bethpage | Date: 10-18-16 | Time: Start 820 am/pm | Finish 1130 am/pm
Project No: 60266526
Site Location: Forge
Weather Conds: Sunny 70° | Collector(s): Paul Kaveski

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

a. Total Well Length 7.55 ft | c. Length of Water Column _____ ft (a-b) | Casing Diameter/Material 4-inch PVC

b. Water Table Depth 37.30 ft | d. Calculated System Volume (see back) 13.1 gal. | 20 screen length (ft)

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
- Conductivity ± 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	15A28
LaMotte	2020	82080

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
850										ON
855		15.88	0.041	7.98	4.62	163.8				
0900		15.82	0.042	7.57	4.84	150.3	58.3			
915	5gal									
928		15.73	0.055	6.16	5.53	121.1	51	600	37.50	
930		15.74	0.046	5.88	5.62	119.3				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

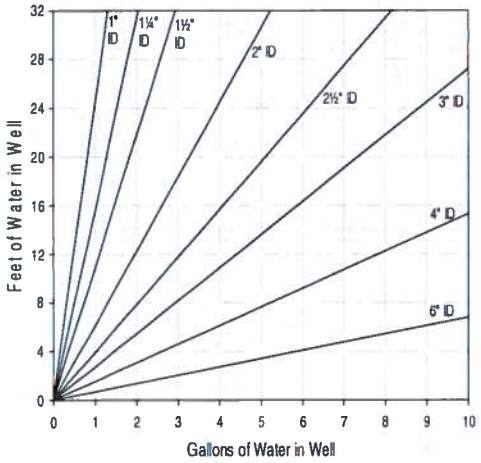
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12402-GW-101816	40-mL vials	3	HCl	VOCs	1020
	1-L amber	2	none	1,4-Dioxane	

Comments: kit bottom while inserting tubing, stirred up the silt in the sump
MS/MSD

Signature: Paul Kaveski | Date: 10.18.16

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: RE124D2 8:50

(continued from front) Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
935		15.74	0.046	5.71	5.64	118.4	83			
940	10gal	15.77	0.046	5.34	5.68	115.9	53			
945		15.73	0.047	5.11	5.73	114.3	34	600	37.49	
950		15.72	0.047	4.89	5.74	113.0	30			
955		15.79	0.046	4.70	5.75	111.0	80.5			
1000		15.74	0.046	4.53	5.76	108.6	75.9		37.50	
1005	15gal	15.71	0.046	4.41	5.80	108.7	68.9			ready to sample
1020								200		Sample
										start 1015 end 1050
										MS/MSD

Appendix B

Analytical Data Validation – Resolution Consultants

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage	
Laboratory:	Katahdin Analytical	
Sample Delivery Group:	BETHPAGE-7	
Analyses/Method:	Volatile Organic Compounds by U.S. EPA SW-846 Method 8260C, 1,4-Dioxane by U.S. EPA SW-846 Method 8270D via Selective Ion Monitoring (SIM), and 1,4-Dioxane in Drinking Water by U.S. EPA Method 522 via Solid Phase Extraction (SPE) and Gas Chromatography/Mass Spectrometry (GC/MS) with SIM	
Validation Level:	Stage 2B Validation Electronic and Manual	
Project Number:	0888812477.SA.DV	
Prepared by:	Dana Miller/Resolution Consultants	Completed on: 12/15/2016
Reviewed by:	Tina Clemmey/Resolution Consultants	File Name: BETHPAGE 7_8260C_8270D_522

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — NWIRP Bethpage Site on 19 to 26 September 2016 and 18 October 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-092016	Trip Blank	8260C
RE103D2-GW-092016	Groundwater	8260C/8270D_SIM
RE103D3-GW-092016	Groundwater	8260C/8270D_SIM
RE122D1-GW-091916	Groundwater	8260C/8270D_SIM
RE122D2-GW-091916	Groundwater	8260C/8270D_SIM
RE122D3-GW-091916	Groundwater	8260C/8270D_SIM
RE104D1-GW-091916	Groundwater	8260C/8270D_SIM
RE104D2-GW-091916	Groundwater	8260C/8270D_SIM
RE104D3-GW-091916	Groundwater	8260C/8270D_SIM

Sample ID	Matrix/Sample Type	Analysis
DUP01-GW-092016	Duplicate of RE103D3-GW-092016	8260C/8270D_SIM
RE103D1-GW-092016	Groundwater	8260C/8270D_SIM
TB02-WQ-092216	Trip Blank	8260C
DUP02-GW-092116	Duplicate of TT101D1-GW-092116	8260C/8270D_SIM
FB01-WQ-092116	Field Blank	8260C/8270D_SIM
RE131D1-GW-092216	Groundwater	8260C/8270D_SIM
RE131D2-GW-092216	Groundwater	8260C/8270D_SIM
RE131D3-GW-092216	Groundwater	8260C/8270D_SIM
RE129D1-GW-092216	Groundwater	8260C/8270D_SIM
RE129D2-GW-092216	Groundwater	8260C/8270D_SIM
RE120D1-GW-092116	Groundwater	8260C/8270D_SIM
RE120D2-GW-092116	Groundwater	8260C/8270D_SIM
RE120D3-GW-092116	Groundwater	8260C/8270D_SIM
RE123D1-GW-092116	Groundwater	8260C/8270D_SIM
RE123D2-GW-092116	Groundwater	8260C/8270D_SIM
RE123D3-GW-092116	Groundwater	8260C/8270D_SIM
TT101D1-GW-092116	Groundwater	8260C/8270D_SIM
TB03-WQ-092616	Trip Blank	8260C
RE105D2-GW-092616	Groundwater	8260C/8270D_SIM
TT101D-GW-092616	Groundwater	8260C/8270D_SIM
TT101D2-GW-092616	Groundwater	8260C/8270D_SIM
RE126D1-GW-092316	Groundwater	8260C/8270D_SIM
RE126D2-GW-092316	Groundwater	8260C/8270D_SIM
RE126D3-GW-092316	Groundwater	8260C/8270D_SIM
RE127D1-GW-092316	Groundwater	8260C/8270D_SIM
RE127D2-GW-092316	Groundwater	8260C/8270D_SIM
RE108D1-GW-092616	Groundwater	8260C/8270D_SIM
RE108D2-GW-092616	Groundwater	8260C/8270D_SIM
RE105D1-GW-092616	Groundwater	8260C/8270D_SIM
RE133D1-GW-092016	Groundwater	8260C/8270D_SIM
RE133D2-GW-092016	Groundwater	8260C/8270D_SIM
TB1-WQ-101816	Trip Blank	8260C
RE124D1-GW-101816	Groundwater	8260C/8270D_SIM
RE124D2-GW-101816	Groundwater	8260C/8270D_SIM
FB1-WQ-101816	Field Blank	8260C/8270D_SIM
RE130D1-GW-101816	Groundwater	8260C/8270D_SIM
RE130D2-GW-101816	Groundwater	8260C/8270D_SIM
DUP1-GW-101816	Duplicate of RE130D2-GW-101816	8260C/8270D_SIM

Sample ID	Matrix/Sample Type	Analysis
RE122D2-GW-091916_GEL	Groundwater	522
RE103D1-GW-092016_GEL	Groundwater	522
RE120D2-GW-092116_GEL	Groundwater	522
RE120D1-GW-092116_GEL	Groundwater	522
RE131D2-GW-092216_GEL	Groundwater	522

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), *Standard Operating Procedure for Analysis of 1,4-Dioxane in Drinking Water by Solid Phase Extraction (SPE) and Gas Chromatography/Mass Spectrometry (GEL, May 2016), 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/field blanks/trip 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 (X) indicates that a QC non-conformance resulted in the qualification of data. Any QC non-conformance that resulted in the qualification of data is discussed below.

RESULTS

Initial Calibration / Initial Calibration Verification / Continuing Calibration Verification

The ICAL is evaluated to ensure that the instrument was capable of producing acceptable qualitative and 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 value 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 value 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/ Field Blanks/Trip Blanks

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

Blank Non-conformance Charts:

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**

For common lab contaminants (methylene chloride, acetone, 2-butanone):			
Blank type	**Blank result**	**Sample result**	**Action for samples**
		≥ LOD and < 2x LOQ	Report sample LOQ value with a U
		≥ 2x LOQ and < blank contamination	Report the blank result with a U or reject the sample result as unusable R
		≥ 2x LOQ and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required. **
****Based on Resolution Consultants professional judgment**			

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

Notes:

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

The laboratory blank non-conformance is 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, 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 Spike 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 value
UJ = Undetected and estimated

Surrogate spike recovery non-conformances are summarized in Attachment A in Table A-5.

Laboratory Control Sample / Laboratory Control Sample Duplicate

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

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

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

Notes:

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

LCS/LCSD %R non-conformances are summarized in Attachment A in Table A-6.

Field Duplicate

Three field duplicate pairs were collected to assess precision: RE103D3-GW-092016/DUP01-GW-092016, TT101D1-GW-092116/DUP02-GW-092116, and RE130D2-GW-101816/DUP1-GW-101816. Field duplicate RPDs were reviewed for conformance with the Resolution Consultants QC criteria of

≤30% for aqueous matrices and ≤50% for solid matrices. These criteria apply if both results were greater than two times the limit of quantitation (LOQ). Data qualification to the analytes associated with the specific field duplicate RPDs was as follows:

Field Duplicate Non-conformances Chart:

Criteria	RPD	Action	
		Detected	Non-
Sample and duplicate are not detected	Not calculable (NC)	No qualification	No
Sample and duplicate results ≥2x LOQ	>30 (aqueous)	J	Not Applicable
	>50 (solids)		
If sample or duplicate result is >2x LOQ and the other is not detected	NC	J	UJ
If sample or duplicate result is <2x LOQ and the other is not detected	NC	No qualification	No

Notes:

LOQ = Limit of quantitation
J = Estimated value
UJ = Undetected and estimated

The field duplicate non-conformance is summarized in Attachment A in Table A-7.

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.

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

SDG	Method	Analyte	Instrument Calibration Date	%RSD	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	Acetone	GCMS-C (C0030.D) 30-SEP-16	19.40242	<15	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Acetone	GCMS-C (C0190.D) 06-OCT-16	19.54288	<15	TB03-WQ-092616 (SJ7877-1) RE126D1-GW-092316 (SJ7877-2RA) RE126D3-GW-092316 (SJ7877-4RA) RE108D1-GW-092616 (SJ7877-7) RE105D1-GW-092616 (SJ7877-9) TT101D-GW-092616 (SJ7877-11) RE126D2-GW-092316 (SJ7877-3DL) RE108D2-GW-092616 (SJ7877-8DL) RE105D2-GW-092616 (SJ7877-10DL) TT101D2-GW-092616 (SJ7877-12DL) RE108D2-GW-092616 (SJ7877-8DL2) RE105D2-GW-092616 (SJ7877-10DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Acetone	GCMS-P (P6785.D) 19-SEP-16	29.85925	<15	RE122D1-GW-091916 (SJ7596-2DL) RE122D2-GW-091916 (SJ7596-3DL) RE103D2-GW-092016 (SJ7596-10DL) RE103D3-GW-092016 (SJ7596-11DL) RE122D3-GW-091916 (SJ7596-4) RE104D1-GW-091916 (SJ7596-5) RE104D2-GW-091916 (SJ7596-6) RE104D3-GW-091916 (SJ7596-7) TB1-WQ-092016 (SJ7596-1) RE103D1-GW-092016 (SJ7596-9DL) DUP01-GW-092016 (SJ7596-8)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Bromomethane	GCMS-P (P7353.D) 13-OCT-16	15.33044	<15	RE108D2-GW-092616 (SJ7877-8DL2RA) RE105D2-GW-092616 (SJ7877-10DL2RA)	Detect: J Non-detect: UJ

Table A-1
Initial Calibration Non-Conformance

SDG	Method	Analyte	Instrument Calibration Date	%RSD	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	Acetone	GCMS-P (P7353.D) 13-OCT-16	27.01004	<15	RE108D2-GW-092616 (SJ7877-8DL2RA) RE105D2-GW-092616 (SJ7877-10DL2RA)	Detect: J Non-detect: UJ
Bethpage 7	8260C	1,2-Dibromo-3-Chloropropane	GCMS-P (P7353.D) 13-OCT-16	15.16747	<15	RE108D2-GW-092616 (SJ7877-8DL2RA) RE105D2-GW-092616 (SJ7877-10DL2RA)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Acetone	GCMS-S (S3655.D) 19-SEP-16	27.81714	<15	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Dibromochloromethane	GCMS-S (S3655.D) 19-SEP-16	15.20344	<15	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	1,4-Dichlorobenzene	GCMS-S (S3655.D) 19-SEP-16	15.29068	<15	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Acetone	GCMS-T (T9222.D) 04-OCT-16	21.81595	<15	RE126D2-GW-092316 (SJ7877-3) RE127D1-GW-092316 (SJ7877-5) RE127D2-GW-092316 (SJ7877-6) RE131D2-GW-092216 (SJ7720-14)	Detect: J Non-detect: UJ
SJ8622	8260C	Acetone	GCMS-S (S3956.D) 20-OCT-16	16.86159	<15	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ
SJ7597	8260C	Acetone	GCMS-P 27-SEP-16	27.75785	<15	RE133D1-GW-092016 RE133D2-GW-092016	Detect: J Non-detect: UJ

Notes:
SDG = Sample delivery group
%RSD = Relative standard deviation
ID = Identification
J = Estimated value
UJ = Undetected and estimated

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	Dichlorodifluoromethane	C0034A.D	70.06	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Acetone	C0034A.D	146.40	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	trans-1,2-Dichloroethene	C0034A.D	128.23	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	1,1-Dichloroethane	C0034A.D	120.94	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	2-Butanone	C0034A.D	128.81	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Benzene	C0034A.D	120.73	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	cis-1,3-dichloropropene	C0034A.D	127.32	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Tetrachloroethene	C0034A.D	120.77	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	trans-1,3-Dichloropropene	C0034A.D	134.65	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Dibromochloromethane	C0034A.D	124.40	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	2-Hexanone	C0034A.D	125.54	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Xylenes (total)	C0034A.D	122.79	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	m+p-Xylenes	C0034A.D	120.20	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	o-Xylene	C0034A.D	127.99	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	Styrene	C0034A.D	125.75	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Isopropylbenzene	C0034A.D	123.19	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	1,3-Dichlorobenzene	C0034A.D	120.33	80-120	DUP01-GW-092016 (SJ7596-8DL) RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16) TB02-WQ-092216 (SJ7720-1) FB01-WQ-092116 (SJ7720-12) RE129D2-GW-092216 (SJ7720-17) RE120D1-GW-092116 (SJ7720-2DL) RE120D2-GW-092116 (SJ7720-3DL) RE131D2-GW-092216 (SJ7720-14DL) TT101D1-GW-092116 (SJ7720-9DL) DUP02-GW-092116 (SJ7720-11DL) RE103D1-GW-092016 (SJ7596-9DL3)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Dichlorodifluoromethane	C0195.D	75.53	80-120	TB03-WQ-092616 (SJ7877-1) RE126D1-GW-092316 (SJ7877-2RA) RE126D3-GW-092316 (SJ7877-4RA) RE108D1-GW-092616 (SJ7877-7) RE105D1-GW-092616 (SJ7877-9) TT101D-GW-092616 (SJ7877-11) RE126D2-GW-092316 (SJ7877-3DL) RE108D2-GW-092616 (SJ7877-8DL) RE105D2-GW-092616 (SJ7877-10DL) TT101D2-GW-092616 (SJ7877-12DL) RE108D2-GW-092616 (SJ7877-8DL2) RE105D2-GW-092616 (SJ7877-10DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Chloroethane	C0195.D	149.02	80-120	TB03-WQ-092616 (SJ7877-1) RE126D1-GW-092316 (SJ7877-2RA) RE126D3-GW-092316 (SJ7877-4RA) RE108D1-GW-092616 (SJ7877-7) RE105D1-GW-092616 (SJ7877-9) TT101D-GW-092616 (SJ7877-11) RE126D2-GW-092316 (SJ7877-3DL) RE108D2-GW-092616 (SJ7877-8DL) RE105D2-GW-092616 (SJ7877-10DL) TT101D2-GW-092616 (SJ7877-12DL) RE108D2-GW-092616 (SJ7877-8DL2) RE105D2-GW-092616 (SJ7877-10DL2)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
Bethpage 7	8260C	Carbon Disulfide	P6786.D	133.75	80-120	RE122D1-GW-091916 (SJ7596-2DL) RE122D2-GW-091916 (SJ7596-3DL) RE103D2-GW-092016 (SJ7596-10DL) RE103D3-GW-092016 (SJ7596-11DL) RE122D3-GW-091916 (SJ7596-4) RE104D1-GW-091916 (SJ7596-5) RE104D2-GW-091916 (SJ7596-6) RE104D3-GW-091916 (SJ7596-7) TB1-WQ-092016 (SJ7596-1) RE103D1-GW-092016 (SJ7596-9DL) DUP01-GW-092016 (SJ7596-8)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Carbon Disulfide	P7363A.D	132.97	80-120	RE108D2-GW-092616 (SJ7877-8DL2RA) RE105D2-GW-092616 (SJ7877-10DL2RA)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Carbon Disulfide	S3658.D	132.17	80-120	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Acetone	S3658.D	167.66	80-120	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	2-Butanone	S3658.D	128.73	80-120	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
Bethpage 7	8260C	Dichlorodifluoromethane	T9229A.D	70.05	80-120	RE126D2-GW-092316 (SJ7877-3) RE127D1-GW-092316 (SJ7877-5) RE127D2-GW-092316 (SJ7877-6) RE131D2-GW-092216 (SJ7720-14)	Detect: J Non-detect: UJ
SJ8622	8260C	Carbon Disulfide	P7568A.D	123.03	80-120	TB1-WQ-101816 (SJ8622-1) FB1-WQ-101816 (SJ8622-4) RE124D2-GW-101816 (SJ8622-3)	Detect: J Non-detect: UJ
SJ8622	8260C	Dichlorodifluoromethane	S3961A.D	127.43	80-120	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ
SJ8622	8260C	Chloromethane	S3961A.D	146.68	80-120	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ
SJ8622	8260C	Carbon Disulfide	S3961A.D	125.04	80-120	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Sample ID (Laboratory ID)	Qualifier
SJ8622	8260C	Acetone	S3961A.D	165.67	80-120	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ
SJ8622	8260C	2-Butanone	S3961A.D	120.79	80-120	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ
SJ7597	8260C	Chloroethane	P6940A.D	129.66	80-120	RE133D1-GW-092016 RE133D2-GW-092016	Detect: J Non-detect: UJ
SJ7597	8260C	Carbon Disulfide	P6095.D	131.78	80-120	RE133D1-GW-092016 RE133D2-GW-092016	Detect: J Non-detect: UJ
SJ7597	8260C	Methyl Acetate	W6632A.D	76.68	80-120	RE133D1-GW-092016 RE133D2-GW-092016	Detect: J Non-detect: UJ

Notes:

SDG = Sample delivery group
ICV = Initial calibration verification
ID = Identification
%R = Percent recovery
J = Estimated value
UJ = Undetected and estimated

Table A-3
Continuing Calibration Verification Non-Conformance

SDG	Calibration ID	Analyte	%D	%D Limit	Associated Sample ID (Laboratory ID)	Qualifier
BETHPAGE-7	WG191891-4 C0105.D	Chloroethane	37.10194	+/- 20%	RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16)	Detect: J Non-detect: UJ
BETHPAGE-7	WG191891-4 C0105.D	Cyclohexane	27.8633	+/- 20%	RE120D3-GW-092116 (SJ7720-4) RE123D1-GW-092116 (SJ7720-5) RE123D2-GW-092116 (SJ7720-6) RE123D3-GW-092116 (SJ7720-7) TT101D1-GW-092116 (SJ7720-9) DUP02-GW-092116 (SJ7720-11) RE131D1-GW-092216 (SJ7720-13) RE131D3-GW-092216 (SJ7720-15) RE129D1-GW-092216 (SJ7720-16)	Detect: J Non-detect: UJ
BETHPAGE-7	WG192102-4 C0196.D	Chloroethane	40.26817	+/- 20%	TB03-WQ-092616 (SJ7877-1) RE126D1-GW-092316 (SJ7877-2RA) RE126D3-GW-092316 (SJ7877-4RA) RE108D1-GW-092616 (SJ7877-7) RE105D1-GW-092616 (SJ7877-9) TT101D-GW-092616 (SJ7877-11) RE126D2-GW-092316 (SJ7877-3DL) RE108D2-GW-092616 (SJ7877-8DL) RE105D2-GW-092616 (SJ7877-10DL) TT101D2-GW-092616 (SJ7877-12DL)	Detect: J Non-detect: UJ
BETHPAGE-7	WG192144-4 C0217.D	Chloromethane	-21.59383	+/- 20%	RE108D2-GW-092616 (SJ7877-8DL2) RE105D2-GW-092616 (SJ7877-10DL2)	Detect: J Non-detect: UJ
BETHPAGE-7	WG192144-4 C0217.D	Chloroethane	35.94857	+/- 20%	RE108D2-GW-092616 (SJ7877-8DL2) RE105D2-GW-092616 (SJ7877-10DL2)	Detect: J Non-detect: UJ
BETHPAGE-7	WG192669-4 P7377.D	Acetone	-20.42396	+/- 20%	RE108D2-GW-092616 (SJ7877-8DL2RA) RE105D2-GW-092616 (SJ7877-10DL2RA)	Detect: J Non-detect: UJ
BETHPAGE-7	WG191117-4 S3708.D	1,2-Dibromo-3-Chloropropane	24.98458	+/- 20%	RE122D1-GW-091916 (SJ7596-2DL2) RE122D2-GW-091916 (SJ7596-3DL2) RE103D2-GW-092016 (SJ7596-10DL2) RE103D3-GW-092016 (SJ7596-11DL2)	Detect: J Non-detect: UJ
BETHPAGE-7	WG191994-4 T9228.D	Dichlorodifluoromethane	-23.18808	+/- 20%	RE126D2-GW-092316 (SJ7877-3) RE127D1-GW-092316 (SJ7877-5) RE127D2-GW-092316 (SJ7877-6) RE131D2-GW-092216 (SJ7720-14)	Detect: J Non-detect: UJ

Table A-3 Continuing Calibration Verification Non-Conformance						
SDG	**Calibration ID**	**Analyte**	**%D**	**%D Limit**	**Associated Sample ID (Laboratory ID)**	**Qualifier**
SJ8622	WG193082-4 S3960.D	Chloroethane	32.54219	+/- 20%	RE124D1-GW-101816 (SJ8622-2) RE130D1-GW-101816 (SJ8622-5) RE130D2-GW-101816 (SJ8622-6) DUP1-GW-101816 (SJ8622-7)	Detect: J Non-detect: UJ

Notes:

SDG = Sample delivery group
ID = Identification
%D = Percent difference
J = Estimated value
UJ = Undetected and estimated

Table A-4
Laboratory Blank Non-Conformance

Blank ID	Batches	Method	Analyte	Blank Result (UG_L)	LOQ	Detected Associated Samples	Qualifier
WG191117-2-BETHPAGE-7	WG191117	8260C	Methylene Chloride	1.4	5.0	RE103D2-GW-092016 RE103D3-GW-092016 RE122D1-GW-091916 RE122D2-GW-091916	RE103D2-GW-092016: U RE103D3-GW-092016: U RE122D1-GW-091916: U RE122D2-GW-091916: U

Notes:

ID = Identification
UG_L = Micrograms per liter
LOQ = Limit of quantitation
U = Undetected value

Table A-5
Surrogate Spike Recovery Non-Conformance

SDG	Method	Sample ID	Laboratory ID	Batch	Surrogate	%R	Control Limit	Qualifier
BETHPAGE-7	8260C	RE103D2-GW-092016	SJ7596-10DL2	WG191117	1,2-Dichloroethane-d4	122	70-120	Detect: J
BETHPAGE-7	8260C	RE122D2-GW-091916	SJ7596-3DL2	WG191117	1,2-Dichloroethane-d4	123	70-120	Detect: J
BETHPAGE-7	8260C	RE122D2-GW-091916	SJ7596-3DL2	WG191117	Dibromofluoromethane	116	85-115	Detect: J
BETHPAGE-7	8260C	RE126D2-GW-092316	SJ7877-3	WG191994	1,2-Dichloroethane-d4	134	70-120	Detect: J
BETHPAGE-7	8260C	RE126D2-GW-092316	SJ7877-3	WG191994	Dibromofluoromethane	121	85-115	Detect: J
BETHPAGE-7	8260C	RE131D2-GW-092216	SJ7720-14	WG191994	1,2-Dichloroethane-d4	140	70-120	Detect: J

Notes:

SDG = Sample delivery group
ID = Identification
%R = Percent recovery
J = Detected estimated value

Table A-6
Laboratory Control Sample/Laboratory Control Sample Duplicate Non-Conformance

LCS	Batch	Analyte	%R	%R Limit	Associated Samples	Qualifier
WG191193-1-BETHPAGE-7	WG191193	Chloromethane	33.8	40-125	DUP01-GW-092016 RE103D1-GW-092016 TB1-WQ-092016	Detect: J Non-detect: UJ
WG191891-1-BETHPAGE-7	WG191891	Xylenes, total	123	89-116	DUP02-GW-092116 RE120D3-GW-092116 RE123D1-GW-092116 RE123D2-GW-092116 RE123D3-GW-092116 RE129D1-GW-092216 RE131D1-GW-092216 RE131D3-GW-092216 TT101D1-GW-092116	Detect: J
WG191891-1-BETHPAGE-7	WG191891	1,2-Dichloroethene, total	130	84-121	DUP02-GW-092116 RE120D3-GW-092116 RE123D1-GW-092116 RE123D2-GW-092116 RE123D3-GW-092116 RE129D1-GW-092216 RE131D1-GW-092216 RE131D3-GW-092216 TT101D1-GW-092116	Detect: J
WG191891-1-BETHPAGE-7	WG191891	Benzene	125	80-120	DUP02-GW-092116 RE120D3-GW-092116 RE123D1-GW-092116 RE123D2-GW-092116 RE123D3-GW-092116 RE129D1-GW-092216 RE131D1-GW-092216 RE131D3-GW-092216 TT101D1-GW-092116	Detect: J

Table A-6
Laboratory Control Sample/Laboratory Control Sample Duplicate Non-Conformance

LCS	Batch	Analyte	%R	%R Limit	Associated Samples	Qualifier
WG191891-1-BETHPAGE-7	WG191891	o-Xylene	128	80-120	DUP02-GW-092116 RE120D3-GW-092116 RE123D1-GW-092116 RE123D2-GW-092116 RE123D3-GW-092116 RE129D1-GW-092216 RE131D1-GW-092216 RE131D3-GW-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	cis-1,3-Dichloropropene	136	70-130	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	trans-1,3-Dichloropropene	143	55-140	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J

Table A-6
Laboratory Control Sample/Laboratory Control Sample Duplicate Non-Conformance

LCS	Batch	Analyte	%R	%R Limit	Associated Samples	Qualifier
WG191904-1-BETHPAGE-7	WG191904	1,2-Dibromoethane	123	80-120	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	Toluene	122	75-120	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	Xylenes, total	125	89-116	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J

Table A-6
Laboratory Control Sample/Laboratory Control Sample Duplicate Non-Conformance

LCS	Batch	Analyte	%R	%R Limit	Associated Samples	Qualifier
WG191904-1-BETHPAGE-7	WG191904	1,2-Dichloroethene, total	127	84-121	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	Benzene	126	80-120	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	Bromodichloromethane	129	75-120	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J

Table A-6
Laboratory Control Sample/Laboratory Control Sample Duplicate Non-Conformance

LCS	Batch	Analyte	%R	%R Limit	Associated Samples	Qualifier
WG191904-1-BETHPAGE-7	WG191904	1,2-Dichloropropane	127	75-125	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	1,1,2-Trichloroethane	126	75-125	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG191904-1-BETHPAGE-7	WG191904	o-Xylene	130	80-120	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J

Table A-6
Laboratory Control Sample/Laboratory Control Sample Duplicate Non-Conformance

LCS	Batch	Analyte	%R	%R Limit	Associated Samples	Qualifier
WG191904-1-BETHPAGE-7	WG191904	1,2-Dichlorobenzene	124	70-120	DUP02-GW-092116 FB01-WQ-092116 RE103D1-GW-092016 RE120D1-GW-092116 RE120D2-GW-092116 RE129D2-GW-092216 RE131D2-GW-092216 TB02-WQ-092216 TT101D1-GW-092116	Detect: J
WG193082-1-SJ8622	WG193082	Acetone	166	40-140	DUP1-GW-101816 RE124D1-GW-101816 RE130D1-GW-101816 RE130D2-GW-101816	Detect: J
WG193082-1-SJ8622	WG193082	Chloroethane	147	60-135	DUP1-GW-101816 RE124D1-GW-101816 RE130D1-GW-101816 RE130D2-GW-101816	Detect: J

Notes:
LCS = Laboratory control sample
%R = Percent recovery
J = Estimated value
UJ = Undetected and estimated

Table A-7
Field Duplicate Non-Conformance

Analyte	Sample ID	Lab ID	Duplicate ID	Lab ID	Sample Result (UG_L)	LOQ	Duplicate Result (UG_L)	LOQ	RPD	Qualifier
1,1,2-Trichloroethane	TT101D1-GW-092116	SJ7720-9	DUP02-GW-092116	SJ7720-11	0.52 J	1	0.75 J	1	36.2	J-both

Notes:

ID = Identification
UG_L = Micrograms per liter
LOQ = Limit of quantitation
RPD = Relative percent difference
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

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

		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-1		
		Sample ID		TB1-WQ-092016		
		Sample Date		9/20/2016		
		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	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	l
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

Notes:

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

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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-10DL2		
		Sample ID		RE103D2-GW-092016		
		Sample Date		9/20/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	4.8	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.2	J	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	1.5	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.5	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	1	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	1	UJ	c
8260C	2-BUTANONE	78-93-3	UG_L	5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	5	U	
8260C	ACETONE	67-64-1	UG_L	5	UJ	c
8260C	BENZENE	71-43-2	UG_L	1	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	1	U	
8260C	BROMOFORM	75-25-2	UG_L	1	U	
8260C	BROMOMETHANE	74-83-9	UG_L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	1	U	
8260C	CHLOROETHANE	75-00-3	UG_L	2	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.99	J	s
8260C	CHLOROMETHANE	74-87-3	UG_L	2	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.5	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	1	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	1	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	1	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	2	U	
8260C	METHYL ACETATE	79-20-9	UG_L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	5	U	bl
8260C	O-XYLENE	95-47-6	UG_L	1	U	
8260C	STYRENE	100-42-5	UG_L	1	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1	J	s
8260C	TOLUENE	108-88-3	UG_L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	1	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	1	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	810		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	3	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.8		

Notes:

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

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-11DL2		
		Sample ID		RE103D3-GW-092016		
		Sample Date		9/20/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	2.2		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	1.5	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.77	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	1	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	1	UJ	c
8260C	2-BUTANONE	78-93-3	UG_L	5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	5	U	
8260C	ACETONE	67-64-1	UG_L	5	UJ	c
8260C	BENZENE	71-43-2	UG_L	1	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	1	U	
8260C	BROMOFORM	75-25-2	UG_L	1	U	
8260C	BROMOMETHANE	74-83-9	UG_L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	1	U	
8260C	CHLOROETHANE	75-00-3	UG_L	2	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.77	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	2	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.77	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	1	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	1	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	1	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	2	U	
8260C	METHYL ACETATE	79-20-9	UG_L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	5	U	bl
8260C	O-XYLENE	95-47-6	UG_L	1	U	
8260C	STYRENE	100-42-5	UG_L	1	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1	U	
8260C	TOLUENE	108-88-3	UG_L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	1	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	1	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	490		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	3	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1.3		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-2DL2		
		Sample ID		RE122D1-GW-091916		
		Sample Date		9/19/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	3.8		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.81	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	1.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.2	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	1	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	1	UJ	c
8260C	2-BUTANONE	78-93-3	UG_L	5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	5	U	
8260C	ACETONE	67-64-1	UG_L	5	UJ	c
8260C	BENZENE	71-43-2	UG_L	1	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	1	U	
8260C	BROMOFORM	75-25-2	UG_L	1	U	
8260C	BROMOMETHANE	74-83-9	UG_L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	1	U	
8260C	CHLOROETHANE	75-00-3	UG_L	2	U	
8260C	CHLOROFORM	67-66-3	UG_L	1	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	2	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.2	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	1	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	1	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	1	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	2	U	
8260C	METHYL ACETATE	79-20-9	UG_L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	5	U	bl
8260C	O-XYLENE	95-47-6	UG_L	1	U	
8260C	STYRENE	100-42-5	UG_L	1	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1.6	J	
8260C	TOLUENE	108-88-3	UG_L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	1	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	1	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	510		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	3	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	8.6		

Notes:

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

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-3DL2		
		Sample ID		RE122D2-GW-091916		
		Sample Date		9/19/2016		
		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	21	J	s
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	UJ	c
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	UJ	c
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	U	
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	UJ	c
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	bl
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	4600		
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	16		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-4		
		Sample ID		RE122D3-GW-091916		
		Sample Date		9/19/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	3.8		
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:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-5		
		Sample ID		RE104D1-GW-091916		
		Sample Date		9/19/2016		
		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	2.9		
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	0.61	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	0.94	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.94	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	2.2		
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	93		
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:

UG_L = Micrograms per liter
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-6		
		Sample ID		RE104D2-GW-091916		
		Sample Date		9/19/2016		
		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	5.2		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	0.88	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	5.2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	12		
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	0.52		

Notes:

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

		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-7		
		Sample ID		RE104D3-GW-091916		
		Sample Date		9/19/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	0.2	U	

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-8		
		Sample ID		DUP01-GW-092016		
		Sample Date		9/20/2016		
		Sample Type		Duplicate of RE103D3-GW-092016		
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	2.2		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	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	0.86	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	3.6	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	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.64	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	l
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.86	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	570		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1.1		

Notes:

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7596-9DL3		
		Sample ID		RE103D1-GW-092016		
		Sample Date		9/20/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	1	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	9.3		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.94	J	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	7.7		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	1	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	1.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	1	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	1	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	1	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	3.4	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	1	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	1	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	1	U	
8260C	2-BUTANONE	78-93-3	UG_L	5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	5	U	
8260C	ACETONE	67-64-1	UG_L	5	UJ	c
8260C	BENZENE	71-43-2	UG_L	1	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	1	U	
8260C	BROMOFORM	75-25-2	UG_L	1	U	
8260C	BROMOMETHANE	74-83-9	UG_L	2	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.52	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	1	U	
8260C	CHLOROETHANE	75-00-3	UG_L	2	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.81	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	2	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	1	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	1	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	1	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	1	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	1	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	2	UJ	c
8260C	METHYL ACETATE	79-20-9	UG_L	1.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	1	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	1	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	5	U	
8260C	O-XYLENE	95-47-6	UG_L	1	UJ	c
8260C	STYRENE	100-42-5	UG_L	1	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	4.6	J	c
8260C	TOLUENE	108-88-3	UG_L	1	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	1	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	1	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	860		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	2	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	2	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	3	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	19		

Notes:

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-1		
		Sample ID		TB02-WQ-092216		
		Sample Date		9/22/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

Notes:

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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-11		
		Sample ID		DUP02-GW-092116		
		Sample Date		9/21/2016		
		Sample Type		Duplicate of TT101D1-GW-092116		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.71	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	0.75	J	fd
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.2	J	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	6.7		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.4	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.8		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	1		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.4	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	210		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	10		

Notes:

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

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-12		
		Sample ID		FB01-WQ-092116		
		Sample Date		9/21/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-13		
		Sample ID		RE131D1-GW-092216		
		Sample Date		9/22/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.3	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	4.1		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.98	J	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.2		
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	4.9	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	4.4		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	4.9		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.3	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	0.52	J	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	8.2	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	18		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-14		
		Sample ID		RE131D2-GW-092216		
		Sample Date		9/22/2016		
		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	240		
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	0.44	J	s
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	3.3	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	2.6	J	s
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	0.42	J	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.3	J	s
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	0.6	J	s,c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.8	J	s
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	42	J	s
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	17		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-15		
		Sample ID		RE131D3-GW-092216		
		Sample Date		9/22/2016		
		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	87		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.9	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	0.48	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	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	0.48	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.91	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1.8		

Notes:

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

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-16		
		Sample ID		RE129D1-GW-092216		
		Sample Date		9/22/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	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	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

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

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-17		
		Sample ID		RE129D2-GW-092216		
		Sample Date		9/22/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-2DL		
		Sample ID		RE120D1-GW-092116		
		Sample Date		9/21/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	27		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	5	UJ	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	18		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	7.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	3.6	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	5	U	
8260C	2-BUTANONE	78-93-3	UG_L	25	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	25	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	25	U	
8260C	ACETONE	67-64-1	UG_L	25	UJ	c
8260C	BENZENE	71-43-2	UG_L	5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	5	U	
8260C	BROMOFORM	75-25-2	UG_L	5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	10	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	10	U	
8260C	CHLOROFORM	67-66-3	UG_L	5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	10	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.6	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	10	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	10	UJ	c
8260C	METHYL ACETATE	79-20-9	UG_L	7.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	25	U	
8260C	O-XYLENE	95-47-6	UG_L	5	UJ	c
8260C	STYRENE	100-42-5	UG_L	5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	1400		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	10	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	10	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	15	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	22		

Notes:

UG_L = Micrograms per liter
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-3DL		
		Sample ID		RE120D2-GW-092116		
		Sample Date		9/21/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	18		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	5	UJ	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	7.5	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	7.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	10	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	5	U	
8260C	2-BUTANONE	78-93-3	UG_L	25	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	25	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	25	U	
8260C	ACETONE	67-64-1	UG_L	25	UJ	c
8260C	BENZENE	71-43-2	UG_L	5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	5	U	
8260C	BROMOFORM	75-25-2	UG_L	5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	10	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	10	U	
8260C	CHLOROFORM	67-66-3	UG_L	5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	10	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	10	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	10	UJ	c
8260C	METHYL ACETATE	79-20-9	UG_L	7.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	25	U	
8260C	O-XYLENE	95-47-6	UG_L	5	UJ	c
8260C	STYRENE	100-42-5	UG_L	5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	1000		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	10	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	10	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	15	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	13		

Notes:

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

		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-4		
		Sample ID		RE120D3-GW-092116		
		Sample Date		9/21/2016		
		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	1.2		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	c
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	0.23	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	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	0.23	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	57		
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.4		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-5		
		Sample ID		RE123D1-GW-092116		
		Sample Date		9/21/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	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	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	9.6		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	4.7		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-6		
		Sample ID		RE123D2-GW-092116		
		Sample Date		9/21/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	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	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	2.1		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-7		
		Sample ID		RE123D3-GW-092116		
		Sample Date		9/21/2016		
		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	UJ	c
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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	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	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
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	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7720-9		
		Sample ID		TT101D1-GW-092116		
		Sample Date		9/21/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.73	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	13		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.52	J	fd
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.1	J	c
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	6.4		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.5	J	l
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	c
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	2.1		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	1		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	c
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.5	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	c
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	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	c
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	c
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	c
8260C	TRICHLOROETHENE	79-01-6	UG_L	220		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	c
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	9.8		

Notes:

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

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-1		
		Sample ID		TB03-WQ-092616		
		Sample Date		9/26/2016		
		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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.3	J	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
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	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-10DL2		
		Sample ID		RE105D2-GW-092616		
		Sample Date		9/26/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	2.5	UJ	it
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	2.5	UJ	it
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	16	J	it
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	2.5	UJ	it
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	2.5	UJ	it
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	6.9	J	it
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	2.5	UJ	it
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	3.8	UJ	it
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	2.5	UJ	it
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	2.5	UJ	it
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	2.5	UJ	it
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	3.5	J	it
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	2.5	UJ	it
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	2.5	UJ	c,it
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	2.5	UJ	it
8260C	2-BUTANONE	78-93-3	UG_L	12	UJ	it
8260C	2-HEXANONE	591-78-6	UG_L	12	UJ	it
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	12	UJ	it
8260C	ACETONE	67-64-1	UG_L	12	UJ	c,it
8260C	BENZENE	71-43-2	UG_L	2.5	UJ	it
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	2.5	UJ	it
8260C	BROMOFORM	75-25-2	UG_L	2.5	UJ	it
8260C	BROMOMETHANE	74-83-9	UG_L	5	UJ	it
8260C	CARBON DISULFIDE	75-15-0	UG_L	2.5	UJ	it
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	2.8	J	it
8260C	CHLOROBENZENE	108-90-7	UG_L	2.5	UJ	it
8260C	CHLOROETHANE	75-00-3	UG_L	5	UJ	c,it
8260C	CHLOROFORM	67-66-3	UG_L	2.5	UJ	it
8260C	CHLOROMETHANE	74-87-3	UG_L	5	UJ	c,it
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.5	J	it
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	2.5	UJ	it
8260C	CYCLOHEXANE	110-82-7	UG_L	2.5	UJ	it
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	2.5	UJ	c,it
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	5	UJ	it
8260C	ETHYLBENZENE	100-41-4	UG_L	2.5	UJ	it
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	2.5	UJ	c,it
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	5	UJ	it
8260C	METHYL ACETATE	79-20-9	UG_L	3.8	UJ	it
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	2.5	UJ	it
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	2.5	UJ	it
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	12	UJ	it
8260C	O-XYLENE	95-47-6	UG_L	2.5	UJ	it
8260C	STYRENE	100-42-5	UG_L	2.5	UJ	it
8260C	TETRACHLOROETHENE	127-18-4	UG_L	2.5	UJ	it
8260C	TOLUENE	108-88-3	UG_L	2.5	UJ	it
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	2.5	UJ	it
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	2.5	UJ	it
8260C	TRICHLOROETHENE	79-01-6	UG_L	2000		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	5	UJ	it
8260C	VINYL CHLORIDE	75-01-4	UG_L	5	UJ	it
8260C	XYLENES, TOTAL	1330-20-7	UG_L	7.5	UJ	it
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	9.7		

Notes:

UG_L = Micrograms per liter
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-11		
		Sample ID		TT101D-GW-092616		
		Sample Date		9/26/2016		
		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	12		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.75	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	3.3		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.8		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.48	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.8		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2.3		
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
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	69		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	12		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-12DL		
		Sample ID		TT101D2-GW-092616		
		Sample Date		9/26/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	16		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	4.9	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	7.5	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	10	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	5	U	
8260C	2-BUTANONE	78-93-3	UG_L	25	U	
8260C	2-HEXANONE	591-78-6	UG_L	25	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	25	U	
8260C	ACETONE	67-64-1	UG_L	25	UJ	c
8260C	BENZENE	71-43-2	UG_L	5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	5	U	
8260C	BROMOFORM	75-25-2	UG_L	5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	10	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	10	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	10	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	5	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	10	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	10	U	
8260C	METHYL ACETATE	79-20-9	UG_L	7.5	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	25	U	
8260C	O-XYLENE	95-47-6	UG_L	5	U	
8260C	STYRENE	100-42-5	UG_L	5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	5	U	
8260C	TOLUENE	108-88-3	UG_L	5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	680		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	10	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	10	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	15	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	3.8		

Notes:

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

September 2016
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-2RA		
		Sample ID		RE126D1-GW-092316		
		Sample Date		9/23/2016		
		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	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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
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	UJ	c
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	0.74	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	23		
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	8.8		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-3		
		Sample ID		RE126D2-GW-092316		
		Sample Date		9/23/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1	J	s
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	0.94	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	3	J	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.4	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.66	J	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.4	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	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	8.7	J	s

Notes:

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

		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-4RA		
		Sample ID		RE126D3-GW-092316		
		Sample Date		9/23/2016		
		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	0.33	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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
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	UJ	c
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	1.5		
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	3.9		
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	2.3		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-5		
		Sample ID		RE127D1-GW-092316		
		Sample Date		9/23/2016		
		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	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	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	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
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Final Results after Data Review
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-6		
		Sample ID		RE127D2-GW-092316		
		Sample Date		9/23/2016		
		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	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	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	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.18	U	

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-7		
		Sample ID		RE108D1-GW-092616		
		Sample Date		9/26/2016		
		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	0.4	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	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	c
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	UJ	c
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	50		
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:

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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-8DL2		
		Sample ID		RE108D2-GW-092616		
		Sample Date		9/26/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	5	UJ	it
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	5	UJ	it
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	5	UJ	it
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	5	UJ	it
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	4.1	J	it
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	5.6	J	it
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	5	UJ	it
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	7.5	UJ	it
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	5	UJ	it
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	5	UJ	it
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	5	UJ	it
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	6.8	J	it
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	5	UJ	it
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	5	UJ	c,it
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	5	UJ	it
8260C	2-BUTANONE	78-93-3	UG_L	25	UJ	it
8260C	2-HEXANONE	591-78-6	UG_L	25	UJ	it
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	25	UJ	it
8260C	ACETONE	67-64-1	UG_L	25	UJ	c,it
8260C	BENZENE	71-43-2	UG_L	5	UJ	it
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	5	UJ	it
8260C	BROMOFORM	75-25-2	UG_L	5	UJ	it
8260C	BROMOMETHANE	74-83-9	UG_L	10	UJ	it
8260C	CARBON DISULFIDE	75-15-0	UG_L	5	UJ	it
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	5	UJ	it
8260C	CHLOROBENZENE	108-90-7	UG_L	5	UJ	it
8260C	CHLOROETHANE	75-00-3	UG_L	10	UJ	c,it
8260C	CHLOROFORM	67-66-3	UG_L	3.3	J	it
8260C	CHLOROMETHANE	74-87-3	UG_L	10	UJ	c,it
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	6.8	J	it
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	5	UJ	it
8260C	CYCLOHEXANE	110-82-7	UG_L	5	UJ	it
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	5	UJ	c,it
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	10	UJ	it
8260C	ETHYLBENZENE	100-41-4	UG_L	5	UJ	it
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	5	UJ	c,it
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	10	UJ	it
8260C	METHYL ACETATE	79-20-9	UG_L	7.5	UJ	it
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	5	UJ	it
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	5	UJ	it
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	25	UJ	it
8260C	O-XYLENE	95-47-6	UG_L	5	UJ	it
8260C	STYRENE	100-42-5	UG_L	5	UJ	it
8260C	TETRACHLOROETHENE	127-18-4	UG_L	5	UJ	it
8260C	TOLUENE	108-88-3	UG_L	5	UJ	it
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	5	UJ	it
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	5	UJ	it
8260C	TRICHLOROETHENE	79-01-6	UG_L	3000		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	10	UJ	it
8260C	VINYL CHLORIDE	75-01-4	UG_L	10	UJ	it
8260C	XYLENES, TOTAL	1330-20-7	UG_L	15	UJ	it
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	7.1		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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		Sample Delivery Group		BETHPAGE-7		
		Lab ID		SJ7877-9		
		Sample ID		RE105D1-GW-092616		
		Sample Date		9/26/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.4	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	6.1		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.1		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.5	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	c
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.22	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.5		
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	UJ	c
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.64	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	c
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	100		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	16		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		SJ7597		
		Lab ID		SJ7597-1		
		Sample ID		RE133D1-GW-092016		
		Sample Date		9/20/2016		
		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	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	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	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	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	c
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.16	J	

Notes:

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

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		Sample Delivery Group		SJ7597		
		Lab ID		SJ7597-2		
		Sample ID		RE133D2-GW-092016		
		Sample Date		9/20/2016		
		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	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	c
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-1		
		Sample ID		TB1-WQ-101816		
		Sample Date		10/18/2016		
		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	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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:

UG_L = Micrograms per liter
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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-2		
		Sample ID		RE124D1-GW-101816		
		Sample Date		10/18/2016		
		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	33		
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	0.29	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	3.3	J	l,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	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.29	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	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	1.7		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.5		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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Final Results after Data Review
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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-3		
		Sample ID		RE124D2-GW-101816		
		Sample Date		10/18/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	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	2.4	J	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

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

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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-4		
		Sample ID		FB1-WQ-101816		
		Sample Date		10/18/2016		
		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	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.51	J	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:

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

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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-5		
		Sample ID		RE130D1-GW-101816		
		Sample Date		10/18/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.18	U	

Notes:

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

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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-6		
		Sample ID		RE130D2-GW-101816		
		Sample Date		10/18/2016		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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		Sample Delivery Group		SJ8622		
		Lab ID		SJ8622-7		
		Sample ID		DUP1-GW-101816		
		Sample Date		10/18/2016		
		Sample Type		Duplicate of RE130D2-GW-101816		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	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	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.18	U	

Notes:

UG_L = Micrograms per liter
NA = Not applicable
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			Sample Delivery Group	SJ8245	SJ8245	SJ8245	SJ8245	SJ8245
			Lab ID	406369001	406369002	406369003	406369004	406369005
			Sample ID	RE122D2-GW-091916_GEL	RE103D1-GW-092016_GEL	RE120D2-GW-092116_GEL	RE131D2-GW-092216_GEL	RE120D1-GW-092116_GEL
			Sample Date	9/19/2016	9/20/2016	9/21/2016	9/22/2016	9/21/2016
			Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Method	Analyte	CAS No	Units	Result	Result	Result	Result	Result
522	1,4-DIOXANE	123-91-1	UG_L	17.7	22	21	17.4	25.7

Notes:

UG_L = Micrograms per liter

Appendix C

Comparative 1,4-dioxane by Method 8270D SIM and Method 522

NWIRP Bethpage OU 2 1,4-Dioxane Method Comparison

Project:	Regional Groundwater Investigation — NWIRP Bethpage
Laboratory:	Katahdin Analytical Services and GEL Laboratories
Analyses/Method:	1,4-Dioxane by U.S. EPA SW-846 Method 8270D via Selective Ion Monitoring (SIM), and 1,4-Dioxane in Drinking Water by U.S. EPA Method 522 via Solid Phase Extraction (SPE) and Gas Chromatography/Mass Spectrometry (GC/MS) via SIM
Project Number:	0888812477.SA.DV
Prepared by:	Dana Miller/Resolution Consultants Revision Completed on: 04/25/2017
Reviewed by:	Tina Cantwell/Resolution Consultants

SUMMARY

The objective of this sampling and analysis was to compare 1,4-dioxane results analyzed via different analytical methods. During the September and October 2016 quarterly groundwater sampling events, five wells (RE103D1, RE120D1, RE120D2, RE122D2 and RE131D2) were selected for the comparative analysis of 1,4-dioxane by United States Environmental Protection Agency (U.S. EPA) SW-846 Method 8270D via selective ion monitoring (SIM) and U.S. EPA Method 522. U.S. EPA SW-846 Method 8270D SIM samples were analyzed by Katahdin Analytical Services (Katahdin) in Scarborough, Maine and U.S. EPA Method 522 samples were analyzed by GEL Laboratories in Charleston, South Carolina.

A review of 1,4-dioxane in water identified two primary problems affecting methods targeting the compound: (1) poor recovery due to high water solubility when analyzed as a volatile and (2) potential loss during the concentration step in sample preparation when analyzed as a semi-volatile. Because 1,4-dioxane is difficult to analyze and to reach lower detection limits, many laboratories modify existing methods using gas chromatography/mass spectrometry (GC/MS) in the selective ion monitoring mode and utilize a deuterated monitoring compound (1,4-dioxane-d8) to assess sample preparation and analysis efficiency.

- **U.S. EPA SW-846 Method 8270D SIM** (semi-volatile method) — 1,4-Dioxane is prepared via liquid-liquid extraction using 1-liter of sample and methylene chloride and the solvent is reduced/concentrated down to 5 or 10 milliliters.
- ***Method issues:*** This method is susceptible to 1,4-dioxane losses during the concentration step if care is not taken to monitor the extraction temperature and again in the solvent reduction phase of the extraction. To overcome both of these issues for the Bethpage project, Katahdin Analytical Services extraction procedure is based on EPA Method 3520A. Method 3520A is a continuous liquid-liquid extraction, which is applicable to the isolation and concentration of water-insoluble and slightly soluble organics; it is a more automated procedure that can better help monitor temperature and solvent reduction. To monitor the extraction efficiency, labelled

compound 1,4-dioxane-d8 is spiked in the sample prior to extraction to monitor losses and is also used to quantitate 1,4-dioxane.

- **EPA Method 522** is a drinking water method used for the determination of 1,4-dioxane. Samples are prepared by solid phase extraction using methylene chloride as the elution solvent and analyzed via GC/MS in selected ion monitoring mode. The detection of 1,4-dioxane may be adversely affected by highly turbid samples when prepared and analyzed by Method 522.

Resolution Consultants reviewed groundwater results analyzed by the two methods and comparable concentrations for 1,4-dioxane were reported for all wells as shown in Attachment A on Table A-1. Therefore, both U.S. EPA Methods 8270D SIM and 522 SIM can be used successfully for the analysis of 1,4-dioxane in water. The method that is currently being used for the NWIRP Bethpage OU 2 Investigation is U.S. EPA SW-846 Method 8270D SIM and is recommended for future analysis based on this study.

ATTACHMENTS

Attachment A: Table A-1

Attachment A

Table A-1
NWIRP Bethpage OU 2 Regional Groundwater Investigation
1,4-Dioxane Method Comparison

			Sample Delivery Group	SJ7596	SJ7596	SJ7720	SJ7720	SJ7720
			Lab ID	SJ7596-3DL	SJ7596-9DL	SJ7720-3DL	SJ7720-14DL	SJ7720-2DL
			Sample ID	RE122D2-GW-091916	RE103D1-GW-092016	RE120D2-GW-092116	RE131D2-GW-092216	RE120D1-GW-092116
			Sample Date	9/19/2016	9/20/2016	9/21/2016	9/22/2016	9/21/2016
			Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Method	**Analyte**	**CAS No**	**Units**	Result	Result	Result	Result	Result
8270D SIM	1,4-Dioxane	123-91-1	UG_L	16	19	13	17	22

			Sample Delivery Group	SJ8245	SJ8245	SJ8245	SJ8245	SJ8245
			Lab ID	406369001	406369002	406369003	406369004	406369005
			Sample ID	RE122D2-GW-091916_GEL	RE103D1-GW-092016_GEL	RE120D2-GW-092116_GEL	RE131D2-GW-092216_GEL	RE120D1-GW-092116_GEL
			Sample Date	9/19/2016	9/20/2016	9/21/2016	9/22/2016	9/21/2016
			Sample Type	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Method	**Analyte**	**CAS No**	**Units**	Result	Result	Result	Result	Result
522 SIM	1,4-Dioxane	123-91-1	UG_L	17.7	22	21	17.4	25.7

Notes:
SIM = Selective ion monitoring
UG_L = Micrograms per liter

Appendix D

Analytical Data Validation – ARCADIS

ARCADIS Design & Consultancy for natural and built assets

Northrop Grumman Corporation -

Operable Unit 2

Data Review

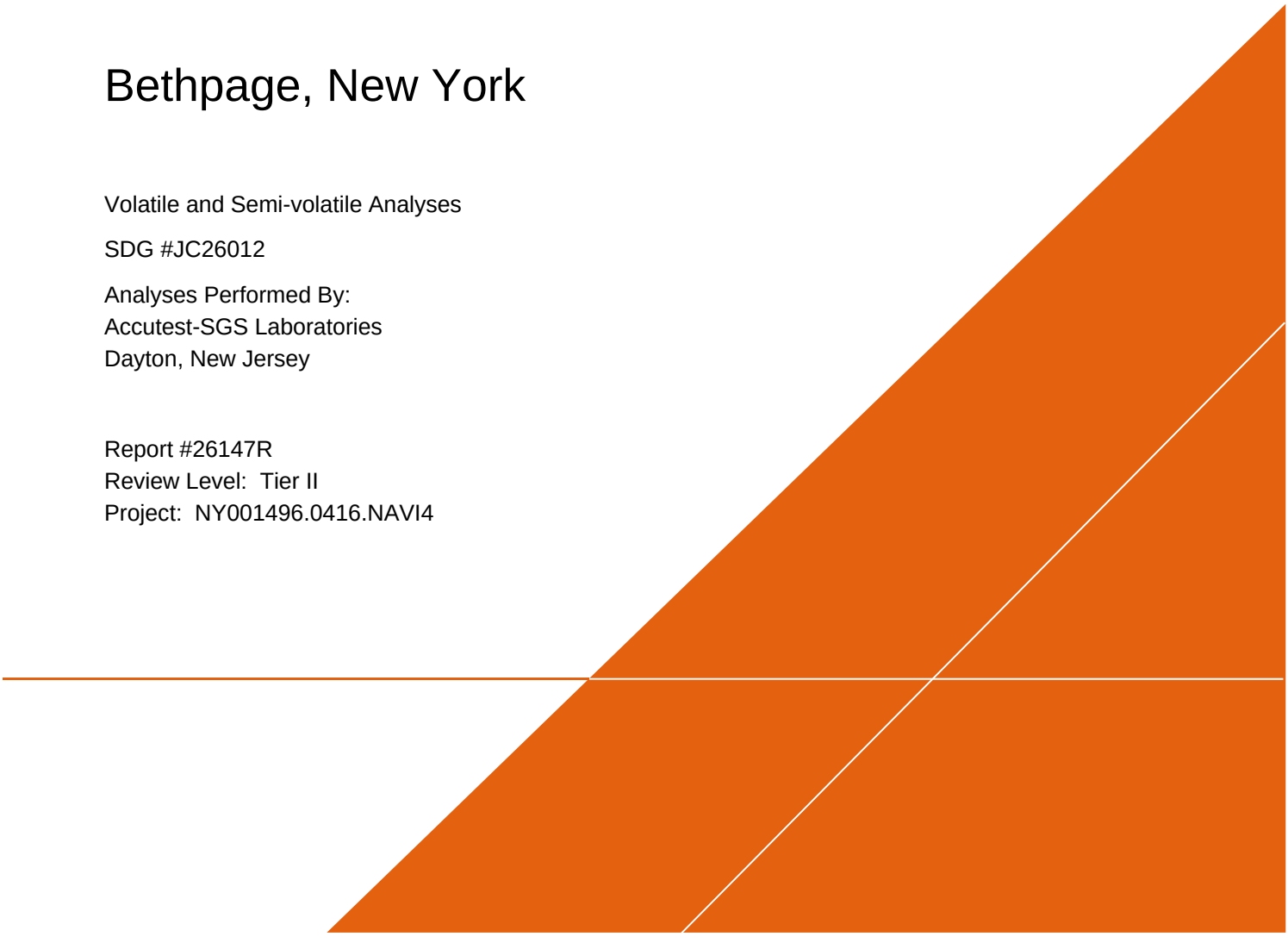
Bethpage, New York

Volatile and Semi-volatile Analyses

SDG #JC26012

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

Report #26147R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #JC26012 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
JC26012	BPOW5-7	JC26012-1	Water	8/16/2016		X	X			
	TB081616	JC26012-2	Water	8/16/2016		X				

Note:

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 SDG is: JC26012X/404231.

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.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

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

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

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected with a sample location associated with this 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 this 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		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

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.

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 this SDG.

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 this 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

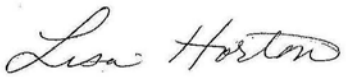
SVOCs: EPA 522-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: August 30, 2016/October 24, 2016

PEER REVIEW: Todd Church

DATE: October 26, 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 # JC26012

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 Prezeriski / Mike Orabona Phone #: 516 861-7061

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 5-7		8/16/16	1145	MO	GW	5	3								2	3	2	SUB
2	TB081616		8/16/16	0900	—	TB	2	2									2		V936

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

NITIAL ASESSMENT 3B
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*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

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

For VOCs, (V524SL4+40, VMS+F113).

OU2 Hydro

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]	8/16/16 1737	1 Chris Laul 8/17/16 9:25	2 Chris Laul	8/17/16 1750	2 [signature]
3		3	4		4
5		5	Custody Seal # [x] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [x] Cooler Temp. 1.4°C

JC26012: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW5-7		
Lab Sample ID:	JC26012-1	**Date Sampled:**	08/16/16
Matrix:	AQ - Ground Water	**Date Received:**	08/17/16
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	1B105305.D	1	08/18/16	BK	n/a	n/a	V1B4995
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:	BPOW5-7		
Lab Sample ID:	JC26012-1	**Date Sampled:**	08/16/16
Matrix:	AQ - Ground Water	**Date Received:**	08/17/16
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	112%		78-114%
460-00-4	4-Bromofluorobenzene	104%		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:	TB081616		
Lab Sample ID:	JC26012-2	**Date Sampled:**	08/16/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/17/16
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	1B105306.D	1	08/18/16	BK	n/a	n/a	V1B4995
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:	TB081616		
Lab Sample ID:	JC26012-2	**Date Sampled:**	08/16/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/17/16
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	104%		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

404271

SGS ACCUTEST CHAIN OF CUSTODY

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

Page 1 of 1

FED-EX Tracking #

Bottle Order Control #

SGS Accutest Quote #

SGS Accutest Job: JC26012X

Client / Reporting Information

Company Name: SGS Accutest

Street Address: 2235 Route 130

City: Dayton State: NJ Zip: 08810

Project Contact: kelly.patterson@sgs.com E-mail

Phone #: 732-329-0200 Fax #

Sampler(s) Name(s): MO Phone

Project Information

Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY

Street

City State

Project #

Client Purchase Order #

Project Manager

Attention:

Billing Information (if different from Report to)

Company Name

Street Address

City State Zip

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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	NaHSO4	Sim 14 Dioxane via 522 method, Low PQL needed
1X	BPOW5-7		8/16/16	11:45:00 AM	MO	AQ	2									2	X

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)

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

Approved By (SGS Accutest PM): / Date:

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.

1 Relinquished by Sampler:	Date Time: 8/16/16 1700	1 Received By:	2 Relinquished By:	Date Time: 8/19/16 0915	2 Received By:
3 Relinquished by Sampler:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal # 204	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: 404231 GEL Work Order: 404231

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: Cameron Bearden **Name: Cameron Bearden**

Date: 08 SEP 2016 **Title: Group Leader**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404231**	**Date Collected:**	**08/16/2016 11:45**	**Matrix:**	**WATER**
Lab Sample ID:	**404231001**	**Date Received:**	**08/19/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-7**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 01:47**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3118.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26012X

ARCADIS Design & Consultancy for natural and built assets

Northrop Grumman Corporation -

Operable Unit 2

Data Review

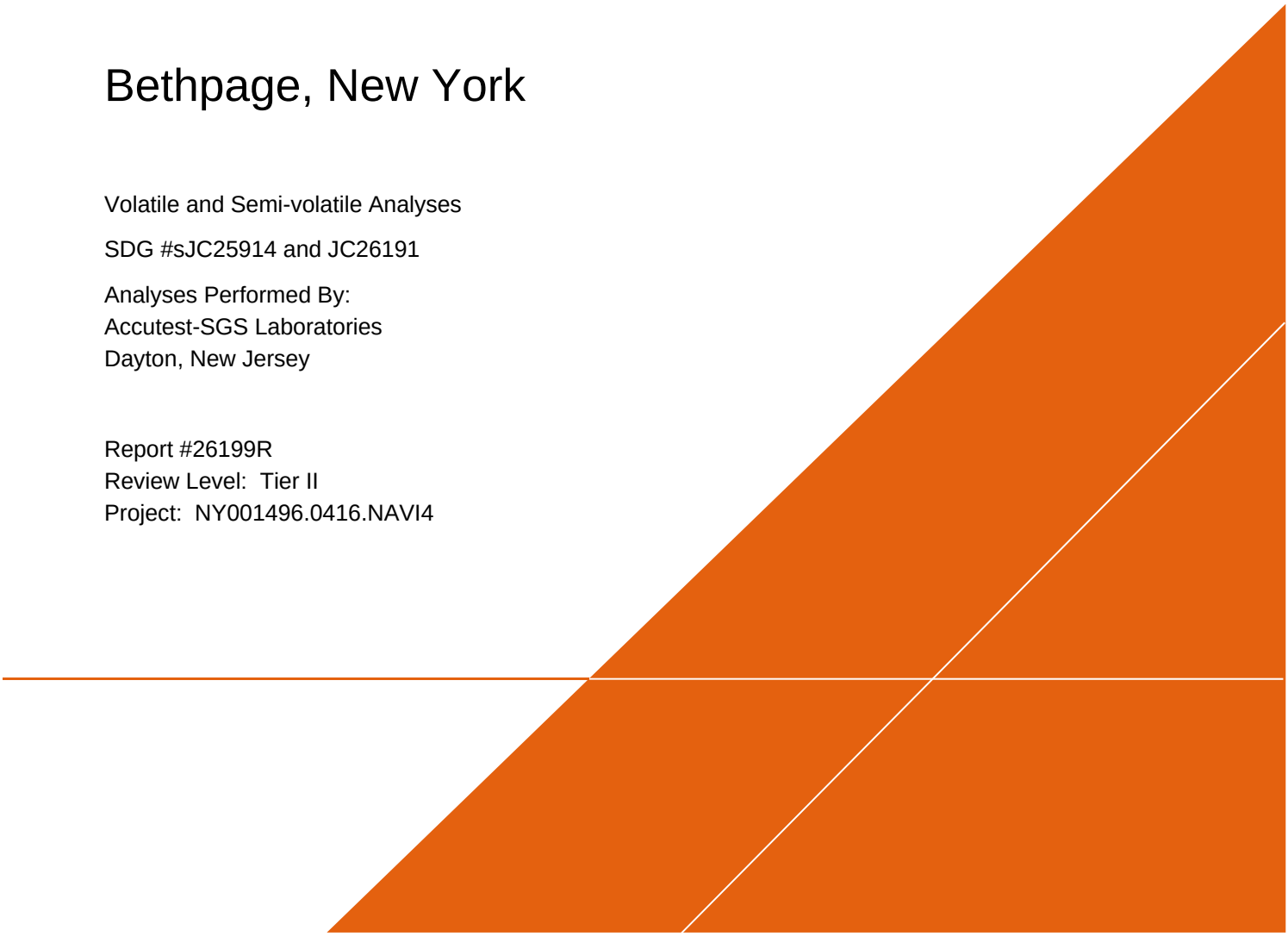
Bethpage, New York

Volatile and Semi-volatile Analyses

SDG #sJC25914 and JC26191

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

Report #26199R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC2591 and JC26191 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
JC25914	BPOW5-6	JC25914-1	Water	8/15/2016		X	X			
	BPOW5-5	JC25914-2	Water	8/15/2016		X	X			
	TB081516	JC25914-3	Water	8/15/2016		X				
JC26191	BPOW5-4	JC26191-1	Water	8/19/2016		X	X			
	TB081916	JC26191-2	Water	8/19/2016		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: JC25914X/404093 and JC26191X/404389.

2. The Chain-of-Custody sent to Gel Laboratories from Accutest inadvertently recorded sample location BPOW5-4 as BPOW4-**9.**

3. Matrix spike (MS) analysis was performed on sample location BPOW5-5 for VOC 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 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.

The MS exhibited acceptable recoveries in SDG JC25914.

A MS/MSD was not performed on a sample location associated with SDG JC26191.

5. Laboratory Control Sample (LCS) Analysis

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected with a sample location associated with these 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 exhibited acceptable RPDs in SDG JC25914.

A laboratory duplicate sample was not performed on a sample location associated with SDG JC6191.

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 524.2	.2Reported		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 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. 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 either SDG.

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

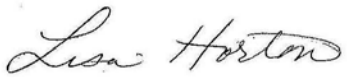
SVOCs: EPA 522-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: September 5, 2016/October 24, 2016

PEER REVIEW: Todd Church

DATE: October 26, 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 # JC25914

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 Vrabana, Pat Prezarski Phone #: 516661-7061

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	Preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW5-6		8/15/16	1330	pp	GW	5	3								2	3	2	SUB
2	BPOW5-5		8/15/16	1308	ma	GW	5	3								2	3	2	
3	TB081516MA1		8/15/16	1000	—	TB	2	2									2		V919

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

For VOCs, (V524SL4+40, VMS+F113).

OU2 Hydro

INITIAL ASESSMENT 3B (AB)

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 [signature]	8/15/16 1645	1 Chris Laul 8/16/16 9:40	2 Chris Laul	8/16/16/1655	2 [signature]
3		3	4		4
5		5	Custody Seal # 659 [x]	Intact [ ] Not intact	Preserved where applicable [x] On Ice [x] Cooler Temp. 2.9° C CP

5.1

5

JC25914: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW5-6		
Lab Sample ID:	JC25914-1	**Date Sampled:**	08/15/16
Matrix:	AQ - Ground Water	**Date Received:**	08/16/16
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]	1B105286.D	1	08/17/16	BK	n/a	n/a	V1B4994
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:	BPOW5-6		
Lab Sample ID:	JC25914-1	**Date Sampled:**	08/15/16
Matrix:	AQ - Ground Water	**Date Received:**	08/16/16
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	106%		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.

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:	BPOW5-5		
Lab Sample ID:	JC25914-2	**Date Sampled:**	08/15/16
Matrix:	AQ - Ground Water	**Date Received:**	08/16/16
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]	1B105287.D	1	08/17/16	BK	n/a	n/a	V1B4994
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	0.81	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	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:	BPOW5-5		
Lab Sample ID:	JC25914-2	**Date Sampled:**	08/15/16
Matrix:	AQ - Ground Water	**Date Received:**	08/16/16
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	101%		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:	TB081516MO1		
Lab Sample ID:	JC25914-3	**Date Sampled:**	08/15/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/16/16
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]	1B105288.D	1	08/17/16	BK	n/a	n/a	V1B4994
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:	TB081516MO1		
Lab Sample ID:	JC25914-3	**Date Sampled:**	08/15/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/16/16
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	101%		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 404093

CHAIN OF CUSTODY

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

Page 1 of 1

FED-EX Tracking # | Bottle Order Control #

SGS Accutest Quote # | SGS Accutest Job # JC25914X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: kelly.patterson@sgs.com E-mail:
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)

Sim 14 Dioxane via 522 method: Low 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		
1X	BPOW5-6		8/15/16	1:30:00 PM	PP	AQ	2								2	X	
2X	BPOW5-5		8/15/16	1:08:00 PM	MO	AQ	2								2	X	

Number of preserved Bottles

LAB USE ONLY

Turnaround Time (Business days)

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

Approved By (SGS Accutest PM): / Date:

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: 1	Date Time: 8/17/16 900	Received By: 1	8/18/16 9:15	Relinquished By:	Date Time:	Received By: 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 # 199	[ ] 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: 404093 GEL Work Order: 404093

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: Cameron Bearden **Name: Cameron Bearden**

Date: 09 SEP 2016 **Title: Group Leader**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404093**	**Date Collected:**	**08/15/2016 13:30**	**Matrix:**	**WATER**
Lab Sample ID:	**404093001**	**Date Received:**	**08/18/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 13:07**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0910.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.127	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC25914X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404093**	**Date Collected:**	**08/15/2016 13:08**	**Matrix:**	**WATER**
Lab Sample ID:	**404093002**	**Date Received:**	**08/18/2016 09:15**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 01:21**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3117.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.25	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC25914X

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 # JC26191

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 Prozarski / Mike Graham Phone #: 516 661-7011

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	Preprescrived NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW5-9		8/19/16	1128	PP	GW	5	3								2	3	2	
2	TB081916 M01		8/19/16	0800	—	TB	2	2									2		SUB
																			V962

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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT 2B OB

LABEL VERIFICATION OK

OU2 Hydro

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]	1250 8/19/16	1 Chris Laul 8/19/16 12:50	2 Chris Laul	8/19/16/1220	2 [signature]
3		3	4		4
5		5			

Custody Seal # [x] [ ] Intact Not intact Preserved where applicable [ ] On Ice [x] Cooler Temp. 2.1°C IR

5.1

5

JC26191: Chain of Custody
Page 1 of 3

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC26191-1	**Date Sampled:**	08/19/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105375.D	1	08/24/16	BK	n/a	n/a	V1B4999
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

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

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

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC26191-1	**Date Sampled:**	08/19/16
Matrix:	AQ - Ground Water	**Date Received:**	08/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		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.

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:	TB081916MD1		
Lab Sample ID:	JC26191-2	**Date Sampled:**	08/19/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105376.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	TB081916MD1		
Lab Sample ID:	JC26191-2	**Date Sampled:**	08/19/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/19/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	100%		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 404389½

CHAIN OF CUSTODY

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

Page 1 of 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job: JC26191X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): PP Phone:	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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		SB522SIM14DIOX, Sim 14 Diox via 522 method low PQL needed	LAB USE ONLY
1X	BPOW5-9		8/19/16	11:28:00 AM	PP	AQ	2									2	X	

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	P Vassilatos	8/22/16 17:00	FedEx			
2						Jacob 8/23/16 9:10
3	Relinquished by Sampler:	Date Time: 8/23/16 0910	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal # 214	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: 404389 GEL Work Order: 404389

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: 12 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404389**	**Date Collected:**	**08/19/2016 11:28**	**Matrix:**	**WATER**
Lab Sample ID:	**404389001**	**Date Received:**	**08/23/2016 09:10**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-9** 4	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 13:35**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0911.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.25	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26191X

ARCADIS Design & Consultancy for natural and built assets

Northrop Grumman Corporation -

Operable Unit 2

Data Review

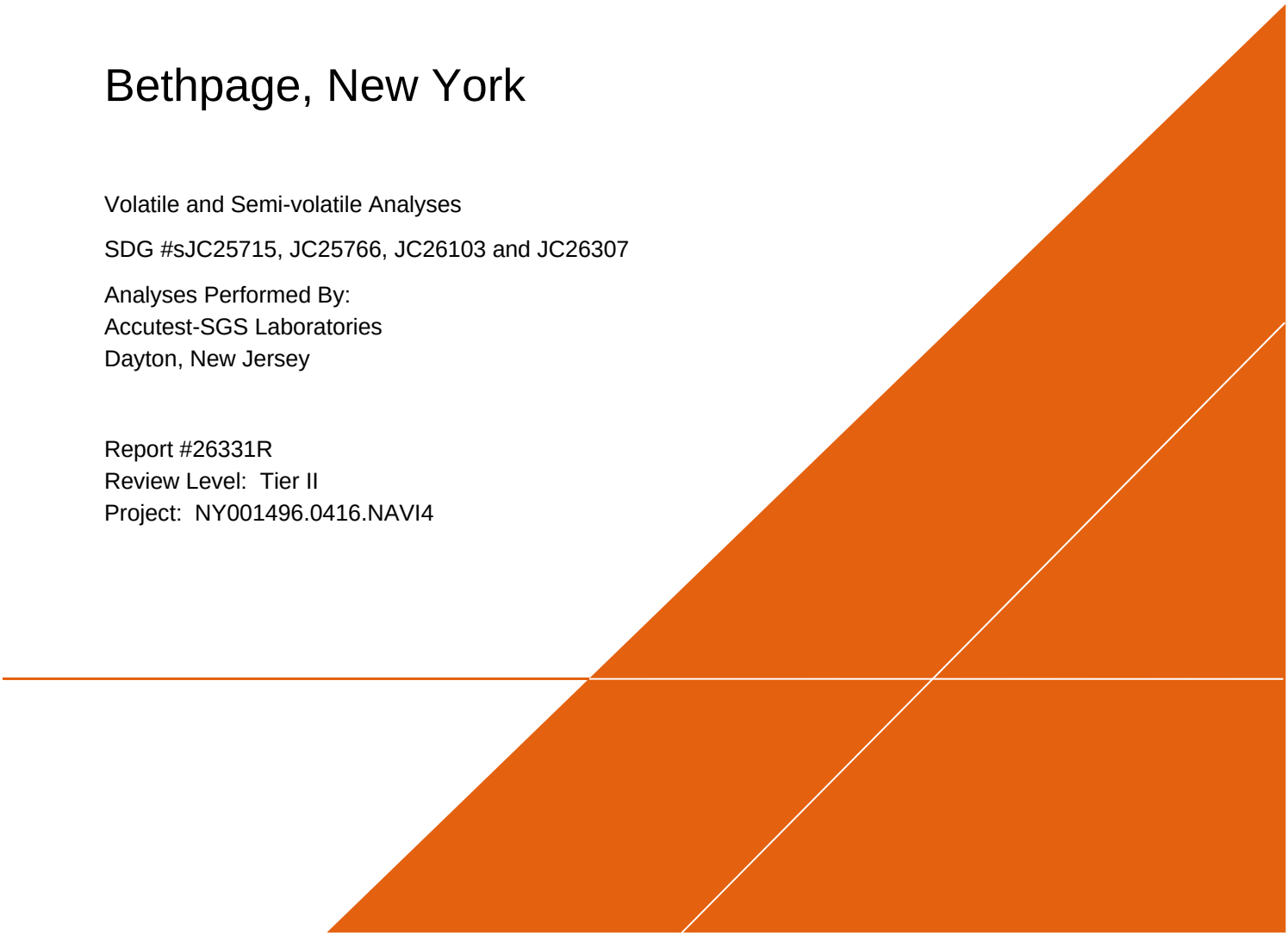
Bethpage, New York

Volatile and Semi-volatile Analyses

SDG #sJC25715, JC25766, JC26103 and JC26307

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

Report #26331R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC25715, JC25766, JC26103 and JC26307 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
JC25715	BPOW2-2	JC25715-1	Water	8/10/2016		X	X			
	TB081016MO1	JC25715-2	Water	8/10/2016		X				
JC25766	BPOW2-1	JC25766-1	Water	8/12/2016		X	X			
	TB081216MO1	JC25766-2	Water	8/12/2016		X				
JC26103	BPOW5-3	JC26103-1	Water	8/17/2016		X	X			
	BPOW5-1	JC26103-2	Water	8/17/2016		X	X			
	BPOW5-2	JC26103-3	Water	8/17/2016		X	X			
	TB081716MD1	JC26103-4	Water	8/17/2016		X				
JC26307	BPOW6-1	JC26307-1	Water	8/22/2016		X	X			
	BPOW6-2	JC26307-2	Water	8/22/2016		X	X			
	TB082216MO1	JC26307-3	Water	8/22/2016		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: JC25715X/403814, JC25766X/403815, JC26103X/404292 and JC26307X/404487.

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 detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDGs JC25715 or JC25766.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination in SDGs JC26103 or JC26307.

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 SDGs JC25715, JC25766, JC26103 or JC26307.

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 JC25715 BPOW2-2	Freon113	>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

All compounds associated with the LCS analysis exhibited recoveries within the control limits in SDGs JC25766, JC26103 and JC26307.

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 these SDGs.

7. Laboratory Duplicate Analysis

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

A laboratory duplicate sample was not performed on a sample location associated with SDGs JC25715, JC25766, JC26103 or JC26307.

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 524.2	.2Reported		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
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 JC26103 and JC26307.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDGs JC25715X and JC25766X.

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 SDGs JC25715X, JC25766X and JC26103.

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 JC26307: BPOW6-1	1,4 -Dioxane	<LL but >10%	AC

Note:

AC Acceptable

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
> 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
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

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

Sample Locations	Compound
SDG JC26307: BPOW6-1	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.

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

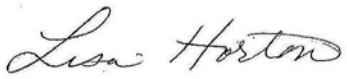
SVOCs: EPA 522-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X	X		
B. Equipment blanks					X
Laboratory Control Sample (LCS) %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: 

DATE: September 28, 2016/Ocotber24, 2016

PEER REVIEW: Dennis Capria

DATE: October 26, 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 # JC25715

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 Redzepagic M Srabone Phone #: 516 661 2061

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	NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 2-2		8/10/16	1250	MO	GW	5	3								2	3	2	SUB
2	TB081016 M01		8/10/16	0900	—	TB	2	2									2		
																			V890

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

INITIAL ASESSMENT TB OK
LABEL VERIFICATION OK

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
For VOCs, (V524SL4+40, VMS+F113).
OU2 Hydro

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]	8/10/16 1700	1 [signature] 8/11/16 10:10	2 [signature]	8/11/16 09:2[illegible]	2 [signature]
3		3	4		4
5		5	Custody Seal # 492 ☑ Intact ☐ Not intact	Preserved where applicable ☑ OK	On Ice ☑ Cooler Temp. 2.1 C° IG

JC25715: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW2-2		
Lab Sample ID:	JC25715-1	**Date Sampled:**	08/10/16
Matrix:	AQ - Ground Water	**Date Received:**	08/11/16
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]	1B105188.D	1	08/12/16	BK	n/a	n/a	V1B4992
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 [b]	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:	BPOW2-2		
Lab Sample ID:	JC25715-1	**Date Sampled:**	08/10/16
Matrix:	AQ - Ground Water	**Date Received:**	08/11/16
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	110%		78-114%
460-00-4	4-Bromofluorobenzene	104%		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:	TB081016MO1		
Lab Sample ID:	JC25715-2	**Date Sampled:**	08/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/11/16
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]	1B105206.D	1	08/15/16	BK	n/a	n/a	V1B4992
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

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

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

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

Report of Analysis

Client Sample ID:	TB081016MO1		
Lab Sample ID:	JC25715-2	**Date Sampled:**	08/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/11/16
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	96%		78-114%
460-00-4	4-Bromofluorobenzene	105%		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

403814

Page 1 of 1

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 JC25715X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): MO Phone:	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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	SB522SIM14DIOX, Sim 14dioxane via EPA 522 method low PQL needed.	LAB USE ONLY
1X	BPOW2-2		8/10/16	12:50:00 PM	MO	AQ	1								1	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		8/12/16 1700	1	2	8-13-16	2
3	Relinquished by Sampler:	Date Time: 8.13.16 0905	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 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: 403814 GEL Work Order: 403814

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: Cameron Bearden **Name: Cameron Bearden**

Date: 02 SEP 2016 **Title: Group Leader**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**403814**	**Date Collected:**	**08/10/2016 12:50**	**Matrix:**	**WATER**
Lab Sample ID:	**403814001**	**Date Received:**	**08/13/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW2-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595756**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**08/27/2016 21:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/23/2016 12:20**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s082716.B\s6h2721.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		0.346	ug/L	0.040	0.040	0.200

SGS ACCUTEST
JC25715X

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 ___ OF ___

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC25766

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 Colman Phone #: 516-661-7061

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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Preserved $NaHSO_4$	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW2-1		8/12/16	1325	MD	GW	5	3								2	2	2	V897
2	TB08121616M01		8/12/16	0900	—	TB	2	2									2		SUB

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

Analyze VOCs for 36 constituents and 40TICS
For VOCs, (V524SL4+40, VMS+F113).
INITIAL ASESSMENT
OU2 Hydro 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		8/12/16 1335	1 Chris Laul	8/12/16 13:35		
2				Chris Laul	8/12/16 1625	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 6556 ☒ Intact ☐ Not Intact	Preserved where applicable ☐	On Ice ☒ Cooler Temp. 1.4°C

5.1 5

JC25766: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW2-1		
Lab Sample ID:	JC25766-1	**Date Sampled:**	08/12/16
Matrix:	AQ - Ground Water	**Date Received:**	08/12/16
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]	1B105212.D	1	08/15/16	BK	n/a	n/a	V1B4992
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	0.067	0.50	0.057	ug/l	J
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:	BPOW2-1		
Lab Sample ID:	JC25766-1	**Date Sampled:**	08/12/16
Matrix:	AQ - Ground Water	**Date Received:**	08/12/16
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	101%		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:	TB081216MO1		
Lab Sample ID:	JC25766-2	**Date Sampled:**	08/12/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/12/16
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]	1B105213.D	1	08/15/16	BK	n/a	n/a	V1B4992
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

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

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

Report of Analysis

Client Sample ID:	TB081216MO1		
Lab Sample ID:	JC25766-2	**Date Sampled:**	08/12/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/12/16
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	99%		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.

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

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

403815

Page 1 of 1

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job: JC25766X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayur.patel@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MP 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 , 14 dioxane via EPA 522 method low PQL needed
1X	BPOW2-1		8/12/16	1:25:00 PM	MP	AQ	2								2	X

LAB USE ONLY

Turnaround Time (Business days)

- [ ] 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

Approved By (SGS 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

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

Relinquished by Sampler: 1	Date Tir: 8/12/16 1700	Received By: 1	Relinquished By: 2	Date Time: 8.13.16	Received By: 2 P. Plant
Relinquished by Sampler: 3	Date Time: 8.13.16 0905	Received By: 3 P. Plant	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.

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 403815 GEL Work Order: 403815

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.

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: 02 SEP 2016 **Title: Group Leader**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**403815**	**Date Collected:**	**08/12/2016 13:25**	**Matrix:**	**WATER**
Lab Sample ID:	**403815001**	**Date Received:**	**08/13/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW2-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595756**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**08/27/2016 21:40**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/23/2016 12:20**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s082716.B\s6h2722.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		0.547	ug/L	0.040	0.040	0.200

SGS ACCUTEST
JC25766X

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

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FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC26103

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 Drabona Pat Prezeski Phone #: 516 661 7061

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 5-3		8/17/16	1130	mo	GW	5	3								2	3	2	SUB
2	BPOW 5-1		8/17/16	1158	pp	GW	5	3								2	3	2	
3	BPOW 5-2		8/17/16	1510	mo	GW	5	3								2	3	2	V952
4	TB081716M01		8/17/16	0800	—	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)
- [ ] 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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT AMA

OU2 Hydro

LABEL VERIFICATION OB

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]	8/17/16 1830	1 [signature] 8/18/16 1125	2 [signature]	8/18/16 17:20	2 [signature]
3		3	4		4
5		5			

Custody Seal # [ ] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [x]
Cooler Temp 2.8°C

JC26103: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW5-3		
Lab Sample ID:	JC26103-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105388.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	JC26103-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

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

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

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

Report of Analysis

Client Sample ID:	BPOW5-1		
Lab Sample ID:	JC26103-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105389.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	BPOW5-1		
Lab Sample ID:	JC26103-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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.

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:	BPOW5-2		
Lab Sample ID:	JC26103-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105390.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	BPOW5-2		
Lab Sample ID:	JC26103-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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:	TB081716MD1		
Lab Sample ID:	JC26103-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105391.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	TB081716MD1		
Lab Sample ID:	JC26103-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		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

SGS ACCUTEST

CHAIN OF CUSTODY

40f292X

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 # JC26103X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: kelly.patterson@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MD 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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		*Sim 14 Dioxane via 522 method. Low PQL needed
1X	BPOW5-3		8/17/16	11:30:00 AM	MD	AQ	2									2	X
2X	BPOW5-1		8/17/16	11:58:00 AM	PP	AQ	2									2	X
3X	BPOW5-2		8/17/16	3:10:00 PM	MD	AQ	2									2	X

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)

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 9/1/2016

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS 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

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	8/19/16 17:00	1 Fed Ex	2		2
Relinquished by Sampler: 3	Date Time: 8-22-16 08:45	Received By: 3 Mary Flynn 8145 8/22/16	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.

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: JC26103X GEL Work Order: 404292

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: 09 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC26103X**	**Date Collected:**	**08/17/2016 11:30**	**Matrix:**	**WATER**
Lab Sample ID:	**404292001**	**Date Received:**	**08/20/2016 08:45**		
Client Sample:	**1X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 02:12**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3119.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.19	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC26103X**	**Date Collected:**	**08/17/2016 11:58**	**Matrix:**	**WATER**
Lab Sample ID:	**404292002**	**Date Received:**	**08/20/2016 08:45**		
Client Sample:	**2X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 02:38**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3120.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC26103X**	**Date Collected:**	**08/17/2016 15:10**	**Matrix:**	**WATER**
Lab Sample ID:	**404292003**	**Date Received:**	**08/20/2016 08:45**		
Client Sample:	**3X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 03:03**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3121.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC26307

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 Pazerski, Mike Orsborn Phone #: 516 661 9061

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	Na HSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW6-1		8/22/16	1430	MO	GW	5	3								2	3	2	
2	BPOW6-2		8/22/16	1405	PP	GW	5	3								2	3	2	SUB
3	TB082216M01		8/22/16	0900	—	TB	2	2									2		V972

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

For VOCs, (V524SL4+40, VMS+F113),

INITIAL ASESSMENT Am IA

OU2 Hydro LABEL VERIFICATION Ok

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		8/22/16	Robert Chambers	2 Robert Chambers	8-23-16 14:28	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 669 ☐ Intact ☐ Not intact	Preserved where applicable	On Ice ☒ Cooler Temp. I.G 2.5°C

JC26307: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-1		
Lab Sample ID:	JC26307-1	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105385.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	BPOW6-1		
Lab Sample ID:	JC26307-1	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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:	BPOW6-2		
Lab Sample ID:	JC26307-2	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105386.D	1	08/24/16	BK	n/a	n/a	V1B4999
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	0.72	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	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	0.11	0.50	0.044	ug/l	J
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:	BPOW6-2		
Lab Sample ID:	JC26307-2	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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.

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:	TB082216MO1		
Lab Sample ID:	JC26307-3	**Date Sampled:**	08/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105387.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	TB082216MO1		
Lab Sample ID:	JC26307-3	**Date Sampled:**	08/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		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

SGS ACCUTEST

404487 Y.

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 JC26307X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayur.patel@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MD 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, 14DIOX via 522 method low PQL needed.	LAB USE ONLY
1X	BPOW6-1		8/22/16	2:30:00 PM	MD	AQ	2									2	X	Sub
2X	BPOW6-2		8/22/16	2:05:00 PM	MD	AQ	2									2	X	

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. 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

Approved By (SGS 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

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 Beumyz	8/23/16 1200	1 [signature] 8/24/16 8:50	2		2
3		3	4		4
5		5	Custody Seal # 228 ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☐ Cooler Temp.

2

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 404487 GEL Work Order: 404487

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: 13 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404487**	**Date Collected:**	**08/22/2016 14:30**	**Matrix:**	**WATER**
Lab Sample ID:	**404487001**	**Date Received:**	**08/24/2016 08:50**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 03:53**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3123.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	UJ	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26307X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404487**	**Date Collected:**	**08/22/2016 14:05**	**Matrix:**	**WATER**
Lab Sample ID:	**404487002**	**Date Received:**	**08/24/2016 08:50**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 14:02**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0912.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26307X

ARCADIS Design & Consultancy for natural and built assets

Northrop Grumman Corporation -

Operable Unit 2

Data Review

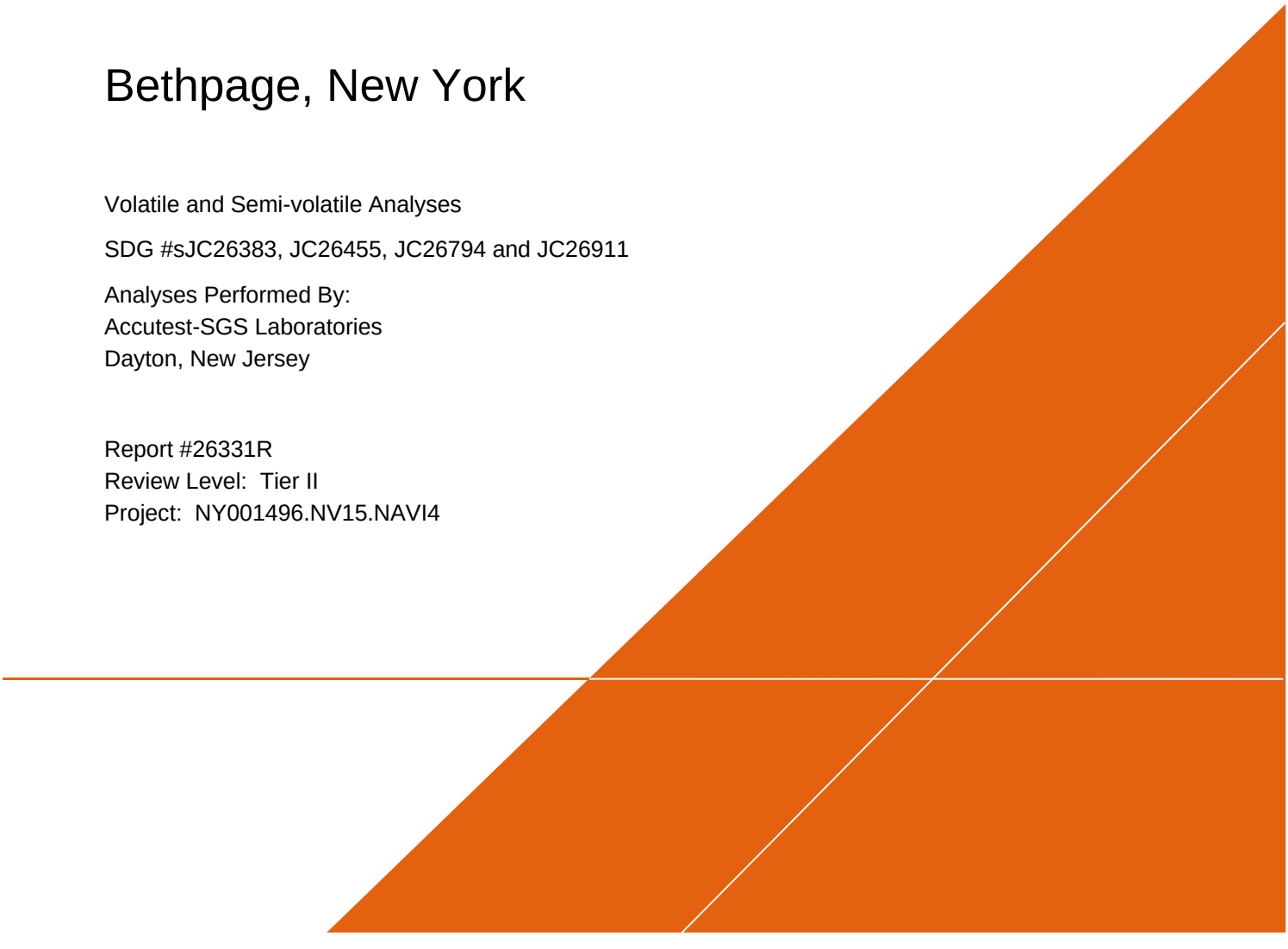
Bethpage, New York

Volatile and Semi-volatile Analyses

SDG #sJC26383, JC26455, JC26794 and JC26911

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

Report #26331R
Review Level: Tier II
Project: NY001496.NV15.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # sJC26383, JC26455, JC26794 and JC26911 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
JC26383	BPOW6-5	JC26383-1	Water	8/23/2016		X	X			
	TB082316MD1	JC26383-2	Water	8/23/2016		X				
JC26455	BPOW6-4	JC26455-1	Water	8/24/2016		X	X			
	TB082416MD1	JC26455-2	Water	8/24/2016		X				
JC26794	BPOW2-3	JC26794-1	Water	8/30/2016		X	X			
	TB083016MD1	JC26794-2	Water	8/30/2016		X				
JC26911	BPOW6-3	JC26911-1	Water	8/31/2016		X	X			
	BPOW6-6	JC26911-2	Water	8/31/2016		X	X			
	TB083116MO1	JC26911-3	Water	8/31/2016		X				
	REP083116MO1	JC26911-4	Water	8/31/2016	BPOW6-6	X	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: JC26383X/404741, JC26455X/404691, JC26794X/405223 and JC26911X/405222.

2. Accutest inadvertently recorded sample location REP083116MO1 as REP0831616MO**L** on the Chain-of-Custody sent to GEL Laboratory.

3. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location BPOW6-5 for VOC analysis; and, sample location BPOW6-3 for SVOC 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 SDGs JC26383, JC26455, JC26794 or JC26911.

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 exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC26383.

A MS/MSD was not performed on a sample location associated with SDGs JC26455, JC26794 or JC26911.

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 SDGs JC26383, JC26455, JC26794 and JC26911.

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
SDG JC26911 BPOW6-6/ REP083116MO1	All Compounds	U	U	AC

Note:

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 SDGs JC26383, JC26455 and JC26794.

7. Laboratory Duplicate Analysis

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

concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A laboratory duplicate sample was not performed on a sample location associated with SDGs JC26383, JC26455, JC26794 or JC26911.

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 524.2	.2Reported		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		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 JC26383X, JC26455X, JC26794X and JC26911X.

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 SDGs JC26383X, JC26455X, JC26794X.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC26911X.

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

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

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits 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 SDGs JC26383X, JC26455X and JC26794X.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC26911X: BPOW6-6/ REP083116MO1	1,4-Dioxane	U	U	AC

Notes:

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

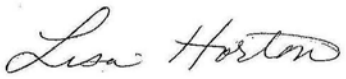
SVOCs: EPA 522-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		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		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: 

DATE: September 28, 2016/October 24, 2016

PEER REVIEW: Todd Church

DATE: October 26, 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 # JC26383

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 Abom Phone #: 516-661-2661

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	$NaHSO_4$	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW G-5		8/23/16	1340	MO	GW	15	9								6	9	6	SUB
2	TB082316MOI		8/24/16	0900	—	TB	2	2									2		V982

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: ZA 8/24

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

For VOCs, (V524SL4+40, VMS+FI13).

BPOW6-5 To be used as a MS/MSD

OU2 Hydro

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		1710 8/23/16	1	2	8/24/16 0945	2
3			3	4		4
5			5			

Custody Seal # 889, 890 Intact / Not Intact Preserved where applicable On Ice Cooler Temp: 0.5 C IP

5.1 5

JC26383: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-5		
Lab Sample ID:	JC26383-1	**Date Sampled:**	08/23/16
Matrix:	AQ - Ground Water	**Date Received:**	08/24/16
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]	1B105531.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW6-5		
Lab Sample ID:	JC26383-1	**Date Sampled:**	08/23/16
Matrix:	AQ - Ground Water	**Date Received:**	08/24/16
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	104%		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.

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:	TB082316MD1		
Lab Sample ID:	JC26383-2	**Date Sampled:**	08/23/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/24/16
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]	1B105532.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB082316MD1		
Lab Sample ID:	JC26383-2	**Date Sampled:**	08/23/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/24/16
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	101%		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.

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

404741 ½

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 # JC26383X

Client / Reporting Information

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

SB522SIM14DIOX, 14 Dioxane via 522 method low 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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		SB522SIM14DIOX, 14 Dioxane via 522 method low pql needed.	LAB USE ONLY
1DX	BPOW6-5		8/23/16	1:40:00 PM	MD	AQ	2									2	X	sub
1SX	BPOW6-5		8/23/16	1:40:00 PM	MD	AQ	2									2	X	
1X	BPOW6-5		8/23/16	1:40:00 PM	MD	AQ	2									2	X	

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	DVassilatos	8/25/16 17:00	1 FedEx	2	8/26/16 0900	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 233 [ ] 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: 404741 GEL Work Order: 404741

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: 14 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404741**	**Date Collected:**	**08/23/2016 13:40**	**Matrix:**	**WATER**
Lab Sample ID:	**404741001**	**Date Received:**	**08/26/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPO26-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 11:48**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0907.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26383X

ACCUTEST LABORATORIES

GW
WTB

CHAIN OF CUSTODY

Accutest New Jersey/SPL Environmental
2235 Route 130, Dayton, NJ 08810
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www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC26455

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 Prezesky Mike Robins Phone #: 516-461-7061

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	BP0416-4		08/24/16	1308	PP	GW	5	3								2	3	2	SUB
2	TB082416M01		8/24/16	0900	—	TB	2	2									2		V994

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 Labilink

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 CUMMC+

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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT AM/18

OU2 Hydro

LABEL VERIFICATION DR

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		8/24/16 1730	1	8/25/16 1010	8/25/16 1410	2
3			3			4
5			5	Custody Seal #	Intact / Not intact	Preserved where applicable: On Ice ✓ Cooler Temp 3.1 2.9 IC

5.1 5

JC26455: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-4		
Lab Sample ID:	JC26455-1	**Date Sampled:**	08/24/16
Matrix:	AQ - Ground Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105534.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW6-4		
Lab Sample ID:	JC26455-1	**Date Sampled:**	08/24/16
Matrix:	AQ - Ground Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	100%		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:	TB082416MD1		
Lab Sample ID:	JC26455-2	**Date Sampled:**	08/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105533.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB082416MD1		
Lab Sample ID:	JC26455-2	**Date Sampled:**	08/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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

SGS ACCUTEST

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
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www.sgs.com

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Page 1 of 1

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job # JC26455X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): PP Phone:	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, 14 Diox via 522 method low PQL needed	LAB USE ONLY
1X	BPOW6-4		8/24/16	1:08:00 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 dat

Comments / Special Instructions

Ref: JC26455X
Dep:
Date: 25Aug16
Wgt: 14.35 LBS
DV: 0.00

SHIPPING: 30.7
SPECIAL: 0.5
HANDLING: 0.0
TOTAL: 31.2

Svcs: PRIORITY OVERNIGHT
TRCK: 5633 9349 4204

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 Berenzon	8/25/16 1700	Mary Horan 8/26/16 900	2		2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 237	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: 404691 GEL Work Order: 404691

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: 14 SEP 2016 **Title: Data Validator**

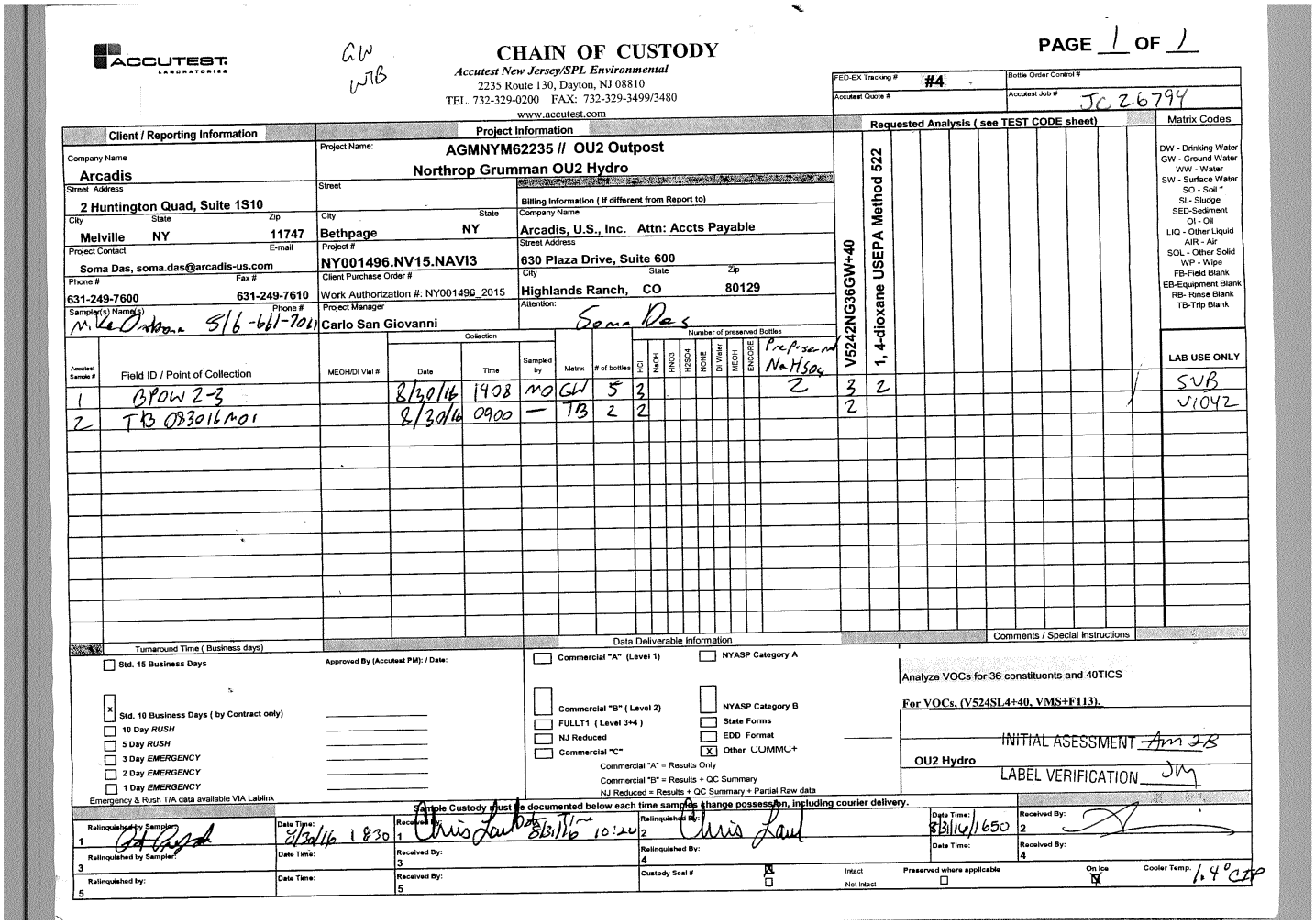
2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404691**	**Date Collected:**	**08/24/2016 13:06**	**Matrix:**	**WATER**
Lab Sample ID:	**404691001**	**Date Received:**	**08/26/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 14:30**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0913.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26455X



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 # JC26794

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 Ostrona Phone #: 516-661-7061

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	Preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 2-3		8/30/16	1408	MO	GW	5	3								2	3	2	SUB
2	TB 083016M01		8/30/16	0900	—	TB	2	2									2		V1042

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*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT Am 2B

OU2 Hydro

LABEL VERIFICATION JM

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]	8/30/16 1830	1 Chris Laul Date 8/31/16 Time 10:20	2 Chris Laul	8/31/16 1650	2 [signature]
3		3	4		4
5		5			

Custody Seal # [x] Intact [ ] Not Intact
Preserved where applicable [ ]
On Ice [x]
Cooler Temp. 1.4° CIP

5.1
5

JC26794: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW2-3		
Lab Sample ID:	JC26794-1	**Date Sampled:**	08/30/16
Matrix:	AQ - Ground Water	**Date Received:**	08/31/16
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]	1B105537.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW2-3		
Lab Sample ID:	JC26794-1	**Date Sampled:**	08/30/16
Matrix:	AQ - Ground Water	**Date Received:**	08/31/16
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	102%		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:	TB083016MD1		
Lab Sample ID:	JC26794-2	**Date Sampled:**	08/30/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/31/16
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]	1B105538.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB083016MD1		
Lab Sample ID:	JC26794-2	**Date Sampled:**	08/30/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/31/16
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	103%		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

405223

CHAIN OF CUSTODY

SGS ACCUTEST

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

Page 1 of 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: JC26794X

Client / Reporting Information

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

SB522SIM14DIOX, SB522SIM14DIOX, 14 Dioxane via EPA 522 method low 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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	SB522SIM14DIOX, SB522SIM14DIOX, 14 Dioxane via EPA 522 method low PQL needed.	LAB USE ONLY
1X	BPOW2-3		8/30/16	2:08:00 PM	MD	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 Due 9/21/2016

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: 1 DAssociate	Date Time: 9/2/16 17:00	Received By: 1 FedEx	Relinquished By: 2	Date Time:	Received By: 2
Relinquished by Sampler: 3 FX	Date Time: 9-3-16 0900	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 255 [ ] 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: 405223 GEL Work Order: 405223

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.
Q LCS recovery not within control limits
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: 23 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405223**	**Date Collected:**	**08/30/2016 14:08**	**Matrix:**	**WATER**
Lab Sample ID:	**405223001**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW2-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1598878**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/15/2016 15:55**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/15/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091516.B\s6i1506.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		3.21	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26794X

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 # JC26911

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 Gabon Phone #: 516-661-2061

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	Dr Water	MEOH	ENCORE	Preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 6-3		08/31/16	1600	mo	GW	5	3								2	3	2	SUB
2	BPOW 6-6		08/31/16	1155	mo	GW	5	3								2	3	2	
3	TB083116mol		8/31/16	0900	—	TB	2	2									2		V1058
4	REP083116mol		8/31/16	—	mo	GW	5	3								2	3	2	

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

INITIAL ASESSMENT 3B Dam
LABEL VERIFICATION DJ

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*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

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
For VOCs, (V524SL4+40, VMS+F113).
OU2 Hydro

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]	8/31/16 1810	1 [signature] Date 9/1/16 Time 11:30	2 [signature]	9/1/16 18:47	2 [signature]
3		3	4		4
5		5	Custody Seal # [x] [ ] Intact Not intact	Preserved where applicable [ ]	On Ice [x] Cooler Temp. 4.8C°, 3.7C°

2COOLERS IG, IG

5.1
5

JC26911: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-3		
Lab Sample ID:	JC26911-1	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105539.D	1	09/02/16	BK	n/a	n/a	V1B5008
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	0.61	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	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:	BPOW6-3		
Lab Sample ID:	JC26911-1	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		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:	BPOW6-6		
Lab Sample ID:	JC26911-2	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105540.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW6-6		
Lab Sample ID:	JC26911-2	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		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.

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:	TB083116MO1		
Lab Sample ID:	JC26911-3	**Date Sampled:**	08/31/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105541.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB083116MO1		
Lab Sample ID:	JC26911-3	**Date Sampled:**	08/31/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		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:	REP083116MO1		
Lab Sample ID:	JC26911-4	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105542.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	REP083116MO1		
Lab Sample ID:	JC26911-4	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		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

405222

Page 1 of 1

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 # JC26911X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): MO Phone:	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, SB522SIM14DIOX, 14 Dioxane via EPA 522 method low PQL needed.	LAB USE ONLY
1X	BPOW6-3		8/31/16	4:00:00 PM	MO	AQ	2									x	X	Sub
2X	BPOW6-6		8/31/16	11:55:00 AM	MO	AQ	2									x	X	
4X	REP083116MOL		8/31/16	12:00:00 AM	MO	AQ	2									x	X	

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 9/22/2016

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	BVassilatos	9/2/16 17:	1 FedEx	2		2
3		9-3-16 0900	3	4		4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 254	[ ] 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: 405222 GEL Work Order: 405222

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: 23 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405222**	**Date Collected:**	**08/31/2016 16:00**	**Matrix:**	**WATER**
Lab Sample ID:	**405222001**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1597677**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/14/2016 16:44**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/14/2016 09:40**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091416.B\s8i1407.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26911X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405222**	**Date Collected:**	**08/31/2016 11:55**	**Matrix:**	**WATER**
Lab Sample ID:	**405222002**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1597677**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/14/2016 18:01**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/14/2016 09:40**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091416.B\s8i1410.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26911X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405222**	**Date Collected:**	**08/31/2016 12:00**	**Matrix:**	**WATER**
Lab Sample ID:	**405222003**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**REP083116MOL** 1	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1597677**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/14/2016 18:26**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/14/2016 09:40**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091416.B\s8i1411.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26911X

ARCADIS Design & Consultancy for natural and built assets

Northrop Grumman Corporation -

Operable Unit 2

Data Review

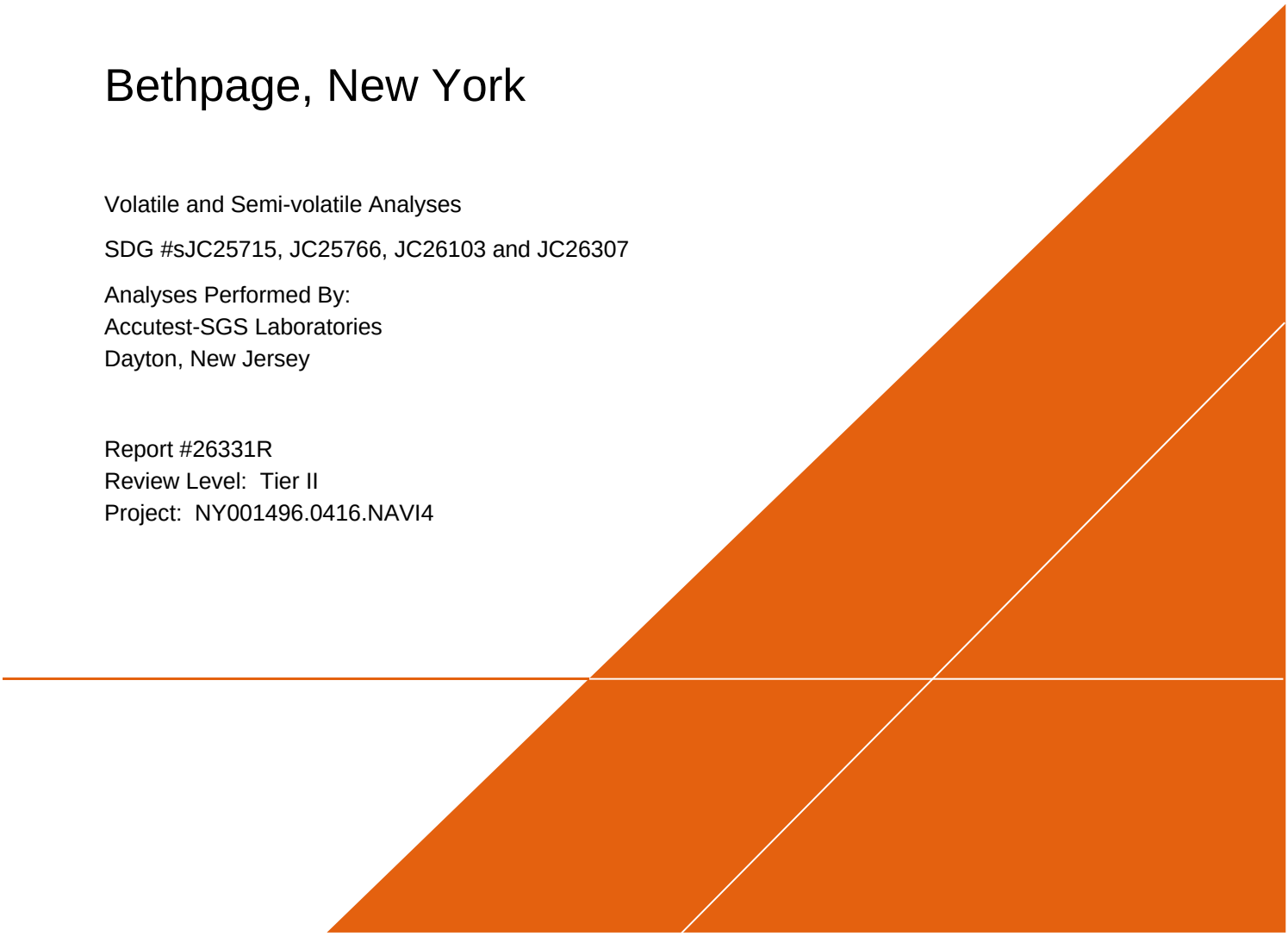
Bethpage, New York

Volatile and Semi-volatile Analyses

SDG #sJC25715, JC25766, JC26103 and JC26307

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

Report #26331R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC25715, JC25766, JC26103 and JC26307 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
JC25715	BPOW2-2	JC25715-1	Water	8/10/2016		X	X			
	TB081016MO1	JC25715-2	Water	8/10/2016		X				
JC25766	BPOW2-1	JC25766-1	Water	8/12/2016		X	X			
	TB081216MO1	JC25766-2	Water	8/12/2016		X				
JC26103	BPOW5-3	JC26103-1	Water	8/17/2016		X	X			
	BPOW5-1	JC26103-2	Water	8/17/2016		X	X			
	BPOW5-2	JC26103-3	Water	8/17/2016		X	X			
	TB081716MD1	JC26103-4	Water	8/17/2016		X				
JC26307	BPOW6-1	JC26307-1	Water	8/22/2016		X	X			
	BPOW6-2	JC26307-2	Water	8/22/2016		X	X			
	TB082216MO1	JC26307-3	Water	8/22/2016		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: JC25715X/403814, JC25766X/403815, JC26103X/404292 and JC26307X/404487.

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 detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDGs JC25715 or JC25766.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination in SDGs JC26103 or JC26307.

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 SDGs JC25715, JC25766, JC26103 or JC26307.

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 JC25715 BPOW2-2	Freon113	>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

All compounds associated with the LCS analysis exhibited recoveries within the control limits in SDGs JC25766, JC26103 and JC26307.

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 these SDGs.

7. Laboratory Duplicate Analysis

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

A laboratory duplicate sample was not performed on a sample location associated with SDGs JC25715, JC25766, JC26103 or JC26307.

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 524.2	.2Reported		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
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 JC26103 and JC26307.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required in SDGs JC25715X and JC25766X.

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 SDGs JC25715X, JC25766X and JC26103.

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 JC26307: BPOW6-1	1,4 -Dioxane	<LL but >10%	AC

Note:

AC Acceptable

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
> 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
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

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

Sample Locations	Compound
SDG JC26307: BPOW6-1	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.

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

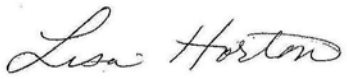
SVOCs: EPA 522-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X	X		
B. Equipment blanks					X
Laboratory Control Sample (LCS) %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: 

DATE: September 28, 2016/Ocotber24, 2016

PEER REVIEW: Dennis Capria

DATE: October 26, 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 # JC25715

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 Redzepagic M Srabone Phone #: 516 661 2061

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	NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 2-2		8/10/16	1250	MO	GW	5	3								2	3	2	SUB
2	TB081016 M01		8/10/16	0900	—	TB	2	2									2		
																			V890

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

INITIAL ASESSMENT TB OK
LABEL VERIFICATION OK

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
For VOCs, (V524SL4+40, VMS+F113).
OU2 Hydro

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]	8/10/16 1700	1 [signature] 8/11/16 10:10	2 [signature]	8/11/16 09:2[illegible]	2 [signature]
3		3	4		4
5		5	Custody Seal # 492 ☑ Intact ☐ Not intact	Preserved where applicable ☑ OK	On Ice ☑ Cooler Temp. 2.1 C° IG

JC25715: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW2-2		
Lab Sample ID:	JC25715-1	**Date Sampled:**	08/10/16
Matrix:	AQ - Ground Water	**Date Received:**	08/11/16
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]	1B105188.D	1	08/12/16	BK	n/a	n/a	V1B4992
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 [b]	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:	BPOW2-2		
Lab Sample ID:	JC25715-1	**Date Sampled:**	08/10/16
Matrix:	AQ - Ground Water	**Date Received:**	08/11/16
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	110%		78-114%
460-00-4	4-Bromofluorobenzene	104%		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:	TB081016MO1		
Lab Sample ID:	JC25715-2	**Date Sampled:**	08/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/11/16
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]	1B105206.D	1	08/15/16	BK	n/a	n/a	V1B4992
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

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

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

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

Report of Analysis

Client Sample ID:	TB081016MO1		
Lab Sample ID:	JC25715-2	**Date Sampled:**	08/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/11/16
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	96%		78-114%
460-00-4	4-Bromofluorobenzene	105%		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

403814

Page 1 of 1

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 JC25715X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): MO Phone:	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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	SB522SIM14DIOX, Sim 14dioxane via EPA 522 method low PQL needed.	LAB USE ONLY
1X	BPOW2-2		8/10/16	12:50:00 PM	MO	AQ	1								1	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		8/12/16 1700	1	2	8-13-16	2
3	Relinquished by Sampler:	Date Time: 8.13.16 0905	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 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: 403814 GEL Work Order: 403814

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: Cameron Bearden **Name: Cameron Bearden**

Date: 02 SEP 2016 **Title: Group Leader**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**403814**	**Date Collected:**	**08/10/2016 12:50**	**Matrix:**	**WATER**
Lab Sample ID:	**403814001**	**Date Received:**	**08/13/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW2-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595756**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**08/27/2016 21:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/23/2016 12:20**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s082716.B\s6h2721.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		0.346	ug/L	0.040	0.040	0.200

SGS ACCUTEST
JC25715X

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 ___ OF ___

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC25766

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 Colman Phone #: 516-661-7061

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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Preserved $NaHSO_4$	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW2-1		8/12/16	1325	MD	GW	5	3								2	2	2	V897
2	TB08121616M01		8/12/16	0900	—	TB	2	2									2		SUB

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

Analyze VOCs for 36 constituents and 40TICS
For VOCs, (V524SL4+40, VMS+F113).
INITIAL ASESSMENT
OU2 Hydro 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		8/12/16 1335	1 Chris Laul	8/12/16 13:35		
2				Chris Laul	8/12/16 1625	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 6556 ☒ Intact ☐ Not Intact	Preserved where applicable ☐	On Ice ☒ Cooler Temp. 1.4°C

5.1 5

JC25766: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW2-1		
Lab Sample ID:	JC25766-1	**Date Sampled:**	08/12/16
Matrix:	AQ - Ground Water	**Date Received:**	08/12/16
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]	1B105212.D	1	08/15/16	BK	n/a	n/a	V1B4992
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	0.067	0.50	0.057	ug/l	J
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	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BPOW2-1		
Lab Sample ID:	JC25766-1	**Date Sampled:**	08/12/16
Matrix:	AQ - Ground Water	**Date Received:**	08/12/16
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	101%		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
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB081216MO1		
Lab Sample ID:	JC25766-2	**Date Sampled:**	08/12/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/12/16
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]	1B105213.D	1	08/15/16	BK	n/a	n/a	V1B4992
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

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

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

Report of Analysis

Client Sample ID:	TB081216MO1		
Lab Sample ID:	JC25766-2	**Date Sampled:**	08/12/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/12/16
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	99%		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.

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

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

403815

Page 1 of 1

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job: JC25766X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayur.patel@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MP 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 , 14 dioxane via EPA 522 method low PQL needed
1X	BPOW2-1		8/12/16	1:25:00 PM	MP	AQ	2								2	X

LAB USE ONLY

Turnaround Time (Business days)

- [ ] 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

Approved By (SGS 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

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

Relinquished by Sampler: 1	Date Tir: 8/12/16 1700	Received By: 1	Relinquished By: 2	Date Time: 8.13.16	Received By: 2 P. Plant
Relinquished by Sampler: 3	Date Time: 8.13.16 0905	Received By: 3 P. Plant	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.

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 403815 GEL Work Order: 403815

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.

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: 02 SEP 2016 **Title: Group Leader**

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**403815**	**Date Collected:**	**08/12/2016 13:25**	**Matrix:**	**WATER**
Lab Sample ID:	**403815001**	**Date Received:**	**08/13/2016 09:05**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW2-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595756**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**08/27/2016 21:40**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/23/2016 12:20**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s082716.B\s6h2722.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		0.547	ug/L	0.040	0.040	0.200

SGS ACCUTEST
JC25766X

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

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PAGE 1 OF 1

FED-EX Tracking # #4
Bottle Order Control #
Accutest Quote #
Accutest Job # JC26103

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 Drabona Pat Prezeski Phone #: 516 661 7061

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 5-3		8/17/16	1130	mo	GW	5	3								2	3	2	SUB
2	BPOW 5-1		8/17/16	1158	pp	GW	5	3								2	3	2	
3	BPOW 5-2		8/17/16	1510	mo	GW	5	3								2	3	2	V952
4	TB081716M01		8/17/16	0800	—	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)
- [ ] 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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT AMA

OU2 Hydro

LABEL VERIFICATION OB

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]	8/17/16 1830	1 [signature] 8/18/16 1125	2 [signature]	8/18/16 17:20	2 [signature]
3		3	4		4
5		5			

Custody Seal # [ ] Intact [ ] Not intact
Preserved where applicable [ ]
On Ice [x]
Cooler Temp 2.8°C

JC26103: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW5-3		
Lab Sample ID:	JC26103-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105388.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	JC26103-1	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	97%		77-115%

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

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

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

Report of Analysis

Client Sample ID:	BPOW5-1		
Lab Sample ID:	JC26103-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105389.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	BPOW5-1		
Lab Sample ID:	JC26103-2	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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.

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:	BPOW5-2		
Lab Sample ID:	JC26103-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105390.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	BPOW5-2		
Lab Sample ID:	JC26103-3	**Date Sampled:**	08/17/16
Matrix:	AQ - Ground Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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:	TB081716MD1		
Lab Sample ID:	JC26103-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105391.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	TB081716MD1		
Lab Sample ID:	JC26103-4	**Date Sampled:**	08/17/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/18/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		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

SGS ACCUTEST

CHAIN OF CUSTODY

40f292X

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 # JC26103X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: kelly.patterson@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MD 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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		*Sim 14 Dioxane via 522 method. Low PQL needed
1X	BPOW5-3		8/17/16	11:30:00 AM	MD	AQ	2									2	X
2X	BPOW5-1		8/17/16	11:58:00 AM	PP	AQ	2									2	X
3X	BPOW5-2		8/17/16	3:10:00 PM	MD	AQ	2									2	X

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)

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 9/1/2016

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS 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

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	8/19/16 17:00	1 Fed Ex	2		2
Relinquished by Sampler: 3	Date Time: 8-22-16 08:45	Received By: 3 Mary Flynn 8145 8/22/16	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.

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: JC26103X GEL Work Order: 404292

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: 09 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC26103X**	**Date Collected:**	**08/17/2016 11:30**	**Matrix:**	**WATER**
Lab Sample ID:	**404292001**	**Date Received:**	**08/20/2016 08:45**		
Client Sample:	**1X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 02:12**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3119.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.19	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC26103X**	**Date Collected:**	**08/17/2016 11:58**	**Matrix:**	**WATER**
Lab Sample ID:	**404292002**	**Date Received:**	**08/20/2016 08:45**		
Client Sample:	**2X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 02:38**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3120.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC26103X**	**Date Collected:**	**08/17/2016 15:10**	**Matrix:**	**WATER**
Lab Sample ID:	**404292003**	**Date Received:**	**08/20/2016 08:45**		
Client Sample:	**3X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 03:03**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3121.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC26307

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 Pazerski, Mike Orsborn Phone #: 516 661 9061

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	Na HSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW6-1		8/22/16	1430	MO	GW	5	3								2	3	2	
2	BPOW6-2		8/22/16	1405	PP	GW	5	3								2	3	2	SUB
3	TB082216M01		8/22/16	0900	—	TB	2	2									2		V972

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

For VOCs, (V524SL4+40, VMS+F113),

INITIAL ASESSMENT Am IA

OU2 Hydro LABEL VERIFICATION Ok

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		8/22/16	Robert Chambers	2 Robert Chambers	8-23-16 14:28	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 669 ☐ Intact ☐ Not intact	Preserved where applicable	On Ice ☒ Cooler Temp. I.G 2.5°C

JC26307: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-1		
Lab Sample ID:	JC26307-1	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105385.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	BPOW6-1		
Lab Sample ID:	JC26307-1	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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:	BPOW6-2		
Lab Sample ID:	JC26307-2	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105386.D	1	08/24/16	BK	n/a	n/a	V1B4999
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	0.72	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	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	0.11	0.50	0.044	ug/l	J
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:	BPOW6-2		
Lab Sample ID:	JC26307-2	**Date Sampled:**	08/22/16
Matrix:	AQ - Ground Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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.

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:	TB082216MO1		
Lab Sample ID:	JC26307-3	**Date Sampled:**	08/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105387.D	1	08/24/16	BK	n/a	n/a	V1B4999
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:	TB082216MO1		
Lab Sample ID:	JC26307-3	**Date Sampled:**	08/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/23/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		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

SGS ACCUTEST

404487 Y.

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 JC26307X

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: mayur.patel@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): MD 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, 14DIOX via 522 method low PQL needed.	LAB USE ONLY
1X	BPOW6-1		8/22/16	2:30:00 PM	MD	AQ	2									2	X	Sub
2X	BPOW6-2		8/22/16	2:05:00 PM	MD	AQ	2									2	X	

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. 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

Approved By (SGS 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

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 Beumyz	8/23/16 1200	1 [signature] 8/24/16 8:50	2		2
3		3	4		4
5		5	Custody Seal # 228 ☐ 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: 404487 GEL Work Order: 404487

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: 13 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404487**	**Date Collected:**	**08/22/2016 14:30**	**Matrix:**	**WATER**
Lab Sample ID:	**404487001**	**Date Received:**	**08/24/2016 08:50**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1593358**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/01/2016 03:53**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**08/31/2016 14:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s083116.B\s8h3123.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	UJ	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26307X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404487**	**Date Collected:**	**08/22/2016 14:05**	**Matrix:**	**WATER**
Lab Sample ID:	**404487002**	**Date Received:**	**08/24/2016 08:50**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 14:02**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0912.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26307X

ARCADIS Design & Consultancy for natural and built assets

Northrop Grumman Corporation -

Operable Unit 2

Data Review

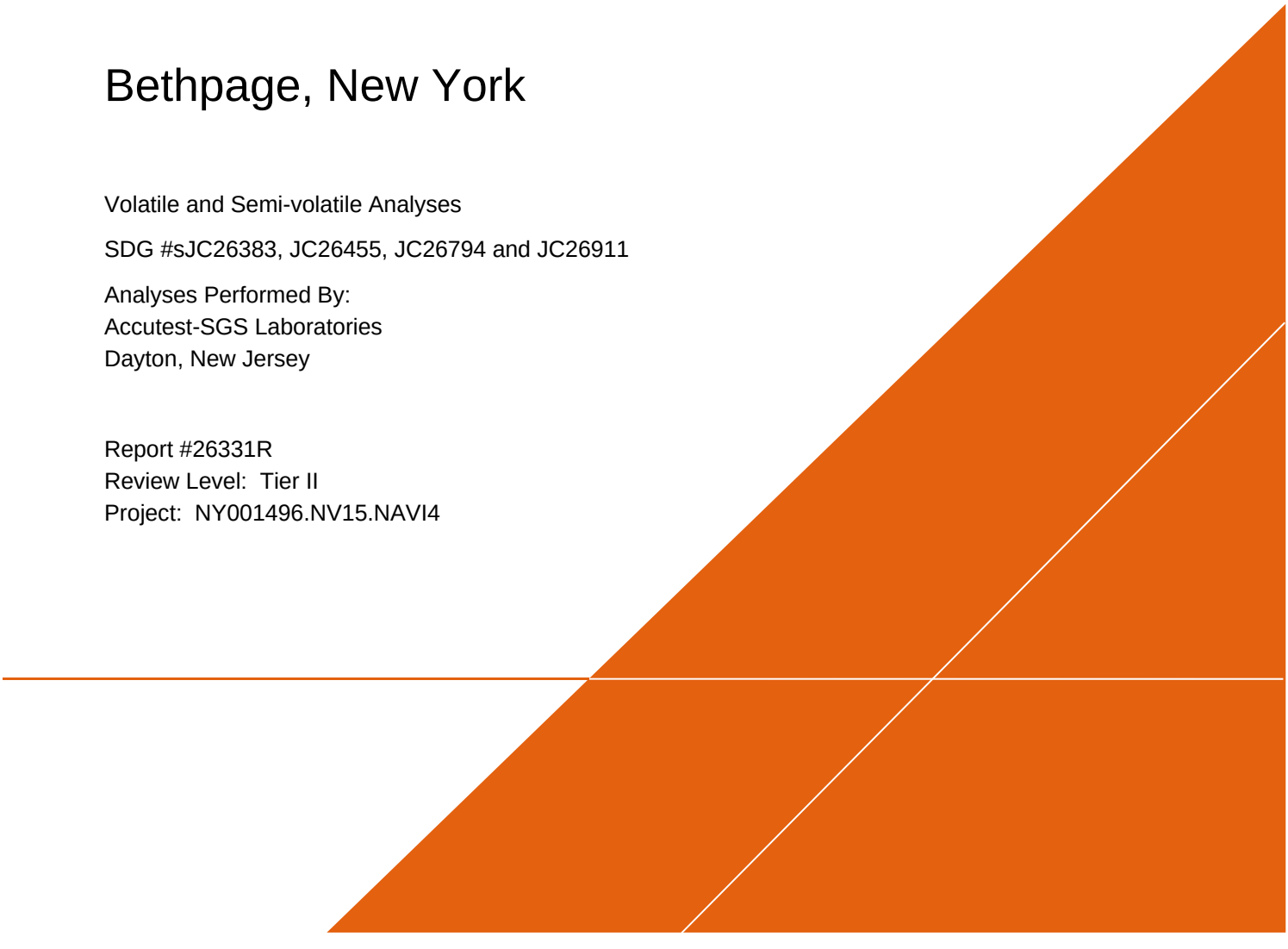
Bethpage, New York

Volatile and Semi-volatile Analyses

SDG #sJC26383, JC26455, JC26794 and JC26911

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

Report #26331R
Review Level: Tier II
Project: NY001496.NV15.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # sJC26383, JC26455, JC26794 and JC26911 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
JC26383	BPOW6-5	JC26383-1	Water	8/23/2016		X	X			
	TB082316MD1	JC26383-2	Water	8/23/2016		X				
JC26455	BPOW6-4	JC26455-1	Water	8/24/2016		X	X			
	TB082416MD1	JC26455-2	Water	8/24/2016		X				
JC26794	BPOW2-3	JC26794-1	Water	8/30/2016		X	X			
	TB083016MD1	JC26794-2	Water	8/30/2016		X				
JC26911	BPOW6-3	JC26911-1	Water	8/31/2016		X	X			
	BPOW6-6	JC26911-2	Water	8/31/2016		X	X			
	TB083116MO1	JC26911-3	Water	8/31/2016		X				
	REP083116MO1	JC26911-4	Water	8/31/2016	BPOW6-6	X	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: JC26383X/404741, JC26455X/404691, JC26794X/405223 and JC26911X/405222.

2. Accutest inadvertently recorded sample location REP083116MO1 as REP0831616MO**L** on the Chain-of-Custody sent to GEL Laboratory.

3. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location BPOW6-5 for VOC analysis; and, sample location BPOW6-3 for SVOC 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 SDGs JC26383, JC26455, JC26794 or JC26911.

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 exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC26383.

A MS/MSD was not performed on a sample location associated with SDGs JC26455, JC26794 or JC26911.

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 SDGs JC26383, JC26455, JC26794 and JC26911.

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
SDG JC26911 BPOW6-6/ REP083116MO1	All Compounds	U	U	AC

Note:

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 SDGs JC26383, JC26455 and JC26794.

7. Laboratory Duplicate Analysis

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

concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A laboratory duplicate sample was not performed on a sample location associated with SDGs JC26383, JC26455, JC26794 or JC26911.

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 524.2	.2Reported		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		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 JC26383X, JC26455X, JC26794X and JC26911X.

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 SDGs JC26383X, JC26455X, JC26794X.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC26911X.

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

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

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits 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 SDGs JC26383X, JC26455X and JC26794X.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC26911X: BPOW6-6/ REP083116MO1	1,4-Dioxane	U	U	AC

Notes:

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

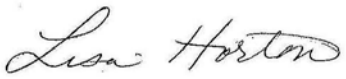
SVOCs: EPA 522-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		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		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: 

DATE: September 28, 2016/October 24, 2016

PEER REVIEW: Todd Church

DATE: October 26, 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 # JC26383

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 Abom Phone #: 516-661-2661

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	$NaHSO_4$	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW G-5		8/23/16	1340	MO	GW	15	9								6	9	6	SUB
2	TB082316MOI		8/24/16	0900	—	TB	2	2									2		V982

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: ZA 8/24

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

For VOCs, (V524SL4+40, VMS+FI13).

BPOW6-5 To be used as a MS/MSD

OU2 Hydro

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		1710 8/23/16	1	2	8/24/16 0945	2
3			3	4		4
5			5			

Custody Seal # 889, 890 Intact / Not Intact Preserved where applicable On Ice Cooler Temp: 0.5 C IP

5.1 5

JC26383: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-5		
Lab Sample ID:	JC26383-1	**Date Sampled:**	08/23/16
Matrix:	AQ - Ground Water	**Date Received:**	08/24/16
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]	1B105531.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW6-5		
Lab Sample ID:	JC26383-1	**Date Sampled:**	08/23/16
Matrix:	AQ - Ground Water	**Date Received:**	08/24/16
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	104%		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.

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:	TB082316MD1		
Lab Sample ID:	JC26383-2	**Date Sampled:**	08/23/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/24/16
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]	1B105532.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB082316MD1		
Lab Sample ID:	JC26383-2	**Date Sampled:**	08/23/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/24/16
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	101%		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.

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

404741 ½

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 # JC26383X

Client / Reporting Information

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

SB522SIM14DIOX, 14 Dioxane via 522 method low 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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		SB522SIM14DIOX, 14 Dioxane via 522 method low pql needed.	LAB USE ONLY
1DX	BPOW6-5		8/23/16	1:40:00 PM	MD	AQ	2									2	X	sub
1SX	BPOW6-5		8/23/16	1:40:00 PM	MD	AQ	2									2	X	
1X	BPOW6-5		8/23/16	1:40:00 PM	MD	AQ	2									2	X	

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	DVassilatos	8/25/16 17:00	1 FedEx	2	8/26/16 0900	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 233 [ ] 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: 404741 GEL Work Order: 404741

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: 14 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404741**	**Date Collected:**	**08/23/2016 13:40**	**Matrix:**	**WATER**
Lab Sample ID:	**404741001**	**Date Received:**	**08/26/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPO26-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 11:48**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0907.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26383X

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 # JC26455

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 Prezesky Mike Robins Phone #: 516-461-7061

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	BP0416-4		08/24/16	1308	PP	GW	5	3								2	3	2	SUB
2	TB082416M01		8/24/16	0900	—	TB	2	2									2		V994

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 Labilink

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 CUMMC+

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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT AM/18

OU2 Hydro

LABEL VERIFICATION DR

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		8/24/16 1730	1	8/25/16 1010	8/25/16 1410	2
3			3			4
5			5	Custody Seal #	Intact / Not intact	Preserved where applicable: On Ice ✓ Cooler Temp 3.1 2.9 IC

5.1 5

JC26455: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-4		
Lab Sample ID:	JC26455-1	**Date Sampled:**	08/24/16
Matrix:	AQ - Ground Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105534.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW6-4		
Lab Sample ID:	JC26455-1	**Date Sampled:**	08/24/16
Matrix:	AQ - Ground Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	100%		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:	TB082416MD1		
Lab Sample ID:	JC26455-2	**Date Sampled:**	08/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105533.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB082416MD1		
Lab Sample ID:	JC26455-2	**Date Sampled:**	08/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/25/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		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

SGS ACCUTEST

CHAIN OF CUSTODY

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www.sgs.com

404691

Page 1 of 1

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job # JC26455X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): PP Phone:	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, 14 Diox via 522 method low PQL needed	LAB USE ONLY
1X	BPOW6-4		8/24/16	1:08:00 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 dat

Comments / Special Instructions

Ref: JC26455X
Dep:
Date: 25Aug16
Wgt: 14.35 LBS
DV: 0.00

SHIPPING: 30.7
SPECIAL: 0.5
HANDLING: 0.0
TOTAL: 31.2

Svcs: PRIORITY OVERNIGHT
TRCK: 5633 9349 4204

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 Berenzon	8/25/16 1700	Mary Horan 8/26/16 900	2		2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 237	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: 404691 GEL Work Order: 404691

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: 14 SEP 2016 **Title: Data Validator**

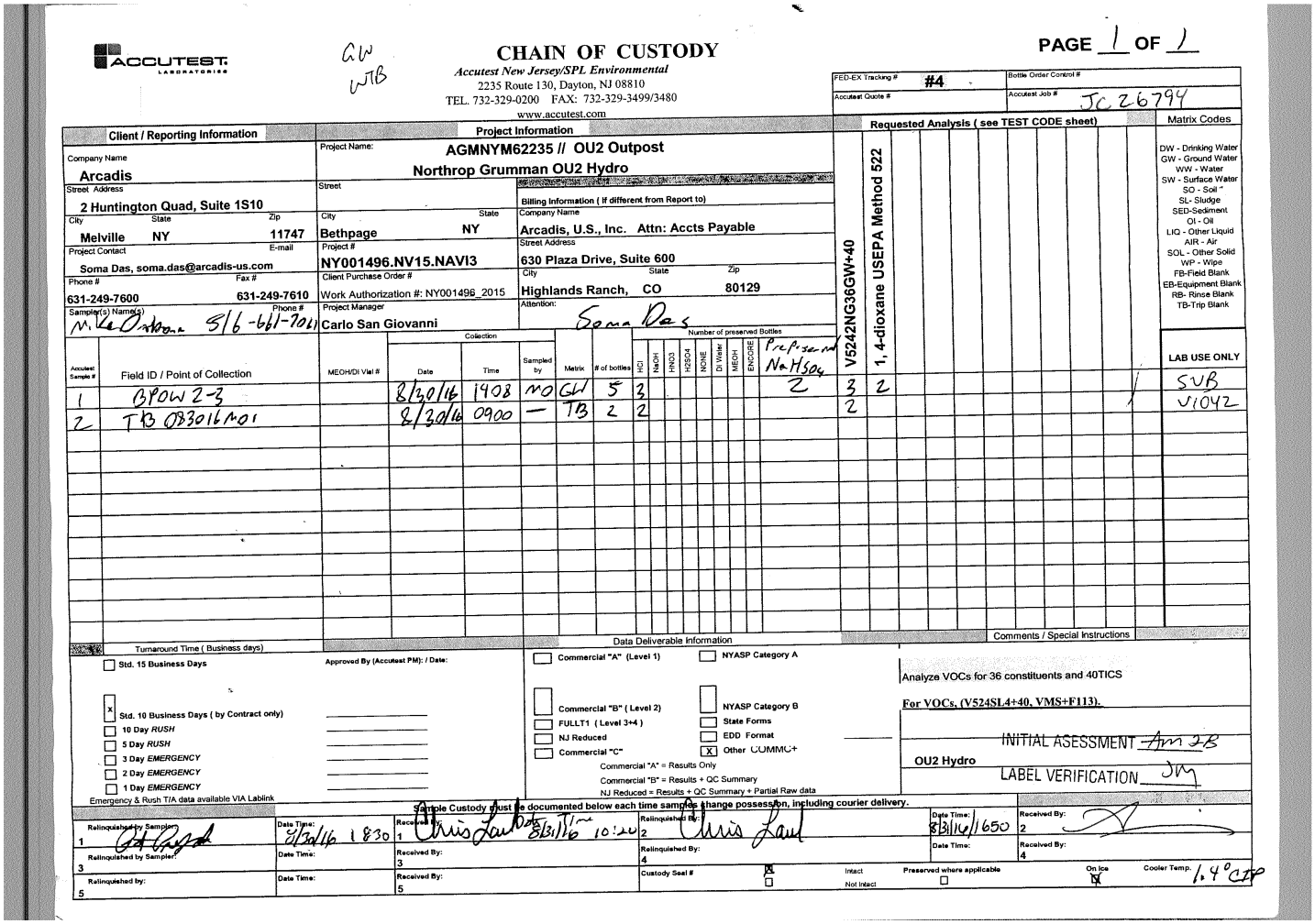
2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**404691**	**Date Collected:**	**08/24/2016 13:06**	**Matrix:**	**WATER**
Lab Sample ID:	**404691001**	**Date Received:**	**08/26/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1595788**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/09/2016 14:30**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/08/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s090916.B\s8i0913.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26455X



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 # JC26794

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 Ostrom Phone #: 516-661-7061

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	Preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 2-3		8/30/16	1408	MO	GW	5	3								2	3	2	SUB
2	TB 083016M01		8/30/16	0900	—	TB	2	2									2		V1042

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*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

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

For VOCs, (V524SL4+40, VMS+F113).

INITIAL ASESSMENT Am 2B

OU2 Hydro

LABEL VERIFICATION JM

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]	8/30/16 1830	1 Chris Laul Date 8/31/16 Time 10:20	2 Chris Laul	8/31/16 1650	2 [signature]
3		3	4		4
5		5			

Custody Seal # [x] Intact [ ] Not Intact
Preserved where applicable [ ]
On Ice [x]
Cooler Temp. 1.4° CIP

5.1
5

JC26794: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW2-3		
Lab Sample ID:	JC26794-1	**Date Sampled:**	08/30/16
Matrix:	AQ - Ground Water	**Date Received:**	08/31/16
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]	1B105537.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW2-3		
Lab Sample ID:	JC26794-1	**Date Sampled:**	08/30/16
Matrix:	AQ - Ground Water	**Date Received:**	08/31/16
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	102%		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:	TB083016MD1		
Lab Sample ID:	JC26794-2	**Date Sampled:**	08/30/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/31/16
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]	1B105538.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB083016MD1		
Lab Sample ID:	JC26794-2	**Date Sampled:**	08/30/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/31/16
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	103%		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

405223

CHAIN OF CUSTODY

SGS ACCUTEST

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

Page 1 of 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: JC26794X

Client / Reporting Information

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

SB522SIM14DIOX, SB522SIM14DIOX, 14 Dioxane via EPA 522 method low 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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	SB522SIM14DIOX, SB522SIM14DIOX, 14 Dioxane via EPA 522 method low PQL needed.	LAB USE ONLY
1X	BPOW2-3		8/30/16	2:08:00 PM	MD	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 Due 9/21/2016

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: 1 DAssociate	Date Time: 9/2/16 17:00	Received By: 1 FedEx	Relinquished By: 2	Date Time:	Received By: 2
Relinquished by Sampler: 3 FX	Date Time: 9-3-16 0900	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 255 [ ] 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: 405223 GEL Work Order: 405223

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.
Q LCS recovery not within control limits
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: 23 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405223**	**Date Collected:**	**08/30/2016 14:08**	**Matrix:**	**WATER**
Lab Sample ID:	**405223001**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW2-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1598878**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/15/2016 15:55**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/15/2016 11:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091516.B\s6i1506.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		3.21	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26794X

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 # JC26911

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 Gabon Phone #: 516-661-2061

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	Dr Water	MEOH	ENCORE	Preserved NaHSO4	V5242NG36GW+40	1, 4-dioxane USEPA Method 522	LAB USE ONLY
1	BPOW 6-3		08/31/16	1600	mo	GW	5	3								2	3	2	SUB
2	BPOW 6-6		08/31/16	1155	mo	GW	5	3								2	3	2	
3	TB083116mol		8/31/16	0900	—	TB	2	2									2		V1058
4	REP083116mol		8/31/16	—	mo	GW	5	3								2	3	2	

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

INITIAL ASESSMENT 3B Dam
LABEL VERIFICATION DJ

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*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

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
For VOCs, (V524SL4+40, VMS+F113).
OU2 Hydro

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]	8/31/16 1810	1 [signature] Date 9/1/16 Time 11:30	2 [signature]	9/1/16 18:47	2 [signature]
3		3	4		4
5		5	Custody Seal # [x] [ ] Intact Not intact	Preserved where applicable [ ]	On Ice [x] Cooler Temp. 4.8C°, 3.7C°

2COOLERS IG, IG

5.1
5

JC26911: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW6-3		
Lab Sample ID:	JC26911-1	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105539.D	1	09/02/16	BK	n/a	n/a	V1B5008
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	0.61	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	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:	BPOW6-3		
Lab Sample ID:	JC26911-1	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		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:	BPOW6-6		
Lab Sample ID:	JC26911-2	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105540.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	BPOW6-6		
Lab Sample ID:	JC26911-2	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		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.

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:	TB083116MO1		
Lab Sample ID:	JC26911-3	**Date Sampled:**	08/31/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105541.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	TB083116MO1		
Lab Sample ID:	JC26911-3	**Date Sampled:**	08/31/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		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:	REP083116MO1		
Lab Sample ID:	JC26911-4	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B105542.D	1	09/02/16	BK	n/a	n/a	V1B5008
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:	REP083116MO1		
Lab Sample ID:	JC26911-4	**Date Sampled:**	08/31/16
Matrix:	AQ - Ground Water	**Date Received:**	09/01/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		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

405222

Page 1 of 1

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 # JC26911X

Client / Reporting Information	Project Information
Company Name: SGS Accutest	Project Name: Northrop Grumman, OU2 Hydro, Bethpage, NY
Street Address: 2235 Route 130	Street:
City: Dayton State: NJ Zip: 08810	City: State:
Project Contact: mayur.patel@sgs.com E-mail:	Project #:
Phone #: 732-329-0200 Fax #:	Client Purchase Order #:
Sampler(s) Name(s): MO Phone:	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, SB522SIM14DIOX, 14 Dioxane via EPA 522 method low PQL needed.	LAB USE ONLY
1X	BPOW6-3		8/31/16	4:00:00 PM	MO	AQ	2									x	X	Sub
2X	BPOW6-6		8/31/16	11:55:00 AM	MO	AQ	2									x	X	
4X	REP083116MOL		8/31/16	12:00:00 AM	MO	AQ	2									x	X	

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 9/22/2016

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	BVassilatos	9/2/16 17:	1 FedEx	2		2
3		9-3-16 0900	3	4		4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # 254	[ ] 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: 405222 GEL Work Order: 405222

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: 23 SEP 2016 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405222**	**Date Collected:**	**08/31/2016 16:00**	**Matrix:**	**WATER**
Lab Sample ID:	**405222001**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1597677**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/14/2016 16:44**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/14/2016 09:40**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091416.B\s8i1407.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

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JC26911X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405222**	**Date Collected:**	**08/31/2016 11:55**	**Matrix:**	**WATER**
Lab Sample ID:	**405222002**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1597677**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/14/2016 18:01**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/14/2016 09:40**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091416.B\s8i1410.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26911X

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**405222**	**Date Collected:**	**08/31/2016 12:00**	**Matrix:**	**WATER**
Lab Sample ID:	**405222003**	**Date Received:**	**09/03/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**REP083116MOL** 1	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1597677**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**09/14/2016 18:26**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**09/14/2016 09:40**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s091416.B\s8i1411.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

SGS ACCUTEST
JC26911X

Appendix E

ARCADIS Separate and Ongoing OU2 Monitoring of Navy Wells

Appendix E. 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
BPOW4-1R	Navy		X		X	8260C
BPOW4-2R	Navy		X		X	8260C
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-74D2	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