JUNE 2017 GROUNDWATER SAMPLING DATA SUMMARY REPORT

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

Prepared for:

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

November 2017

JUNE 2017 GROUNDWATER SAMPLING DATA SUMMARY REPORT

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

Prepared by:

Resolution Consultants
A Joint Venture of AECOM & EnSafe
1500 Wells Fargo Building
440 Monticello Avenue
Norfolk, Virginia 23510

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

November 2017

Brian Caldwell

Brian Caldwell
Contract Task Order Manager

Table of Contents

Tables

Figures

Appendices

List of Acronyms and Abbreviations

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

1.0 PROJECT BACKGROUND

Resolution Consultants has prepared this Groundwater Sampling Data Summary Report for the Naval Facilities Engineering Command, Mid-Atlantic under contract task order WE08 Contract N62470-11-D-8013. The report describes quarterly sampling activities in June 2017, 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 73 Navy-owned monitoring wells by Resolution Consultants on behalf of the Navy, and by ARCADIS on behalf of the Navy at the direction of Northrop Grumman (NG) as part of an agreement between the Navy and NG. The purpose of this sampling is to provide information on the extent and magnitude of volatile organic compounds (VOCs) located in a narrow area immediately south of the Onsite Containment System (ONCT) in the western offsite plume, which could represent contamination that has bypassed the ONCT, to evaluate the southernmost extent of the OU2 plume, and to evaluate outpost wells intended to provide early warning of plume migration to public water supply wells. The locations of monitoring wells sampled as part of this effort are shown in Figure 2. Well construction information and sampling responsibility are listed in Table 1.

2.0 FIELD PROGRAM

Field tasks were conducted in June 2017 in accordance with the Uniform Federal Policy (UFP) Sampling and Analysis Plan (SAP) Addendum: *Groundwater Sampling Using Low Stress (Low Flow) Purging and Sampling Protocol* (Resolution Consultants, 2013). The field investigation included purging and sampling of monitoring wells in the quarterly groundwater sampling network.

The June 2017 quarterly sampling round consisted of a total of 73 wells (Table 1). Of these, 33 groundwater wells were sampled by Resolution Consultants and 40 were sampled by ARCADIS, the NG consultant.

2.1 Sampling

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

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

Results for ARCADIS-sampled wells are provided in Table 4, Table 5 and Table 6; data validation packages are included in Appendix C. Samples collected from outpost wells were analyzed for VOCs via method 524.2 and 1,4-dioxane via Method 522 by Accutest Laboratories. Samples collected from remaining wells were analyzed for VOCs via Method 8260C 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 2017 Annual Groundwater Monitoring Report,

scheduled for submission to New York State Department of Environmental Conservation in the summer of 2018.

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. All analytical criteria were met for disposal of water. No solid waste was generated during sampling.

3.0 SUMMARY

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

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

Analytical results for wells sampled by ARCADIS are summarized in Table 4, Table 5 and Table 6. Data validation packages for wells sampled by ARCADIS are included in Appendix C.

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

4.0 REFERENCES

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

Tables

TABLE 1
MONITORING WELL CONSTRUCTION SUMMARY
2017 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	632.5	5	VPB137	Resolution
RE103D2	673	653	673	663	0	VPB137	Resolution
RE103D3	735	715	730	722.5	5	VPB137	Resolution
RE104D1	375	350	370	360	5	VPB138	Resolution
RE104D2	735	710	730	720	5	VPB138	Resolution
RE104D3	785	760	780	770	5	VPB138	Resolution
RE105D1	555	530	550	540	5	VPB139	Resolution
RE105D2	755	730	750	740	5	VPB139	Resolution
RE106D1	462	440	460	450	2	VPB140	ARCADIS
RE106D2	492	480	490	485	2	VPB140	ARCADIS
RE106D3	535	510	530	520	5	VPB140	ARCADIS
RE107D1	530	505	525	515	5	VPB141	ARCADIS
RE107D2	585	560	580	570	5	VPB141	ARCADIS
RE107D3	670	645	665	655	5	VPB141	ARCADIS
RE108D1	555	530	550	540	5	VPB142	Resolution
RE108D2	655	630	650	640	5	VPB142	Resolution
RE114D1	560	535	555	545	5	VPB148	ARCADIS
RE114D2	635	610	630	620	5	VPB148	ARCADIS
RE114D3	725	700	720	710	5	VPB148	ARCADIS
RE115D1	660	640	655	647.5	5	VPB149	ARCADIS
RE115D2	755	730	750	740	5	VPB149	ARCADIS
RE117D1	760	730	755	742.5	5	VPB151	Resolution
RE117D2	810	780	805	792.5	5	VPB151	Resolution
RE118D1	795	765	790	777.5	5	VPB152	ARCADIS
RE119D1	745	715	740	727.5	5	VPB153	ARCADIS
RE120D1	655	630	650	640	5	VPB154	Resolution
RE120D2	713	690	710	700	3	VPB154	Resolution
RE120D3	765	740	760	750	5	VPB154	Resolution
RE121D1	575	550	570	560	5	VPB155	ARCADIS
RE121D2	755	730	750	740	5	VPB155	ARCADIS
RE122D1	545	520	540	530	5	VPB156	Resolution
RE122D2	615	590	610	600	5	VPB156	Resolution
RE122D3	740	715	735	725	5	VPB156	Resolution
RE123D1	505	480	500	490	5	VPB157	Resolution
RE123D2	660	635	655	645	5	VPB157	Resolution
RE123D3	840	815	835	825	5	VPB157	Resolution
RE124D1	685	660	680	670	5	VPB158	ARCADIS
RE124D2	755	730	750	740	5	VPB158	ARCADIS
RE125D1	345	320	340	330	5	VPB159	Resolution
RE125D2	605	580	600	590	5	VPB159	Resolution

TABLE 1
MONITORING WELL CONSTRUCTION SUMMARY
2017 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
RE125D3	695	670	690	680	5	VPB159	Resolution
RE126D1	525	500	520	510	5	VPB160	Resolution
RE126D2	580	555	575	565	5	VPB160	Resolution
RE126D3	665	640	660	650	5	VPB160	Resolution
RE127D1	685	660	680	670	5	VPB161	ARCADIS
RE127D2	780	755	775	765	5	VPB161	ARCADIS
RE128D1	685	660	680	670	5	VPB162	ARCADIS
RE128D2	760	735	755	745	5	VPB162	ARCADIS
RE129D1	715	690	710	700	5	VPB163	ARCADIS
RE129D2	830	805	825	815	5	VPB163	ARCADIS
RE130D1	580	555	575	565	5	VPB164	ARCADIS
RE130D2	665	640	660	650	5	VPB164	ARCADIS
RE131D1	455	430	450	440	5	VPB165	Resolution
RE131D2	595	565	590	577.5	5	VPB165	Resolution
RE131D3	685	660	680	670	5	VPB165	Resolution
RE133D1	585	560	580	570	5	VPB167	ARCADIS
RE133D2	805	780	800	790	5	VPB167	ARCADIS
TT101D	350	325	345	335	5	VPB129	Resolution
TT101D1	595	570	590	580	5	VPB129	Resolution
TT101D2	765	740	760	750	5	VPB129	Resolution
BPOW5-1	515	480	510	495	5	VPB132	ARCADIS
BPOW5-2	585	540	580	560	5	VPB132	ARCADIS
BPOW5-3	665	620	660	640	5	VPB132	ARCADIS
BPOW5-4	575	545	570	557.5	5	VPB151	ARCADIS
BPOW5-5	545	515	540	527.5	5	VPB152	ARCADIS
BPOW5-6	615	585	610	597.5	5	VPB152	ARCADIS
BPOW5-7	555	525	550	537.5	5	VPB152	ARCADIS
BPOW6-1	580	550	575	562.5	5	VPB145	ARCADIS
BPOW6-2	785	755	780	767.5	5	VPB145	ARCADIS
BPOW6-3	780	750	775	762.5	5	VPB146	ARCADIS
BPOW6-4	575	545	570	557.5	5	VPB146	ARCADIS
BPOW6-5	555	525	550	537.5	5	VPB147	ARCADIS
BPOW6-6	800	770	795	782.5	5	VPB147	ARCADIS

ft bgs - feet below ground surface

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE103D2	RE103D2	RE103D1	RE103D3
Sample Date		6/1/2017	6/1/2017	6/1/2017	6/1/2017
Sample ID		RE103D2-GW-060117	DUP01-GW-060117	RE103D1-GW-060117	RE103D3-GW-060117
Sample type code		N	FD	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**2.6**	**2.6**	**8.2**	**1.5**
1,1,2-TRICHLOROETHANE	1	<1.0 U	**0.33 J**	<1.0 U	<0.50 U
1,1-DICHLOROETHANE	5	<1.0 U	**0.56 J**	**0.75 J**	<0.50 U
1,1-DICHLOROETHENE	5	<1.0 U	**0.85 J**	**3.8**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<1.5 U***	***<0.75 U***	***<1.5 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,2-DICHLOROBENZENE	3	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,2-DICHLOROETHANE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.1 J**	**1.1 J**	**3.0 J**	**0.68 J**
1,2-DICHLOROPROPANE	1	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,3-DICHLOROBENZENE	3	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,4-DICHLOROBENZENE	3	<1.0 U	<0.50 U	<1.0 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**1.8**	**1.5**	**14**	**0.71**
2-BUTANONE	50	<5.0 U	<2.5 U	<5.0 U	<2.5 U
2-HEXANONE	50	<5.0 U	<2.5 U	<5.0 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<5.0 U	<2.5 U	<5.0 U	<2.5 U
ACETONE	50	<5.0 UJ	<2.5 UJ	<5.0 UJ	<2.5 UJ
BENZENE	1	<1.0 U	<0.50 U	<1.0 U	<0.50 U
BROMODICHLOROMETHANE	50	<1.0 U	<0.50 U	<1.0 U	<0.50 U
BROMOFORM	50	<1.0 U	<0.50 U	<1.0 U	**0.77 J**
BROMOMETHANE	5	<2.0 U	<1.0 U	<2.0 U	<1.0 U
CARBON DISULFIDE	60	<1.0 U	<0.50 U	<1.0 U	<0.50 U
CARBON TETRACHLORIDE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
CHLOROBENZENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
CHLOROETHANE	5	<2.0 U	<1.0 U	<2.0 U	<1.0 U
CHLOROFORM	7	**0.71 J**	**0.76 J**	**0.65 J**	**0.59 J**
CHLOROMETHANE	5	<2.0 U	<1.0 U	<2.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.1 J**	**1.1**	**3.0**	**0.68 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<1.0 U***	***<0.50 U***	***<1.0 U***	***<0.50 U***
CYCLOHEXANE	NL	<1.0 U	<0.50 U	<1.0 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<2.0 U	<1.0 U	<2.0 U	<1.0 U
ETHYLBENZENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
ISOPROPYLBENZENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
M- AND P-XYLENE	NL	<2.0 U	<1.0 U	<2.0 U	<1.0 U
METHYL ACETATE	NL	<1.5 U	<0.75 U	<1.5 U	<0.75 U
METHYL CYCLOHEXANE	NL	<1.0 U	<0.50 U	<1.0 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<1.0 U	<0.50 U	<1.0 U	<0.50 U
METHYLENE CHLORIDE	5	<5.0 U	<2.5 U	<5.0 U	<2.5 U
O-XYLENE	NL	<1.0 U	<0.50 U	<1.0 U	<0.50 U
STYRENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
TETRACHLOROETHENE	5	<1.0 U	**0.88 J**	**3.6**	<0.50 U
TOLUENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<1.0 U	<0.50 U	<1.0 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<1.0 U***	***<0.50 U***	***<1.0 U***	***<0.50 U***
TRICHLOROETHENE	5	**560**	**600**	**910**	**400**
TRICHLOROFLUOROMETHANE	5	<2.0 U	<1.0 U	<2.0 U	<1.0 U
VINYL CHLORIDE	2	<2.0 U	<1.0 U	<2.0 U	<1.0 U
XYLENES, TOTAL	5	<3.0 U	<1.5 U	<3.0 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	TT101D1	TT101D2	TT101D	RE104D1
Sample Date		6/1/2017	6/1/2017	6/1/2017	6/5/2017
Sample ID		TT101D1-GW-060117	TT101D2-GW-060117	TT101D-GW-060117	RE104D1-GW-060517
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	**0.60 J**	**0.35 J**	**0.41 J**	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**17**	**16**	**18**	**3.4 J**
1,1,2-TRICHLOROETHANE	1	**0.62 J**	**0.66 J**	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	**1.1**	**1.0**	**0.98 J**	<0.50 U
1,1-DICHLOROETHENE	5	**5.6**	**4.3**	**3.4**	**0.59 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**2.1**	**2.4**	**3.4**	**0.73 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**9.5**	**2.2**	**9.3**	**9.0 J**
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 UJ
CHLOROFORM	7	**0.81 J**	**0.88 J**	**0.55 J**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**2.1**	**2.4**	**3.4**	**0.73 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	**2.1**	<1.0 U	**2.5**	<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	**1.3**	<0.50 U	**2.2 J**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**200**	**670**	**85**	**77 J**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE104D2	RE104D3	RE125D1	RE125D2
Sample Date		6/5/2017	6/5/2017	6/2/2017	6/2/2017
Sample ID		RE104D2-GW-060517	RE104D3-GW-060517	RE125D1-GW-060217	RE125D2-GW-060217
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	**0.50 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 J**	**19 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	<0.50 U	**0.47 J**
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	**2.1 J**	**1.0 J**
1,1-DICHLOROETHENE	5	<0.50 U	<0.50 U	**2.9 J**	**6.6 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**5.6 J**	<1.0 U	**4.2 J**	**4.0 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**0.44 J**	<0.17 U	**12 J**	**13 J**
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 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 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	**0.94 J**	<0.50 U	**0.92 J**	**0.57 J**
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**5.6 J**	<0.50 U	**4.2 J**	**4.0 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	**0.70 J**	<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	**7.1 J**	**1.4 J**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**15 J**	<0.50 U	**180 J**	**230 J**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	**0.27 J**
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE125D3	RE126D1	RE131D1	RE131D2
Sample Date		6/2/2017	6/5/2017	6/2/2017	6/2/2017
Sample ID		RE125D3-GW-060217	RE126D1-GW-060517	RE131D1-GW-060217	RE131D2-GW-060217
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**42**	<0.50 U	**4.7**	**190 J**
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	**0.55 J**	<0.50 U
1,1-DICHLOROETHENE	5	**0.83 J**	<0.50 U	**1.0**	**1.8 J**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.6 J**	<1.0 U	**5.1**	**3.7 J**
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**3.9**	**7.0 J**	**12**	**12 J**
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	**11 J**	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 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 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
CHLOROFORM	7	**0.38 J**	<0.50 U	**2.8**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	**1.2 J**	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.6**	<0.50 U	**5.1**	**3.7 J**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	**0.43 J**	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**1.7**	**0.85 J**	**9.5**	**4.2 J**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**140**	**43 J**	**130**	**45 J**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE131D3	RE120D1	RE120D1	RE120D2
Sample Date		6/2/2017	6/6/2017	6/6/2017	6/6/2017
Sample ID		RE131D3-GW-060217	RE120D1-GW-060617	DUP02-GW-060617	RE120D2-GW-060617
Sample type code		N	N	FD	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<1.0 U	**0.97 J**	**0.28 J**
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**170 J**	**18**	**19 J**	**16**
1,1,2-TRICHLOROETHANE	1	<0.50 U	**0.86 J**	**1.2 J**	**0.53 J**
1,1-DICHLOROETHANE	5	<0.50 U	**2.2**	**2.3 J**	**0.79 J**
1,1-DICHLOROETHENE	5	**0.82 J**	**12**	**15 J**	**4.4**
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<1.5 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**0.45 J**	**3.2 J**	**3.4 J**	**3.1**
1,2-DICHLOROPROPANE	1	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<1.0 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**1.8 J**	**20**	**15**	**12**
2-BUTANONE	50	<2.5 U	<5.0 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<5.0 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<5.0 U	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<5.0 UJ	<2.5 U	<2.5 U
BENZENE	1	<0.50 U	<1.0 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<1.0 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<1.0 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<2.0 U	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 U	<1.0 U	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 UJ	<2.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	<1.0 U	**0.80 J**	**0.67 J**
CHLOROMETHANE	5	<1.0 U	<2.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**0.45 J**	**3.2**	**3.4 J**	**3.1**
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<1.0 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<1.0 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<2.0 UJ	**0.26 J**	**0.32 J**
ETHYLBENZENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<2.0 U	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<1.5 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<1.0 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<1.0 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<5.0 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<1.0 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	**1.9 J**	<1.0 U	**2.6 J**	**3.2**
TOLUENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<1.0 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<1.0 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**6.3 J**	**870**	**860**	**640 J**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<2.0 U	**0.45 J**	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<2.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<3.0 U	<1.5 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE120D3	RE122D1	RE122D2	RE122D3
Sample Date		6/6/2017	6/6/2017	6/6/2017	6/6/2017
Sample ID		RE120D3-GW-060617	RE122D1-GW-060617	RE122D2-GW-060617	RE122D3-GW-060617
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**0.86 J**	**3.5**	**12**	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	**1.8 J**	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,1-DICHLOROETHENE	5	<0.50 U	**0.82 J**	**6.8**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<3.0 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**1.8 J**	**6.3 J**	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	***<2.0 U***	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<2.0 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**0.32**	**8.9**	**11**	<0.17 U
2-BUTANONE	50	<2.5 U	<2.5 U	<10 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<10 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 U	<10 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 UJ	<10 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	***<2.0 U***	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<2.0 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<2.0 U	<0.50 U
BROMOMETHANE	5	<1.0 U	<1.0 U	<4.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 U	<0.50 U	<2.0 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<4.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	<0.50 U	**2.3 J**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<4.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**1.8**	**6.3**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<2.0 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<2.0 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	<4.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 U	<4.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<3.0 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<2.0 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<2.0 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	***<10 U***	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<2.0 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
TOLUENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<2.0 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<2.0 U***	***<0.50 U***
TRICHLOROETHENE	5	**37**	**450**	**3000**	**6.7**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<4.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	***<4.0 U***	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	***<6.0 U***	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE105D1	RE105D2	RE123D1	RE123D2
Sample Date		6/7/2017	6/7/2017	6/7/2017	6/7/2017
Sample ID		RE105D1-GW-060717	RE105D2-GW-060717	RE123D1-GW-060717	RE123D2-GW-060717
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**6.2**	**18 J**	<0.50 U	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	**1.4 J**	<0.50 U	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	**1.7 J**	<0.50 U	<0.50 U
1,1-DICHLOROETHENE	5	**1.2**	**8.2 J**	<0.50 U	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<3.0 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	**1.4 J**	**3.7 J**	<1.0 U	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	***<2.0 U***	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<2.0 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**9.5**	**11**	**4.6**	**1.0**
2-BUTANONE	50	<2.5 U	<10 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<10 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	**45 J**	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<10 U	<2.5 UJ	<2.5 UJ
BENZENE	1	<0.50 U	***<2.0 U***	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<2.0 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<2.0 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<4.0 U	<1.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 U	<2.0 UJ	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	**2.2 J**	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<4.0 UJ	<1.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	**2.1 J**	<0.50 U	<0.50 U
CHLOROMETHANE	5	<1.0 U	<4.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	**1.4**	**3.7 J**	<0.50 U	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<2.0 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<2.0 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	**0.77 J**	<4.0 UJ	<1.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<4.0 UJ	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<3.0 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<2.0 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<2.0 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	***<10 U***	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<2.0 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	**2.7 J**	<0.50 U	<0.50 U
TOLUENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<2.0 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<2.0 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	**86**	**1700 J**	**4.9**	**1.8**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<4.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	***<4.0 U***	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	***<6.0 U***	<1.5 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE123D3	RE108D1	RE108D2	RE117D1
Sample Date		6/7/2017	6/8/2017	6/8/2017	6/8/2017
Sample ID		RE123D3-GW-060717	RE108D1-GW-060817	RE108D2-GW-060817	RE117D1-GW-060817
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 U	**0.57 J**	**3.9 J**	<0.50 U
1,1,2-TRICHLOROETHANE	1	<0.50 U	<0.50 U	***<2.5 U***	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	<0.50 U	**4.2 J**	<0.50 U
1,1-DICHLOROETHENE	5	<0.50 U	<0.50 U	**6.0 J**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<3.8 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**0.27 J**	**6.6 J**	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	***<2.5 U***	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<2.5 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	<0.17 U	**6.4**	**6.9**	<0.17 U
2-BUTANONE	50	<2.5 U	<2.5 U	<12 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<12 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 U	<2.5 UJ	<12 UJ	<2.5 UJ
ACETONE	50	<2.5 UJ	<2.5 UJ	<12 UJ	<2.5 UJ
BENZENE	1	<0.50 U	<0.50 U	***<2.5 U***	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<2.5 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<2.5 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 UJ	<5.0 UJ	<1.0 UJ
CARBON DISULFIDE	60	<0.50 U	<0.50 UJ	<2.5 UJ	<0.50 UJ
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	**1.2 J**	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<5.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	<0.50 U	**3.8 J**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<5.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**0.27 J**	**6.6 J**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<2.5 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<2.5 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	<5.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 U	<1.0 UJ	<5.0 UJ	<1.0 UJ
METHYL ACETATE	NL	<0.75 U	<0.75 U	<3.8 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<2.5 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<2.5 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	***<12 U***	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<2.5 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	**1.5 J**	<2.5 U	<0.50 U
TOLUENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<2.5 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<2.5 U***	***<0.50 U***
TRICHLOROETHENE	5	<0.50 U	**38 J**	**3000 J**	**15 J**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<5.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	***<5.0 U***	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	***<7.5 U***	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE117D2	RE126D2	RE126D3
Sample Date		6/8/2017	6/9/2017	6/9/2017
Sample ID		RE117D2-GW-060817	RE126D2-GW-060917	RE126D3-GW-060917
Sample type code		N	N	N
VOC 8260C (ug/L)				
1,1,1-TRICHLOROETHANE	5	<0.50 U	**0.58 J**	<0.50 U
1,1,2,2-TETRACHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	<0.50 U	**0.99 J**	**0.42 J**
1,1,2-TRICHLOROETHANE	1	<0.50 U	**0.52 J**	<0.50 U
1,1-DICHLOROETHANE	5	<0.50 U	**2.4**	<0.50 U
1,1-DICHLOROETHENE	5	<0.50 U	**1.3**	<0.50 U
1,2,4-TRICHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	NL	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHANE	5	<0.50 U	<0.50 U	<0.50 U
1,2-DICHLOROETHENE, TOTAL	5	<1.0 U	**2.9**	<1.0 U
1,2-DICHLOROPROPANE	1	<0.50 U	<0.50 U	<0.50 U
1,3-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U
1,4-DICHLOROBENZENE	3	<0.50 U	<0.50 U	<0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	<0.17 U	**7.4**	**0.94**
2-BUTANONE	50	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	50	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	NL	<2.5 UJ	<2.5 U	<2.5 U
ACETONE	50	<2.5 UJ	<2.5 U	<2.5 U
BENZENE	1	<0.50 U	<0.50 U	<0.50 U
BROMODICHLOROMETHANE	50	<0.50 U	<0.50 U	<0.50 U
BROMOFORM	50	<0.50 U	<0.50 U	<0.50 U
BROMOMETHANE	5	<1.0 UJ	<1.0 U	<1.0 U
CARBON DISULFIDE	60	<0.50 UJ	<0.50 U	<0.50 U
CARBON TETRACHLORIDE	5	<0.50 U	<0.50 U	<0.50 U
CHLOROBENZENE	5	<0.50 U	<0.50 U	<0.50 U
CHLOROETHANE	5	<1.0 U	<1.0 U	<1.0 U
CHLOROFORM	7	<0.50 U	**0.59 J**	<0.50 U
CHLOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U
CIS-1,2-DICHLOROETHENE	5	<0.50 U	**2.9**	<0.50 U
CIS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***
CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U
DIBROMOCHLOROMETHANE	5	<0.50 U	<0.50 U	<0.50 U
DICHLORODIFLUOROMETHANE	5	<1.0 UJ	<1.0 UJ	<1.0 UJ
ETHYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U
ISOPROPYLBENZENE	5	<0.50 U	<0.50 U	<0.50 U
M- AND P-XYLENE	NL	<1.0 UJ	<1.0 U	<1.0 U
METHYL ACETATE	NL	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	NL	<0.50 U	<0.50 U	<0.50 U
METHYL TERT-BUTYL ETHER	10	<0.50 U	<0.50 U	<0.50 U
METHYLENE CHLORIDE	5	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	NL	<0.50 U	<0.50 U	<0.50 U
STYRENE	5	<0.50 U	<0.50 U	<0.50 U
TETRACHLOROETHENE	5	<0.50 U	**0.66 J**	**2.0**
TOLUENE	5	<0.50 U	<0.50 U	<0.50 U
TRANS-1,2-DICHLOROETHENE	5	<0.50 U	<0.50 U	<0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***<0.50 U***	***<0.50 U***	***<0.50 U***
TRICHLOROETHENE	5	<0.50 U	**480 J**	**2.5**
TRICHLOROFLUOROMETHANE	5	<1.0 U	<1.0 U	<1.0 U
VINYL CHLORIDE	2	<1.0 U	<1.0 U	<1.0 U
XYLENES, TOTAL	5	<1.5 U	<1.5 U	<1.5 U

TABLE 2
ANALYTICAL DATA SUMMARY FOR
WELLS SAMPLED BY RESOLUTION CONSULTANTS
2017 OU2 GROUNDWATER INVESTIGATION

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
2017 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

Well	Date	Temperature (°C)	pH	Specific Conductance (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Depth to water (ft bgs)	Purge Flow rate (ml/min)
TT101D	6/1/2017	15.30	3.87	0.106	1.20	66.8	1.82	34.42	850
TT101D1	6/1/2017	15.25	4.47	0.083	2.41	188.7	4.23	35.90	300
TT101D2	6/1/2017	15.67	5.15	0.034	6.46	-199.6	2.71	36.68	800
RE103D1	6/1/2017	16.89	4.50	0.088	8.31	198.1	0.62	42.77	550
RE103D2	6/1/2017	16.91	4.70	0.046	8.32	47.7	0.89	40.64	200
RE103D3	6/1/2017	15.83	5.12	0.024	4.89	-234.0	1.91	42.10	550
RE104D1	6/5/2017	14.44	NM	0.090	6.38	105.5	1.17	36.53	600
RE104D2	6/5/2017	14.62	4.89	0.020	5.87	-96.2	2.63	41.38	600
RE104D3	6/5/2017	14.90	3.68	0.022	7.17	301.6	12.4	41.70	600
RE105D1	6/7/2017	14.88	2.38	0.115	3.82	73.9	1.47	39.32	650
RE105D2	6/7/2017	15.21	3.59	0.077	5.20	272.2	1.11	40.11	700
RE108D1	6/8/2017	15.56	4.68	0.091	6.74	283.4	0.75	42.50	600
RE108D2	6/8/2017	15.48	5.29	0.085	5.75	61.1	1.01	43.05	600
RE117D1	6/8/2017	15.36	4.76	0.032	6.49	89.5	18.3	22.97	600
RE117D2	6/8/2017	16.08	3.41	0.028	3.83	280.1	3.86	23.52	600
RE120D1	6/6/2017	15.47	4.90	0.095	2.04	-119.1	1.73	38.50	700
RE120D2	6/6/2017	15.41	4.37	0.076	6.38	276.2	1.31	38.22	650
RE120D3	6/6/2017	15.15	4.00	0.038	7.13	147.7	7.31	38.17	600
RE122D1	6/6/2017	14.91	5.04	0.096	6.48	233.7	1.23	44.14	700
RE122D2	6/6/2017	14.36	4.91	0.114	5.53	128.1	0.65	44.13	600
RE122D3	6/6/2017	14.76	4.93	0.020	3.05	-117.2	3.03	44.86	600
RE123D1	6/7/2017	14.65	3.92	0.120	8.14	274.3	0.79	49.53	400
RE123D2	6/7/2017	13.69	3.24	0.042	9.30	77.9	0.96	50.83	600
RE123D3	6/7/2017	14.56	5.47	0.029	0.33	-92.1	10.74	50.65	400
RE125D1	6/2/2017	15.79	4.87	0.122	2.37	-229.4	2.89	35.91	600
RE125D2	6/2/2017	15.26	4.89	0.102	4.16	57.8	2.61	38.16	650
RE125D3	6/2/2017	18.23	4.24	0.051	7.02	246.6	6.94	38.34	600
RE126D1	6/5/2017	14.85	NM	0.104	8.90	133.4	1.33	47.28	600
RE131D1	6/2/2017	15.11	4.49	0.093	3.73	-193.3	2.36	37.27	600
RE131D2	6/2/2017	15.26	4.73	0.083	5.25	196.2	12.1	38.63	600
RE131D3	6/2/2017	14.71	4.64	0.054	8.38	39.2	2.21	39.03	700
RE126D2	6/9/2017	14.25	5.04	0.112	3.75	84.3	2.03	48.34	700
RE126D3	6/9/2017	15.40	4.18	0.031	7.68	280.2	1.41	48.01	600

°C - degrees Celsius
µS/cm - Microsiemens per Centimeter
mg/L - milligrams per liter
mV - Millivolts
NTU - Nephelometric Turbidity Unit
ft bgs - feet below ground surface
ml/min - mililiters per minute
NM - not measured

Table 4.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Outpost Wells BPOW 5-1 through BPOW 5-7, Second Quarter 2017
Operable Unit 2 (Groundwater), Bethpage, New York

CONSTITUENT Units (ug/L)	Well: Sample ID: Date:	BPOW 5-1 BPOW 5-1 5/17/2017	BPOW 5-2 BPOW 5-2 5/17/2017	BPOW 5-3 BPOW 5-3 5/15/2017	BPOW 5-4 BPOW 5-4 5/12/2017
Volatile Organic Compounds (VOCs) [1]					
1,1,1-Trichloroethane		< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane		< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-trichloro-1,2,2-trifluroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane		< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane		< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		< 0.50	< 0.50	< 0.50	< 0.50
2-Butanone (MEK)		< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone		< 2.0	< 2.0	< 2.0	< 2.0
4-methyl-2-pentanone (MIK)		< 2.0	< 2.0	< 2.0	< 2.0
Acetone		< 5.0	< 5.0	< 5.0	< 5.0
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		< 0.50	< 0.50	< 0.50	< 0.50
Carbon Disulfide		< 0.50	< 0.50	< 0.50	< 0.50
Carbon tetrachloride		< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		< 0.50	< 0.50	< 0.50	< 0.50
Chloroethane		< 0.50	< 0.50	< 0.50	< 0.50
Chloroform		< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane		< 0.50	< 0.50	< 0.50	< 0.50
cis-1,2-dichloroethene		< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-dichloropropene		< 0.50	< 0.50	< 0.50	< 0.50
Dibromochloromethane		< 0.50	< 0.50	< 0.50	< 0.50
Ethylbenzene		< 0.50	< 0.50	< 0.50	< 0.50
Methylene Chloride		< 0.50	< 0.50	< 0.50	< 0.50
Styrene		< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		< 0.50	< 0.50	< 0.50	< 0.50
Toluene		< 0.50	< 0.50	< 0.50	< 0.50
trans-1,2-dichloroethene		< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-dichloropropene		< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethylene		< 0.50	< 0.50	< 0.50	< 0.50
Vinyl Chloride		< 0.50	< 0.50	< 0.50	< 0.50
Xylene-o		< 0.50	< 0.50	< 0.50	< 0.50
Xylenes - m,p		< 0.50	< 0.50	< 0.50	< 0.50
Total VOCs [2]		0	0	0	0
1,4-Dioxane [3]		< 0.200	< 0.200	**1.28**	**1.12**

See last page for Notes and Abbreviations

Table 4.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Outpost Wells BPOW 5-1 through BPOW 5-7, Second Quarter 2017
Operable Unit 2 (Groundwater),
Bethpage, New York

CONSTITUENT Units (ug/L)	Well: Sample ID: Date:	BPOW 5-5 BPOW 5-5 5/11/2017	BPOW 5-5 REP051117AR1 5/11/2017	BPOW 5-6 BPOW 5-6 5/11/2017	BPOW 5-7 BPOW 5-7 5/16/2017
Volatile Organic Compounds (VOCs) [1]					
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0	< 0.50
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 0.50
1,1,2-trichloro-1,2,2-trifluroethane		< 5.0	< 5.0	< 5.0	< 1.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 0.50
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0	< 0.50
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0	< 0.50
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 0.50
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 0.50
2-Butanone (MEK)		< 10	< 10	< 10	< 5.0
2-Hexanone		< 5.0	< 5.0	< 5.0	< 2.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0	< 2.0
Acetone		< 10	< 10	< 10	< 5.0
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 0.50
Bromoform		< 1.0	< 1.0	< 1.0	< 0.50
Bromomethane		< 2.0	< 2.0	< 2.0	< 0.50
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 0.50
Carbon tetrachloride		< 1.0	< 1.0	< 1.0	< 0.50
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 0.50
Chloroethane		< 1.0	< 1.0	< 1.0	< 0.50
Chloroform		< 1.0	< 1.0	< 1.0	< 0.50
Chloromethane		< 1.0	< 1.0	< 1.0	< 0.50
cis-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 0.50
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 0.50
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 0.50
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 0.50
Methylene Chloride		< 2.0	< 2.0	< 2.0	< 0.50
Styrene		< 1.0	< 1.0	< 1.0	< 0.50
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 0.50
Toluene		< 1.0	< 1.0	< 1.0	< 0.50
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 0.50
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 0.50
Trichloroethylene		< 1.0	< 1.0	< 1.0	< 0.50
Vinyl Chloride		< 1.0	< 1.0	< 1.0	< 0.50
Xylene-o		< 1.0	< 1.0	< 1.0	< 0.50
Xylenes - m,p		< 1.0	< 1.0	< 1.0	< 0.50
Total VOCs [2]		0	0	0	0
1,4-Dioxane [3]		**1.34**	**1.39**	**0.129 J**	< 0.200

See last page for Notes and Abbreviations

Table 4.
Concentrations of Volatile Organic Compounds
and 1,4-Dioxane in Outpost Wells BPOW 5-1 through BPOW 5-7,
Second Quarter 2017
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
REP	Blind duplicate sample
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 Outpost Wells BPOW 6-1 through BPOW 6-6,
Second Quarter 2017
Operable Unit 2 (Groundwater),
Bethpage, New York

Well: / Sample ID: / CONSTITUENT / Date: / Units (ug/L)	BPOW 6-1 BPOW 6-1 5/22/2017	BPOW 6-2 BPOW 6-2 5/22/2017	BPOW 6-3 BPOW 6-3 5/23/2017	BPOW 6-4 BPOW 6-4 5/23/2017	BPOW 6-5 BPOW 6-5 5/25/2017	BPOW 6-6 BPOW 6-6 5/25/2017
Volatile Organic Compounds (VOCs) [1]						
1,1,1-Trichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-trichloro-1,2,2-trifluroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	< 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
2-Butanone (MEK)	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4-methyl-2-pentanone (MIK)	< 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
Benzene	< 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
Bromoform	< 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
Carbon Disulfide	< 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
Chlorobenzene	< 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
Chloroform	< 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
cis-1,2-dichloroethene	< 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
Dibromochloromethane	< 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
Methylene Chloride	< 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
Tetrachloroethene	< 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
trans-1,2-dichloroethene	< 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
Trichloroethylene	< 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
Xylene-o	< 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
Total VOCs [2]	0	0	0	0	0	0
1,4-Dioxane [3]	< 0.200	< 0.200	< 0.200 [4]	**0.104 J [4]**	< 0.200 [4]	< 0.200 [4]

See last page for Notes and Abbreviations.

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.

[4] Samples were collected and re-analysed for 1,4-dioxane on 07/20/17 due to non-usability of the previous data.

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
<0.50	Constituent not detected above its laboratory detection limit

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

ARCADIS Design & Consultancy for natural and built assets

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE106D1 RE106D1 5/30/2017	RE106D2 RE106D2 5/30/2017	RE106D3 RE106D3 5/31/2017	RE107D1 RE107D1 5/10/2017
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		< 1.0	< 1.0	**0.24 J**	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		< 5.0	**10.9**	**99.5**	< 5.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	**0.46 J**	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	**1.7**	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	**1.4**	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	**0.28 J**	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		< 1.0	**1.1**	**4.5**	< 1.0
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		**0.89 J**	**6.6**	**56.4**	**1.0**
Tolene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene		**8.5**	**45.3**	**93.8**	**15.2**
Vinyl Chloride		< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs (2)		**10**	**64**	**260**	**16**
1,4-Dioxane (3)		**5.41**	**7.98**	**8.26**	**4.33**

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

ARCADIS Design & Consultancy for natural and built assets

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE107D2 RE107D2 5/10/2017	RE107D3 RE107D3 5/12/2017	RE114D1 RE114D1 5/15/2017	RE114D1 REP051517AD1 5/15/2017
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		< 1.0	< 1.0	**0.36 J**	**0.36 J**
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		**34.9**	**4.5 J**	**13.9**	**5.5**
1,1,2-Trichloroethane		< 1.0	< 1.0	**1.3**	**1.4**
1,1-Dichloroethane		**0.30 J**	< 1.0	**1.2**	**1.1**
1,1-Dichloroethene		**0.80 J**	< 1.0	**3.5**	**2.9**
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	**2.0**	**1.4**
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		**0.35 J**	< 1.0	**2.3**	**2.2**
Chloromethane		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		**4.1**	< 1.0	**4.7**	**4.4**
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		**8.6**	**0.40 J**	< 1.0	< 1.0
Tolene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene		**194 D**	**0.27 J**	**415 D**	**390 D**
Vinyl Chloride		< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs (2)		**240**	**5.2**	**440**	**409**
1,4-Dioxane (3)		**9.58**	< 0.097	**4.17**	**4.56**

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

ARCADIS Design & Consultancy for natural and built assets

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE114D2 RE114D2 5/15/2017	RE114D3 RE114D3 5/16/2017	RE115D1 RE115D1 6/1/2017	RE115D2 RE115D2 6/1/2017
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		< 1.0	< 1.0	**0.26 J**	**0.57 J**
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		**6.7**	**9.7**	**4.8 J**	**11.6**
1,1,2-Trichloroethane		**0.34 J**	< 1.0	**0.59 J**	**0.59 J**
1,1-Dichloroethane		**0.49 J**	< 1.0	< 1.0	**0.86 J**
1,1-Dichloroethene		**0.89 J**	**0.94 J**	**1.9**	**5.5**
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	**1.4**	**1.3**
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		**0.39 J**	< 1.0	**1.3**	**0.90 J**
Chloromethane		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		**0.95 J**	**0.83 J**	**1.3**	**2.7**
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 1.0
Tolene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene		**67.0**	**42.6**	**62.2**	**230**
Vinyl Chloride		< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs (2)		**77**	**54**	**74**	**250**
1,4-Dioxane (3)		**2.34**	**3.19**	**1.80 J**	**1.70**

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE118D1 RE118D1 5/17/2017	RE119D1 RE119D1 5/19/2017	RE121D1 RE121D1 6/9/2017
Volatile Organic Compounds (VOCs) (1)				
1,1,1-Trichloroethane		< 1.0	< 1.0	**0.36 J**
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		< 5.0	< 5.0	**6.6**
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	**1.7**
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	**0.37 J**
Chlorobenzene		< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	**0.36 J**
Chloromethane		< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		< 1.0	< 1.0	**1.0**
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0
Tolene		< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0
Trichloroethylene		< 1.0	< 1.0	**31.3**
Vinyl Chloride		< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0
Total VOCs (2)		0	0	**42**
1,4-Dioxane (3)		< 0.11	< 0.10	**4.76 J**

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE121D2 RE121D2 6/9/2017	RE121D2 REP060917AD1 6/9/2017	RE124D1 RE124D1 6/1/2017
Volatile Organic Compounds (VOCs) (1)				
1,1,1-Trichloroethane		**0.49 J**	**0.48 J**	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		**14.4**	**14.1**	**52.3**
1,1,2-Trichloroethane		**0.64 J**	**0.61 J**	< 1.0
1,1-Dichloroethane		**0.72 J**	**0.68 J**	< 1.0
1,1-Dichloroethene		**3.6**	**3.6**	**0.74 J**
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0
Carbon tetrachloride		**4.3**	**4.2**	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0
Chloroform		**1.7**	**1.6**	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		**2.1**	**2.2**	< 1.0
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0
Tetrachloroethene		**0.56 J**	**0.53 J**	**0.30 J**
Tolene		< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0
Trichloroethylene		**789 D**	**728 D**	**3.1**
Vinyl Chloride		< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0
Total VOCs (2)		**820**	**750**	**56**
1,4-Dioxane (3)		**2.64 J**	**3.93 J**	**1.11**

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE124D2 RE124D2 6/1/2017	RE127D1 RE127D1 6/6/2017	RE127D2 RE127D2 6/6/2017	RE128D1 RE128D1 6/7/2017
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 1.0
Tolene		< 1.0	< 1.0	< 1.0	**0.80 J**
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene		< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride		< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs (2)		0	0	0	**0.8**
1,4-Dioxane (3)		< 0.10	< 0.10	< 0.10	< 0.11

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE128D2 RE128D2 6/7/2017	RE129D1 RE129D1 6/8/2017	RE129D2 RE129D2 6/8/2017	RE130D1 RE130D1 6/6/2017
Volatile Organic Compounds (VOCs) (1)					
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 1.0
Tolene		**0.48 J**	**1.0**	**1.1**	**0.82 J**
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene		< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride		< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs (2)		**0.48**	**1.0**	**1.1**	**0.82**
1,4-Dioxane (3)		< 0.10	< 0.10	< 0.10	< 0.11

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

Constituent (Units in µg/L)	Well: Sample ID: Date:	RE130D2 RE130D2 6/6/2017	RE133D1 RE133D1 5/24/2017	RE133D2 RE133D2 5/24/2017
Volatile Organic Compounds (VOCs) (1)				
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-triflroethane		< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0
2-Butanone (MEK)		< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)		< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10
Benzene		< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 1.0	< 1.0	< 1.0
Bromoform		< 1.0	< 1.0	< 1.0
Bromomethane		< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0
Carbon tetrachloride		< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene		< 1.0	< 1.0	< 1.0
cis-1,3-dichloropropene		< 1.0	< 1.0	< 1.0
Dibromochloromethane		< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0
Methylene Chloride		< 2.0	< 2.0	< 2.0
Styrene		< 1.0	< 1.0	< 1.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0
Tolene		**0.89 J**	< 1.0	< 1.0
trans-1,2-dichloroethene		< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene		< 1.0	< 1.0	< 1.0
Trichloroethylene		< 1.0	< 1.0	< 1.0
Vinyl Chloride		< 1.0	< 1.0	< 1.0
Xylene-o		< 1.0	< 1.0	< 1.0
Xylenes - m,p		< 1.0	< 1.0	< 1.0
Total VOCs (2)		**0.89**	0	0
1,4-Dioxane (3)		< 0.10	< 0.11	< 0.10

Notes and Abbreviations on last page.

Table 6.
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells Installed by the Navy Second Quarter 2017, Operable Unit 2 (Groundwater) Bethpage, New York.

ARCADIS Design & Consultancy for natural and built assets

Notes and Abbreviations:

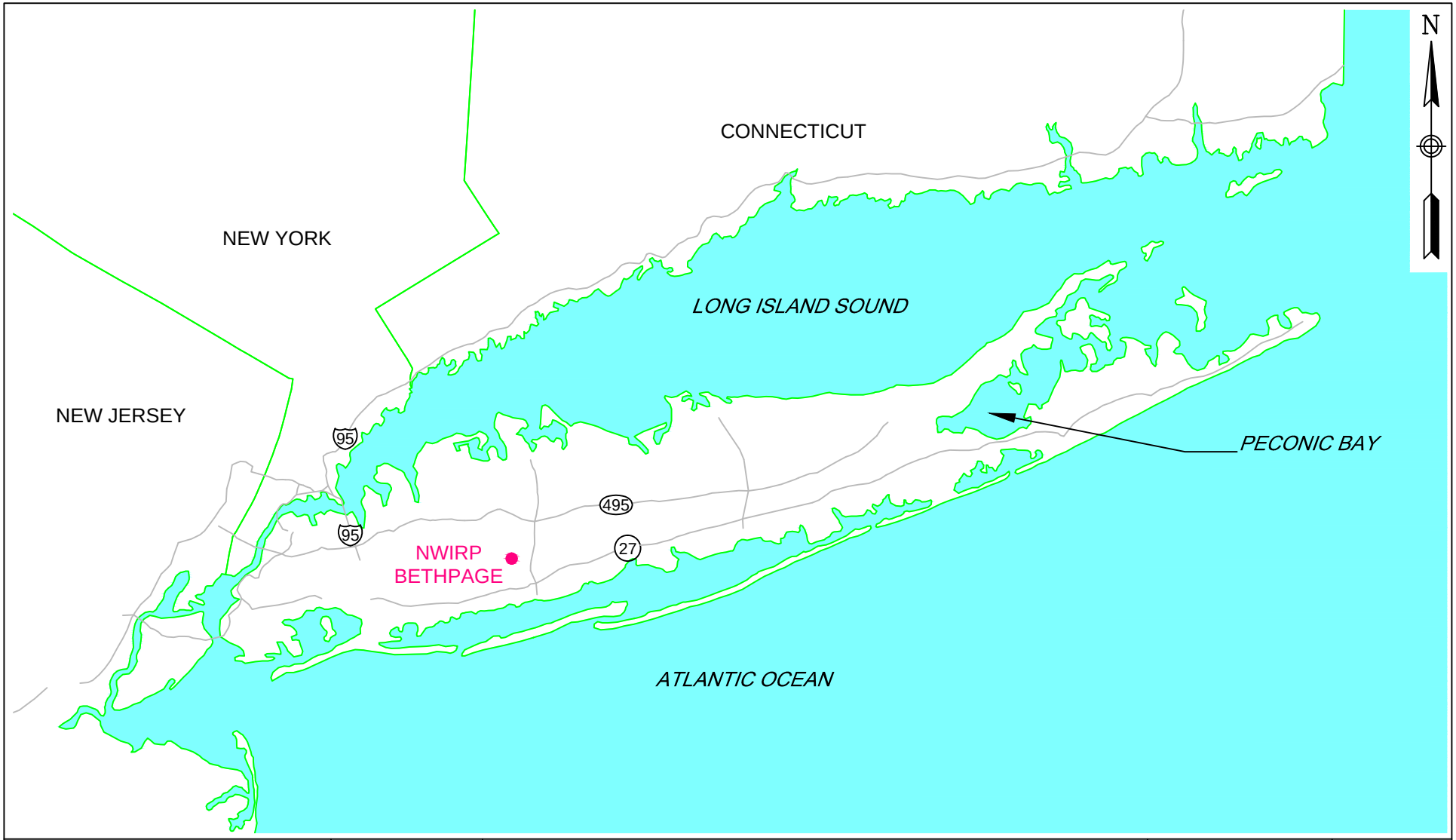
(1) Samples were analyzed for the TCL VOCs using USEPA Method 8260C.
(2) Total VOCs are rounded to two significant figures.
(3) Samples were analyzed for 1,4-Dioxane using USEPA Method 8270D SIM

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

Bold	Constituent detected
D	Concentration is based on a diluted sample analysis
J	Constituent value is estimated
REP	Blind Duplicate Sample
SIM	Selected Ion Monitoring
TCL	Target Compound List
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
µg/L	Micrograms per liter
<0.50	Compound 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

F:\Projects\Navy\Bethpage WXE08I7.0_Deliverables\7.2_CADD\GIS_files\Bethpage\MAP DOCS\MXD\MISC\2014 03 Wells Sampled\F2 GW Samples 2017 09 25.mxd

Former Northrop Grumman Site

Former Northrop Grumman Site

RE123D1 RE123D2 RE123D3

RE106D1 RE106D2 RE106D3

RE107D1 RE107D2 RE107D3

RE122D1 RE122D2 RE122D3

RE108D1 RE108D2

RE103D1 RE103D2 RE103D3

RE104D1 RE104D2 RE104D3

RE126D1 RE126D2 RE126D3

RE105D1 RE105D2

RE125D1 RE125D2 RE125D3

RE120D1 RE120D2 RE120D3

RE131D1 RE131D2 RE131D3

TT101D TT101D1 TT101D2

RE121D1 RE121D2

RE124D1 RE124D2

RE114D1 RE114D2 RE114D3

RE115D1 RE115D2

RE128D1 RE128D2

RE127D1 RE127D2

BPOW5-1 BPOW5-2 BPOW5-3

RE130D1 RE130D2

BPOW5-4 RE117D1 RE117D2

RE129D1 RE129D2

BPOW5-5 BPOW5-6 RE118D1

RE119D1 BPOW5-7

RE133D1 RE133D2

BPOW6-3 BPOW6-4

BPOW6-5 BPOW6-6

BPOW6-1 BPOW6-2

Note:
Wells outlined on this figure reflect wells installed by Resolution Consultants (RC) and sampled by RC or ARCADIS in June 2017, as documented in this report. Additional Navy-owned wells sampled by ARCADIS as part of separate and ongoing OU2 programs will be documented in the ARCADIS 2017 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

NAVFAC

LOCATION MAP
JUNE 2017 GROUNDWATER SAMPLING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: EV	DATE: 9/25/2017
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendices

Appendix A

Groundwater Sampling Forms – Resolution Consultants

RESOLUTION CONSULTANTS

Well ID: RE103D1

Low Flow Ground Water Sample Collection Record 1140

Client: Navy NWIRP Bethpage Date: 6/1/17 Time: Start ~~435~~ am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Arvada
Weather Conds: ~~cloudy 45°~~ clear 75°F Collector(s): JC

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

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

b. Water Table Depth 42.45 ft 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	08L160232

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
1150	–	16.60	0.088	9.92	4.13	224.0	6.27	550	42.79	clear / none
1155	–	16.57	0.088	9.85	3.85	225.4	–	550	42.79	"
1200	–	16.57	0.088	9.57	3.98	205.9	0.21	550	42.78	"
1205	–	16.63	0.087	9.28	4.14	195.4	–	550	42.78	"
1210	5 gal	16.54	0.087	8.93	4.29	187.2	0.79	550	42.78	"
1215	–	16.81	0.087	9.06	4.38	186.8	–	550	42.78	"

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)

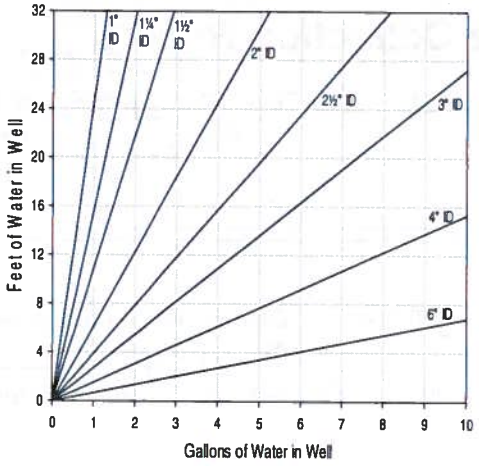
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D1-GW-060117	40-mL vials	3	HCl	VOCs	1245
RE103D1-GW-060117	1-L amber	2	none	1,4-Dioxane	1245

Comments

Signature _____ Date _____

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1220	—	16.80	0.087	8.96	4.43	187.1	0.44	550	42.77	Clear / none
1225	—	16.85	0.088	8.71	4.47	190.1	—	550	42.77	"
1230	—	16.90	0.088	8.49	4.47	194.9	0.71	550	42.77	"
1235	—	16.94	0.088	8.34	4.47	198.4	—	550	42.77	"
1240	10 gal	16.89	0.088	8.31	4.50	195.9	0.62	550	42.77	"
1245										SAMPLE!

RESOLUTION CONSULTANTS

Well ID: RE103D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 1 / 17 Time: Start 930 am/pm
Project No: 60266526 Finish 1230 am/pm
Site Location: Areca
Weather Conds: Cloudy 65° Collector(s):

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

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

b. Water Table Depth 42.40 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	14C101881
LaMotte		

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
1005	-	16.90	0.051	~~94.4~~	9.09	89.2	-	450	41.48	clear
1020		17.44	0.051	6.64	7.53	70.1				
1030		16.66	0.048	6.83	6.53	55.9				
1035		16.81	0.045	7.42	6.12	51.4		450	40.80	
1040	5 gal	16.68	0.043	8.05	5.59	47.1				
1045		16.89	0.043	8.10	5.38	46.5	0.96		40.80	

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)

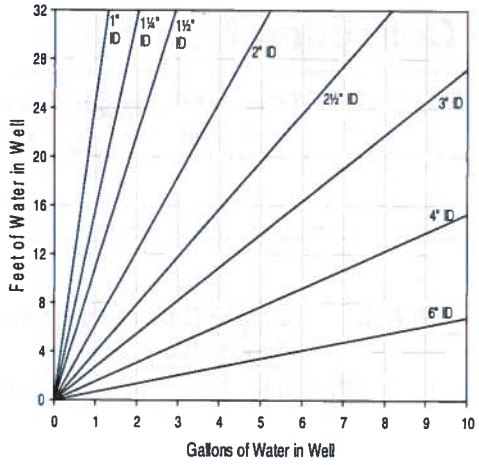
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D2-060117-GW	40-mL vials	3	HCl	VOCs	1210
RE103D2-GW-060117	1-L amber	2	none	1,4-Dioxane	
DUP01-GW-060117					1230

Comments

Signature Date

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: RE103D2 13.1gal

(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
1058		16.81	0.042	8.33	5.01	45.1	0.43		40.78	
1100		16.91	0.042	8.26	4.94	43.5	0.91		40.69	
1105		16.96	0.043	8.32	4.88	41.2	0.99			
1110		16.94	0.044	8.29	4.89	40.5			40.68	
1115		17.15	0.044	8.22	4.88	40.7	0.92	400		
1120		17.05	0.044	8.21	4.80	41.5				
1125		16.98	0.044	8.27	4.82	42.7				
1130		16.97	0.044	8.28	4.79	43.5			40.63	
1135	10gal	16.89	0.044	8.20	4.76	44.6				
1140		16.91	0.045	8.27	4.77	43.5	1.15		40.66	
1145		17.05	0.044	7.94	4.75	45.3				
1150		16.79	0.045	8.20	4.68	45.6				
1155		16.92	0.045	8.34	4.69	46.6	0.89	400	40.64	
1200	13gal	16.89	0.045	8.32	4.71	46.7				
1205		16.91	0.046	8.52	4.70	47.1				
1210								200		sample
DAY 2		12:30								

RESOLUTION CONSULTANTS

Well ID: RE10303

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 1 / 17 Time: Start 930 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Arcata
Weather Conds: Cloudy 61°, Sunny 70 Collector(s): _____

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

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

b. Water Table Depth 42.04 ft 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	16J101453
~~Horiba~~		

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
1020										ON
1025		16.10	0026	12.69	6.16	-247.5		500		
1030		15.80	0.025	9.54	1.22	-248.0		~~42.25~~	42.25	
1035		15.82	0.025	7.85	5.41	-259.6				
1040		15.81	0.025	7.15	5.50	-253.2				
1045		15.84	0.025	6.31	5.65	-247.0	1.11	550	42.24	

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)

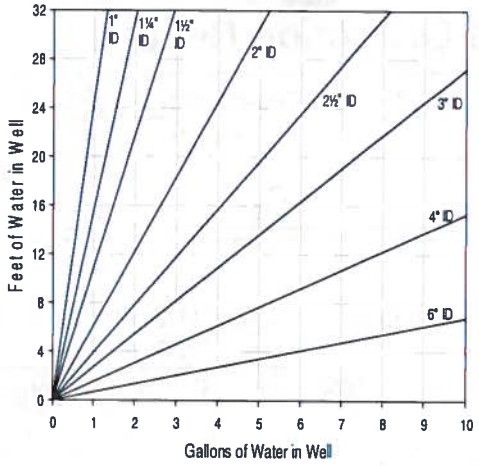
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10303-GW-060117	40-mL vials	3	HCl	VOCs	1130
RE10303-GW-060117	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kneeth Date 6/1/17

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: RC-10303 (4.8gal)

(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
1050	5gal	15.78	0.025	5.68	5.48	-240.7	1.51		42.20	
~~1055~~		~~16.78~~	~~0.042~~	~~8.29~~	~~5.05~~	~~45.1~~				
1055		15.83	0.025	5.67	5.36	-283.4				
1100		15.84	0.025	5.48	5.31	-236.9	2.00		42.19	
1105		15.84	0.025	5.29	5.31	-237.9	1.73			
1110		15.77	0.025	5.20	5.25	-236.4			42.05	
1115		15.82	0.024	5.11	5.22	-234.7	1.91	550		
1120		15.78	0.024	4.99	5.22	235.4				
1125	10gal	15.83	0.024	4.89	5.12	-234.0			42.10	
1130										Sample

Well ID: TT1010

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 1 / 17 Time: Start 1318 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Wadsworth
Weather Conds: Sunny 75° Collector(s): _____

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

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

b. Water Table Depth 34.58 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	14C101881

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								900		ORI
1350		15.35	0.105	3.01	4.24	85.4			34.38	
1355		15.37	0.105	2.20	3.99	84.1			34.42	
1400		15.26	0.105	1.81	3.95	81.2	14.7		34.40	
1405	5gal	15.35	0.105	1.77	3.90	78.6				
1410		15.37	0.106	1.31	3.87	75.8				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

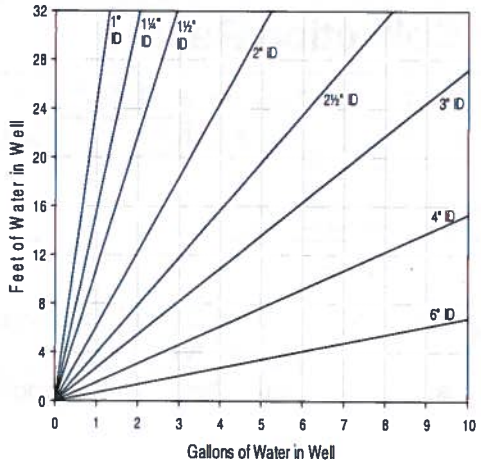
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT1010-GW-060117	40-mL vials	3	HCl	VOCs	1440
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature _____ Date _____

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: TT101D

(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
1415		15.27	0.106	1.32	3.87	73.9	6.65		34.41	
1420	10gal	15.25	0.106	1.25	3.88	71.4	3.50	850		
1425		15.26	0.106	1.23	3.88	69.8				
1430		15.28	0.106	~~1.23~~	3.87	68.4				
1435	13gal	15.30	0.106	1.26	3.87	66.8	1.82		34.42	
1440										Sample

RESOLUTION CONSULTANTS

Well ID: TT10101

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 1 / 17 Time: Start 1315 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Wadsworth
Weather Conds: Sunny 75° Collector(s): _____

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

a. Total Well Length 595 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 360.00 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	08L100232

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~~	1330							900		ON
1350		15.29	0.082	4.76	3.74	222.0				
1355		15.30	0.082	3.52	4.13	204.1				
1400	5gal	15.26	0.084	3.27	4.43	185.1	13.0		35.92	
1405		15.32	0.084	3.16	4.41	189.0				
1410		15.40	0.084	2.81	4.33	195.4				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

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

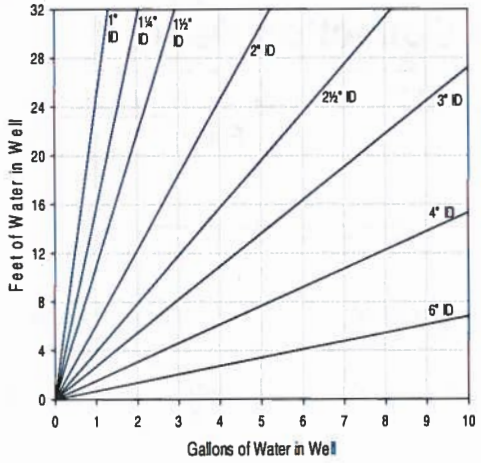
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT101D1-GW-060117	40-mL vials	3	HCl	VOCs	1430
	1-L amber	2	none	1,4-Dioxane	

MS/MSD

Comments _____

Signature _____ Date _____

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: TT101D1

(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
1415	10	15.77	0.083	2.58	4.53	184.8	8.63		35.90	
1420		15.23	0.083	2.44	4.45	190.0	6.27			
1425		15.25	0.083	2.41	4.47	188.7	4.23			
1430								300		Samp/R, MS/MSD

Well ID: 11101-D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Bethpage
Weather Conds:
Date: 6 / 1 / 17
Time: Start 1345 am/pm
Finish ____ am/pm
Collector(s): T. Bell, P. Karath

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

a. Total Well Length 765 ft
b. Water Table Depth 36.67 ft
c. Length of Water Column ____ ft (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	10G101453
QED	MP10	U554072

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
1355	–	15.83	0.035	1.70	4.668	-225.6	–	800	–	Clear
1400	–	15.73	0.035	1.81	4.86	-235.6	–	800	36.68	Clear
1405	–	15.72	0.035	2.76	4.94	-237.1	0.65	800	–	Clear
1410	5 Gal	15.70	0.035	3.38	5.14	-238.6	–	800	36.67	Clear
1415	–	15.68	0.035	5.04	5.15	-200.2	0.45	800	36.67	Clear
1430		15.62	0.035	6.21	5.16	-200.6				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

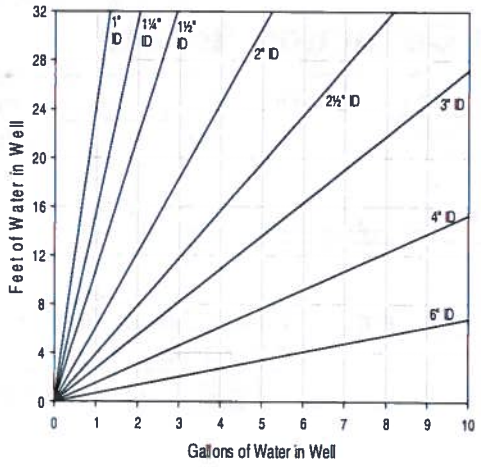
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	40-mL vials	3	HCl	VOCs	1450
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature ____ Date ____

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID:

(continued from front) Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1435		15.65	0.034	6.28	5.14	-200.4	2.71		36.68	
1440		15.67	0.034	6.35	5.14	-199.3				
1445	13.5	15.67	0.034	6.46	5.15	-199.6				
1450										sample

RESOLUTION CONSULTANTS

Well ID: RE131D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 2 / 17 Time: Start 820 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: RE131
Weather Conds: 55-75° sunny Collector(s): SC

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

a. Total Well Length 435 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 37.84 ft 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	10G101453

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										OR
830	–	15.48	0.093	6.44	4.27	-196.1	–	550	37.27	clear/none
835	–	15.57	0.094	3.73	4.22	-195.0	1.67	550	37.27	"
840	–	15.42	0.093	3.69	4.29	-193.4	–	550	37.27	"
845	–	15.33	0.093	3.61	4.30	-193.4	–	550	37.27	"
850	–	15.26	0.093	3.56	4.32	-193.6		550	37.27	"

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:

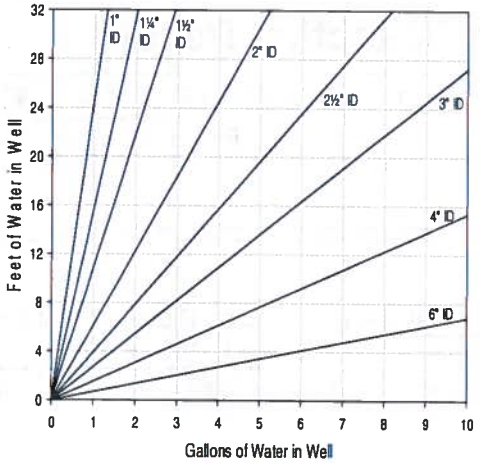
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE131D1-GW-060217	40-mL vials	3	HCl	VOCs	945
RE131D1-GW-060217	1-L amber	2	none	1,4-Dioxane	945

Comments

Signature _____ Date 6/2/2017

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
855	5 gal	15.25	0.093	3.43	4.43	-196.6	–	550	37.27	clear / none
900	–	15.17	0.093	3.47	4.40	-194.3	3.86	550	37.27	"
905	–	15.13	0.092	4.50	4.44	-193.0	–	600	37.27	"
910	–	15.07	0.092	4.31	4.47	-196.3	–	600	37.27	"
915	–	15.17	0.092	4.15	4.51	-196.5	2.15	600	37.27	"
920	–	15.19	0.092	4.04	4.52	-197.6	–	600	37.27	"
925	10 gal	15.07	0.092	3.95	4.51	-195.9	–	600	37.27	"
930	–	15.17	0.092	3.87	4.53	-197.0	2.36	600	37.27	"
935	–	15.17	0.093	3.80	4.52	-196.0	–	600	37.27	"
940	13.5 gal	15.11	0.093	3.73	4.49	-193.3	–	600	37.27	"
945										SAMPLE

RESOLUTION CONSULTANTS

Well ID: RE BID2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 2 / 17 Time: Start 800 am/pm
Project No: 60266526 Finish 1015 am/pm
Site Location:
Weather Conds: 55-75° Sunny Collector(s): PK

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

a. Total Well Length 595 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 38.49 ft d. Calculated System Volume (see back) 161 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	08L100232
LaMotte	2020	1845 25X

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
810										OY
815		15.18	0.088	14.28	5.22	162.7		600		
820		15.02	0.086	9.95	4.78	178.5			38.58	
825		14.97	0.083	9.29	4.83	177.4	23.8			
830		14.92	0.082	9.05	4.61	190.5			38.61	
835		15.00	0.082	8.72	4.61	197.3		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)

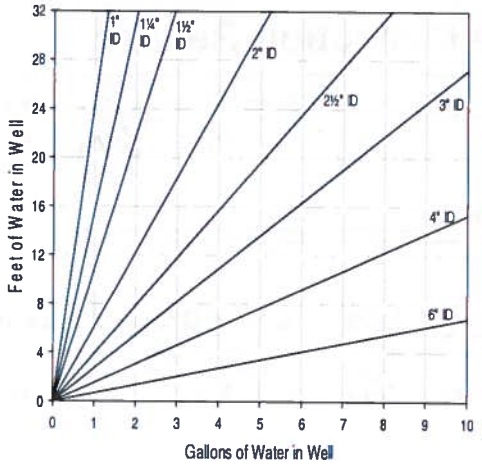
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13102-GW-060217	40-mL vials	3	HCl	VOCs	0950
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaveth Date 6/2/17

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: RE13102 @ 8:10 (16.3gal)

(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
840	5gal	14.86	0.082	8.27	4.86	188.6	30.1		38.62	
845		14.84	0.082	8.08	4.77	197.7		600		
850		14.80	0.082	7.92	4.65	207.3	22.8		38.62	
855		14.81	0.082	7.83	4.63	210.2				
900		14.80	0.082	7.70	4.57	216.3			38.63	
905	10gal	14.80	0.083	5.93	4.78	202.9	20.1			
910		14.98	0.083	5.71	4.80	200.1			38.63	
915		15.07	0.083	5.67	4.85	196.6	13.1			
920		15.16	0.083	5.58	4.87	193.4		600	38.64	
925		15.24	0.083	5.44	4.87	190.9	11.7			
930		15.22	0.083	5.40	4.84	191.4			38.63	
935	15gal	15.22	0.083	5.34	4.82	189.4	11.53			
940		15.21	0.083	5.28	4.78	192.8	12.3		38.63	
945	17gal	15.26	0.083	5.25	4.73	196.2	12.1			
950										Sample

RESOLUTION CONSULTANTS

Well ID: RE13103

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/2/17 Time: Start 08 15 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: RE131
Weather Conds: 55°-75° Sunny Collector(s): F. Bell

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

a. Total Well Length 685 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 38.91 ft d. Calculated System Volume (see back) 13.1 gal. 60 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	14C101881
QED	MP10	U6452972

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
0815	-	14.70						550		OH
0830	-	14.65	0.055	11.40	7.76	30.9	—	700	38.94	clear
0855	-	14.71	0.054	10.71	6.47	24.1	9.93	700	38.96	clear
0840	-	14.70	0.054	10.66	6.24	25.7	-	700	38.97	clear
0845	5Gal	14.59	0.054	10.65	6.02	27.1	—	700	38.98	clear
0850	-	14.72	0.053	10.25	5.35	30.1	4.11	700	38.99	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)

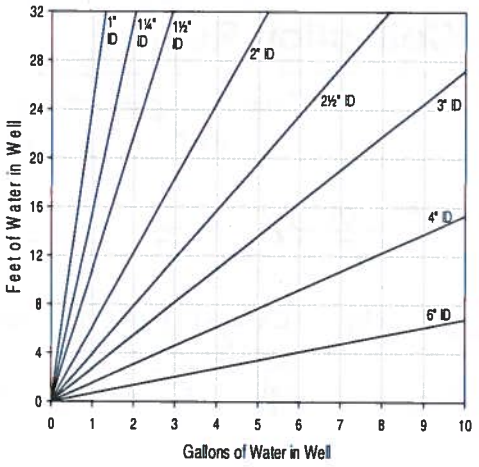
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE131D3	40-mL vials	3	HCl	VOCs	0930
RE131D3	1-L amber	2	none	1,4-Dioxane	0930

Comments

Signature _____ Date 6/2/2017

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
0855	–	14.70	0.053	10.19	5.31	30.5	4.52	700	38.99	Clear
0900	–	14.78	0.053	8.52	5.04	30.8	2.02	700	39.00	clear
0905	–	14.74	0.053	8.72	4.89	32.7	–	700	39.01	clear
0910	10 Gal	14.74	0.053	8.82	4.81	34.5	2.23	700	39.02	clear
0915	–	14.80	0.053	8.64	4.72	36.7	2.14	700	39.02	clear
0920	–	14.84	0.054	8.46	4.66	38.4	–	700	39.03	clear
0925	13.1 Gal	14.71	0.054	8.38	4.64	39.2	2.21	700	39.03	clear
	Sample Time			0950						

Well ID: RE125D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/2/17 Time: Start 1330 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Diane
Weather Conds: Sunny 75° Collector(s): JC

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

a. Total Well Length 345 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 38.24 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	

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
1315										ON
1320	—	16.22	0.124	4.68	4.57	-218.6	—	600	35.91	clear/none
1325	—	16.21	0.124	4.58	4.56	-218.0	—	600	35.91	"
1330	—	16.10	0.124	3.93	4.67	-228.1	2.37	600	35.91	"
1335	—	16.09	0.123	3.84	4.71	-228.2	—	600	35.91	"
1340	—	16.10	0.124	3.60	4.75	-228.9	—	600	35.91	"

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)

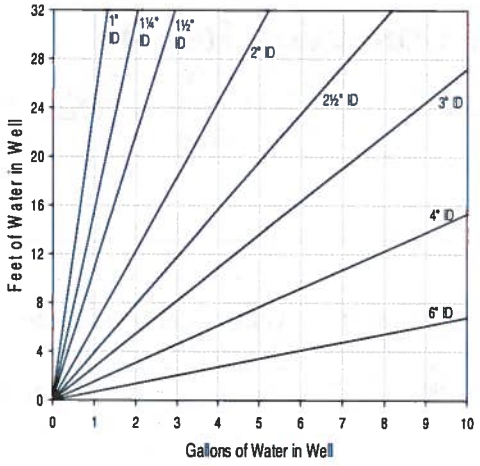
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE125D1-GW-060217	40-mL vials	3	HCl	VOCs	1448
RE125D1-GW-060217	1-L amber	2	none	1,4-Dioxane	1448

Comments

Signature _____ Date _____

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID:

(continued from front) Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1345	–	16.03	0.124	3.32	4.73	-227.6	35.99	600	35.92	
1350	–	15.89	0.123	2.89	4.80	-228.3	–	600	35.92	clear
1355	–	15.86	0.123	2.85	4.79	-225.0	–	600	–	clear
1400	–	15.91	0.122	2.72	4.81	-226.9	3.31	600	35.93	Clear
1405	–	15.86	0.123	2.60	4.82	-226.7	–	600	35.92	clear
1410	10 Gal	15.86	0.122	2.44	4.86	-228.0	3.27	600	35.91	Clear
1415	–	15.81	0.122	2.42	4.89	-228.1	–	600	35.91	"
1430	–	15.77	0.122	2.39	4.87	-228.6	–	600	35.91	"
1435	–	15.79	0.122	2.37	4.87	-229.4	2.89	600	35.91	"
1440	13.5gal									SAMPLE!

Well ID: RE125D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/2/17 Time: Start 1300 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Dime
Weather Conds: Sunny 75° Collector(s): E. Bell

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

a. Total Well Length ~~560~~ 605 ft c. Length of Water Column 569.06 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth ~~35.94~~ 35.94 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	

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	Start									
1330	–	16.25	0.110	13.24	6.05	57.8	4.45	650	38.20	Clear
1335	–	15.98	0.108	6.45	6.02	58.7	4.23	650	38.20	clear
1340	–	15.67	0.102	5.97	6.02	59.2	4.54	650	38.19	Clear
1345	–	15.54	0.101	5.92	5.33	60.6	–	650	38.19	Clear
1350	–	15.37	0.100	5.45	5.05	60.0	4.29	650	38.19	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.

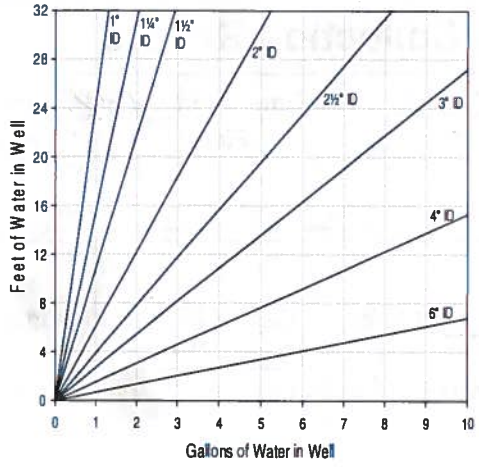
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE125D2GW060217	40-mL vials	3	HCl	VOCs	1445
RE125D2-GW-060217	1-L amber	2	none	1,4-Dioxane	

Comments

Signature _____ Date 6-2-2017

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
1355	5Gal	15.82	0.~~102~~	~~4.59~~	4.97	61.2	3.91	650	38.19	clear
1400	-	15.30	0.100	4.57	4.97	61.0	-	650	38.19	clear
1405	-	15.28	0.101	4.54	4.97	60.0	-	650	38.19	clear
1410	-	15.27	0.100	4.40	4.95	57.8	3.87	650	38.17	clear
1415	-	15.27	0.100	4.38	4.94	57.7	-	650	38.16	clear
1430	10gal	15.25	0.102	4.12	4.86	57.9	2.61	650	38.16	"
1435	-	15.26	0.102	4.16	4.89	57.8	-	650	38.16	
1445										Sample

Well ID: RE~~18~~5D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/2/17 Time: Start 1430 am/pm
Project No: 60266526 Finish 1500 am/pm
Site Location: Dave
Weather Conds: Sunny 75° Collector(s):

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

a. Total Well Length ~~695~~ 695 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 38.45 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%
- 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	08L160323
LaMotte	2020	

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
1305										OX
1315		18.65	0.058	42.67	3.06	306.4		600	38.42	
1320		18.58	0.055	14.90	3.60	272.4				
1325		18.48	0.054	12.46	3.99	253.0			38.43	
1330		18.15	0052	10.45	3.74	264.5	8.19	~~8.19~~		
1335		18.46	0.051	9.71	4.13	243.7				

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)

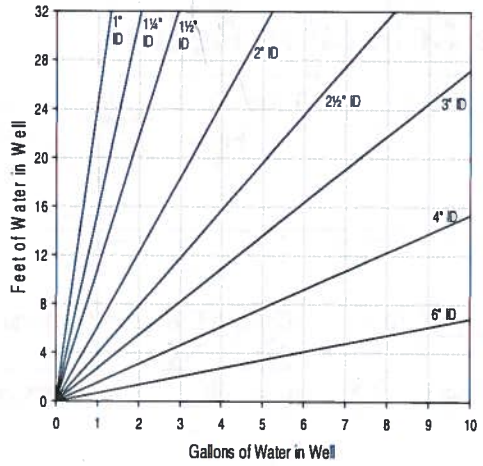
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE15D3GW-060217	40-mL vials	3	HCl	VOCs	1440
	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Paul Kaeta Date 6/2/17

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: RE12503 13:05

(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
1340	5gal	18.41	0.051	8.78	4.49	224.6				
1345		18.47	0.051	8.39	4.40	229.7	7	600	38.39	
1350		18.41	0.051	8.33	4.40	231.5	7.60			
1355		18.26	0.051	8.19	4.34	237.6				
1400		18.15	0.051	8.08	4.26	241.3	7.99	600	38.38	
1405	10gal	18.29	0.051	7.96	4.22	243.5				
1410		18.27	0.051	7.25	4.53	226.4	7.62			
1415		18.26	0.051	7.18	4.52	226.8				
1420		18.23	0.051	7.09	4.38	235.6	6.85		38.35	
1425		18.26	0.051	2.04	4.33	238.7	6.68			
1430	13.5	18.23	0.051	7.02	4.24	246.6	6.44		38.34	
1440										Sample

Fedex lost cooler; resampled 6/9/17

Well ID: RE126D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 5 / 17 Time: Start 1130 am/pm

Project No: 60266526 Finish 1330 am/pm

Site Location: S. Nastan

Weather Conds: 65° cloudy Collector(s): S. WRIGHT

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 47.42 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	08L100232

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	—	15.56	0.111	50.35	3.82	314.6	—	500	46.64	CLEAR/NONE
1205	0.75	15.46	0.111	12.16	4.82	271.8	4.19	500	45.90	CLEAR/NONE
1210	1.50	14.93	0.111	9.98	4.32	288.4	—	600	46.40	CLEAR/NONE
1215	2.25	14.90	0.111	8.94	4.88	264.2	—	600	46.58	CLEAR/NONE
1220	3	15.03	0.114	8.22	5.15	250.3	—	600	46.62	CLEAR/NONE
1225	3.75	14.99	0.114	7.92	5.31	241.6	5.40	600	46.64	CLEAR/NONE

(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

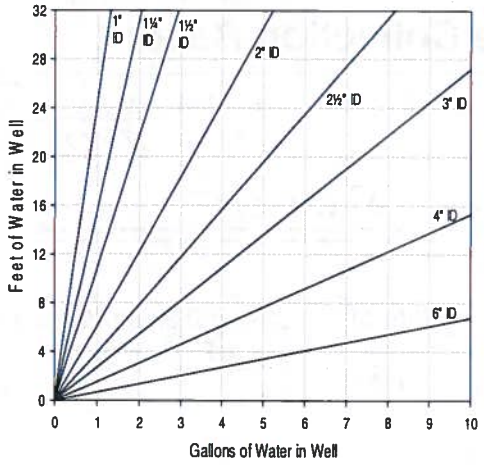
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D2-GW-060517	40-mL vials	3	HCl	VOCs	1320
RE126D2-GW-060517	1-L amber	2	none	1,4-Dioxane	

Comments

Signature Date 6-5-17

Fedex lost cooler; resampled 6/9/2017

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
1230	4,5	14,92	0.113	7,41	5.76	219,9	2,18	600	46,60	CLEAR / NONE
1235	5.5	14.81	0.113	7,04	5.51	227,2	—	700	46.60	CLEAR / NONE
1240	6,5	14,71	0.112	6.88	5.32	233,7	—	700	46,56	CLEAR / NONE
1245	7,5	14,72	0.112	6.57	5,35	230.1	—	700	46.58	CLEAR / NONE
1250	8,5	14,74	0.112	6.33	5.32	229.4	—	700	46.60	CLEAR / NONE
1255	9,5	14.74	0.112	6.13	5,41	225,1	—	700	46.60	CLEAR / NONE
1300	10.5	14.73	0.111	5.95	5.54	221.2	2.11	700	46.60	CLEAR / NONE
1305	11.5	14,70	0.110	5.78	5.61	218.8	—	700	46.60	CLEAR / NONE
1310	12,25	14.65	0.110	5.60	5,51	220.8	—	600	46.60	CLEAR / NONE
1315	13	14.68	0.110	5.55	5.48	221.7	2.01	600	46.60	CLEAR / NONE
1320										Sample

Fedex lost cooler; resampled 6/9/17

Well ID: RE126D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 5 / 17 Time: Start 1130 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: S. Nassau
Weather Conds: 65° cloudy Collector(s): _____

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

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

b. Water Table Depth 47.29 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	14C10188
LaMotte	2020	

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
1155								600		clear
1200		15.56	0.106	10.24	.994	188.7			47.31	
1205		15.05	0.105	11.74	—	135.8				
1210		14.97	0.105	10.48	—	138.0				
1215		14.93	0.104	10.01	—	136.8	2.77			
1220		15.00	0.104	9.74	—	135.7			47.29	

d. Acceptance criteria pass/fail

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

(continued on back)

If no or N/A - Explain below.
pH meter is not working

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

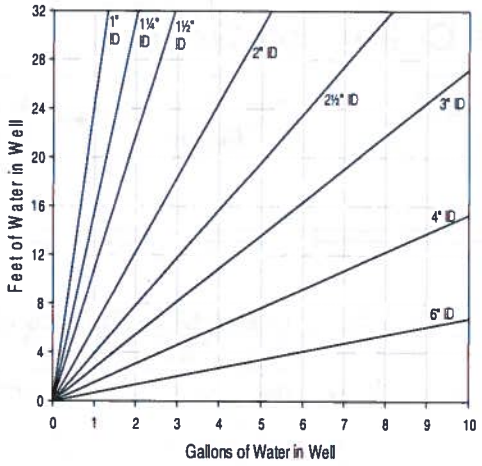
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D1-GW-060517	40-mL vials	3	HCl	VOCs	1325
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kaucher Date 6/5/17

Fedex lost cooler; resampled 6/9/2017

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: RE126P1 11:35

(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
1225		14.95	0.104	9.60	-	135.8				
1230	5gal	14.95	0.104	9.61	-	135.9	2.44	600	47.28	
1235		14.97	0.104	9.48	-	136.2				
1240		14.86	0.104	9.41	-	154.6			47.24	
1245		14.87	0.104	9.32	-	135.1				
1250		14.87	0.104	9.19	-	134.2				
1255	10gal	14.85	0.104	9.32	-	134.6	2.02	600	47.28	
1300		14.84	0.104	8.99	-	134.5				
1305		14.79	0.104	8.93	-	133.7	1.33			
1310		14.77	0.104	9.05	-	133.4			47.28	
1315		14.85	0.104	9.04	-	133.9				
1320	13.5	14.85	0.104	8.96	-	133.4				
1325										Taylor

Well ID: RE126D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/5/17 Time: Start 1130 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: S. Nassau
Weather Conds: 65° Cloudy Collector(s): _____

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

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

b. Water Table Depth 47.63 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	10610145
QED	MP10	U47533X

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
1155										ON
1200		15.45	0.024	7.91	4.17	-100.4		600	47.62	
1205		15.33	0.024	6.96	4.00	-65.0				
1210		15.19	0.024	6.44	4.15	-71.9	1.05		47.63	
1215		15.27	0.024	6.30	4.70	-98.4				
1220		15.43	0.026	6.36	4.85	-105.0			47.62	

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)

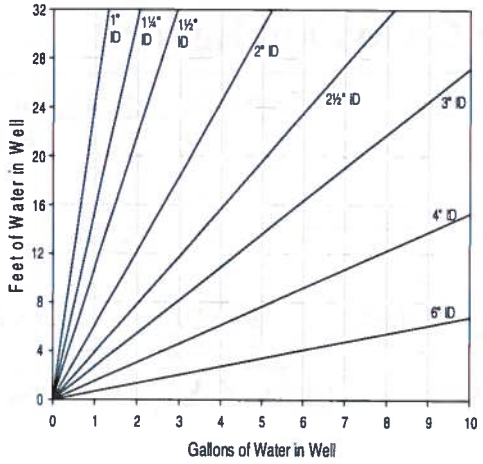
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D3-GW-060517	40-mL vials	3	HCl	VOCs	1330
RE126D3-GW-060517	1-L amber	2	none	1,4-Dioxane	1330

Comments N/A / MS/MSD collected @ well location

Signature _____ Date 6.5.2017

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: RE126D3 11:55

(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
1235	~~5~~	15.23	0.026	6.68	4.85	-102.4	3.18	600	47.62	
1240		15.19	0.025	6.78	4.87	-100.8	-	600	47.60	clear
1245	-	15.11	0.025	6.86	4.79	-98.0	3.21	600	47.59	clear
1250	-	15.10	0.025	6.91	4.88	-103.5	-	600	47.58	clear
1255	-	15.10	0.025	6.91	4.88	-104.3	3.43	600	47.58	clear
1300	10 Gal	15.10	0.026	6.82	4.90	-105.0	-	600	47.57	clear
1305	-	15.12	0.026	6.84	4.90	-105.7	3.10	600	47.56	clear
1310	-	15.14	0.026	6.84	4.91	-106.1	3.43	600	47.56	clear
1315	-	15.17	0.026	6.85	4.92	-106.4	3.62	600	47.55	clear
1320	13 Gal	15.13	0.026	6.87	4.93	-105.9	3.11	600	47.55	clear
1330	Sample time									

Well ID: RE104D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/5/17 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Hilltop
Weather Conds: Cloudy 65° Collector(s): S. WRIGHT

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

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

b. Water Table Depth 37.68 ft d. Calculated System Volume (see back) 15.1 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	14C101881

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
0820	—	17.09	0.100	28.37	21.79	41.7	1.18	600	36.00	CLEAR/NONE
0825	0.75	14.51	0.093	9.82	5.51	50.4	—	600	36.22	CLEAR/NONE
0830	1.5	14.40	0.094	8.07	*	60.7	—	600	36.42	CLEAR/NONE
0835	2.25	14.46	0.092	7.85	*	65.8	—	600	36.42	CLEAR/NONE
0840	3	14.42	0.091	7.55	*	69.1	—	600	36.44	CLEAR/NONE
0845	3.75	14.39	0.091	7.27	*	73.4	—	600	36.44	CLEAR/NONE

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

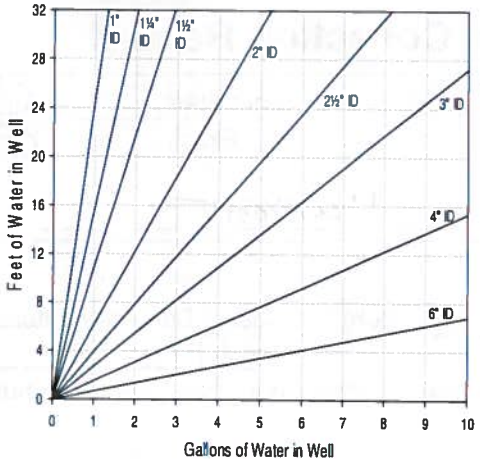
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D1-GW-060517	40-mL vials	3	HCl	VOCs	0950
RE104D1	1-L amber	2	none	1,4-Dioxane	0950

Comments * pH NOT READING CORRECTLY

Signature _____ Date 6-5-17

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
0850	4.5	14.44	0.091	7.39	*	78.1	1.21	600	36.46	CLEAR / NONE
0855	5.25	14.47	0.090	7.00	*	82.5	-	600	36.48	CLEAR / NONE
0900	6	14.41	0.090	6.74	*	86.4	-	600	36.48	CLEAR / NONE
0905	6.75	14.44	0.090	6.86	*	90.6	-	600	36.49	CLEAR / NONE
0910	7.5	14.43	0.090	6.88	*	94.0	-	600	36.50	CLEAR / NONE
0915	9	14.43	0.091	6.71	*	98.1	1.18	600	36.50	CLEAR / NONE
0920	9.75	14.42	0.090	6.61	*	101.0	-	600	36.50	CLEAR / NONE
0925	10.5	14.43	0.090	6.56	*	101.8	-	600	36.52	CLEAR / NONE
0930	11.25	14.43	0.090	6.52	*	102.6	-	600	36.52	CLEAR / NONE
0935	12	14.43	0.090	6.48	*	103.6	-	600	36.52	CLEAR / NONE
0940	12.75	14.44	0.090	6.43	*	104.6	-	600	36.53	CLEAR / NONE
0945	13.5	14.44	0.090	6.38	*	105.5	1.17	600	36.53	CLEAR / NONE
0950	Sample time									

RESOLUTION CONSULTANTS

Well ID: RE104D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/05/17 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Hilltop
Weather Conds: cloudy 65° Collector(s): F.B / P.K

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

a. Total Well Length 735 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC
b. Water Table Depth 41.62 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	10G101453
QED	MP10	LM#7533X
LaMotte	2020wc	8140-2616

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
0830	Start pump									
0840								600		
0845	~~1100~~	14.62	0.021	6.83	4.42	-42.5	1.05	600	~~41.65~~	clear
0850	—	14.61	0.020	4.62	4.68	-66.6	—	600	41.66	clear
0855	—	14.61	0.021	4.89	4.72	-69.7	—	600	41.66	clear
0900	—	14.62	0.021	5.23	4.80	-71.5	4.56	600	41.67	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.

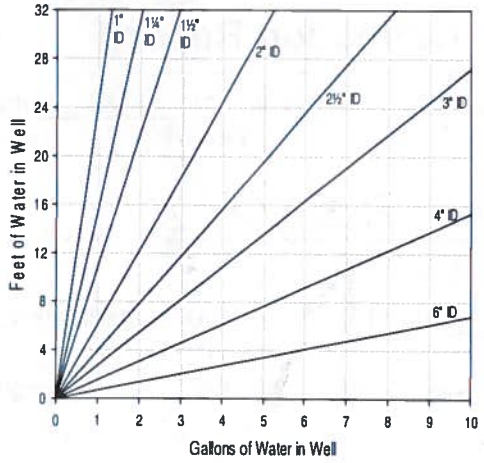
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D2-GW-060517	40-mL vials	3	HCl	VOCs	1010
RE104D2-GW-060517	1-L amber	2	none	1,4-Dioxane	1010

Comments

Signature _____ Date 6-5-2017

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
0905	5 Gal	14.62	0.021	5.38	4.84	-73.2	—	600	41.67	Clear
0910	–	14.63	0.020	5.62	4.89	-75.6	2.41	600	41.64	clear
0915	–	14.63	0.020	5.90	4.91	-78.9	–	600	41.60	clear
0920	–	14.62	0.020	5.89	4.90	-81.2	2.89	600	41.56	clear
0925	–	14.62	0.020	5.87	4.88	-86.2	–	600	41.48	clear
0930	"	14.62	0.020	5.86	4.89	-88.7	2.10	600	41.48	clear
0935	10 Gal	14.62	0.020	5.78	4.89	-87.8	–	600	41.46	Clear
0940	–	14.63	0.020	5.63	4.88	-89.1	2.73	600	41.41	clear
0945	–	14.64	0.020	5.32	4.88	-92.7	–	600	41.39	Clear
0950	–	14.63	0.020	5.85	4.88	-94.1	2.52	600	41.38	clear
0955	13.5	14.62	0.020	5.87	4.89	-96.2	2.63	600	41.38	Clear
1010	Sample time									

RESOLUTION CONSULTANTS

Well ID: RE104D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/5/17 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Hilltop
Weather Conds: Cloudy 65° Collector(s): _____

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

a. Total Well Length 785 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 41.53 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	08L 100232
LaMotte	2020	

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
825		1								OX
830		14.94	0.028	14.08	1.32	377.5		600		
835		14.90	0.023	12.79	8.91	368.4			41.68	
840		14.87	0.022	7.43	2.33	325.6	606			
845		14.88	0.022	7.48	2.40	324.1				
850		14.91	0.022	7.80	2.59	317.5		600	41.69	

d. Acceptance criteria pass/fail

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

(continued on back)

If no or N/A - Explain below.

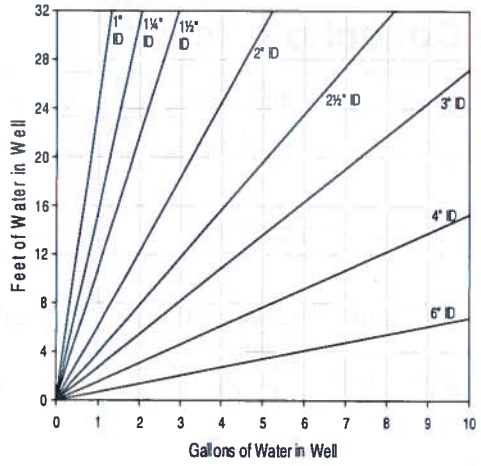
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D3-GW-060517	40-mL vials	3	HCl	VOCs	1000
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kovatch Date 6/5/17

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: RE104D3 of 8:25

(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
855	5 Gal	14.87	0.022	7.54	3.35	296.5		600	41.73	
900		14.86	0.022	7.50	3.66	285.6				
905		14.90	0.022	7.44	3.72	287.4	6.71			
910		14.94	0.022	7.28	3.62	292.6			41.73	
915		14.92	0.022	7.23	3.58	294.6		600		
920		14.95	0.022	7.16	3.68	295.2	11.7			
925		14.92	0.022	7.17	3.65	295.9			41.72	
930	10 gal	14.89	0.022	7.16	3.64	296.4	11.9			
935	~~10 gal~~	14.91	0.022	7.08	3.57	300.0				
940		14.92	0.022	6.96	3.82	283.8	11.9		41.73	
945		14.91	0.022	6.98	3.75	295.3	12.3			
950	13.5	14.90	0.022	7.17	3.68	301.6	12.4	600	41.70	
1000										Sample

Well ID: RE120D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/6/17 Time: Start 1130 am/pm
Project No: 60266526 Finish 1320 am/pm
Site Location: Shelley
Weather Conds: Cloudy 60° Collector(s): S. WRIGHT

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

a. Total Well Length 655 ft c. Length of Water Column 616 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 38.72 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	10G101453

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
1155	—	15.21	0.000	13.38	5.82	266.1	—	600	38.60	CLEAR/NONE
1200	0.75	15.47	0.097	5.64	5.79	-100.2	0.80	600	38.60	CLEAR/NONE
1205	1.5	15.50	0.097	3.61	5.65	-116.4	—	600	38.60	CLEAR/NONE
1210	2.25	15.48	0.095	2.63	5.44	-122.5	—	600	38.60	CLEAR/NONE
1215	3	15.49	0.095	2.45	5.29	-120.4	—	600	38.58	CLEAR/NONE
1220	3.75	15.55	0.094	2.54	5.02	-114.4	1.77	600	38.58	CLEAR/NONE

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

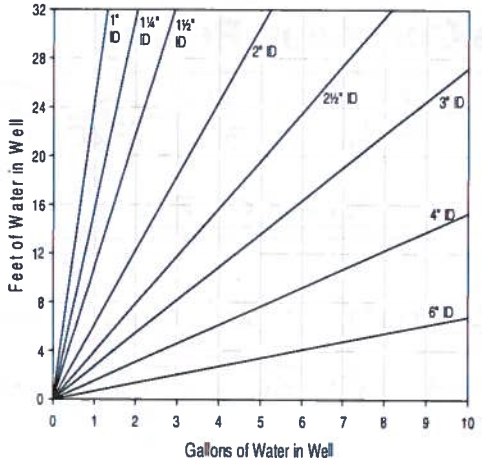
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D1-GW-060617	40-mL vials	3	HCl	VOCs	1320
RE120D1-GW-060617	1-L amber	2	none	1,4-Dioxane	1320
DUP02-GW-060617		5	"		1330

Comments

Signature Date 6-6-17

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
1225	4.5	15.50	0.095	2.41	4.99	-114.4	—	600	38.58	CLEAR/NONE
1230	5.25	15.47	0.095	2.36	4.97	-114.7	—	600	38.56	CLEAR/NONE
1235	6	15.47	0.094	2.31	4.96	-115.8	2.16	600	38.56	CLEAR/NONE
1240	6.75	15.43	0.095	2.27	4.95	-120.1	—	600	38.56	CLEAR/NONE
1245	7.5	15.40	0.094	2.23	4.95	-120.5	—	600	38.54	CLEAR/NONE
1250	8.25	15.46	0.095	2.18	4.94	-120.4	—	600	38.52	CLEAR/NONE
1255	9	15.43	0.094	2.12	4.93	-117.7	2.91	600	38.50	CLEAR/NONE
1300	9.75	15.42	0.095	2.10	4.92	-117.0	—	600	38.50	CLEAR/NONE
1305	10.5	15.47	0.094	2.09	4.92	-119.4	—	600	38.50	CLEAR/NONE
1310	11.25	15.47	0.095	2.06	4.92	-117.7	—	600	38.50	CLEAR/NONE
1315	12.25	15.47	0.095	2.05	4.91	-118.1	1.73	700	38.50	CLEAR/NONE
1320	13.25	15.47	0.095	2.04	4.90	-119.1	—	700	38.50	CLEAR/NONE
1320										Sample
1330										DUP02

RESOLUTION CONSULTANTS

Well ID: RE120D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/6/17 Time: Start 1130 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Shelley
Weather Conds: cloudy 60° Collector(s): _____

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

a. Total Well Length 713 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 38.52 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	

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	Start									
1255	-	15.53	0.076	7.05	4.48	266.4	-	650	38.25	clear
1300	5 Gal	15.52	0.076	7.02	4.48	266.8	-	650	38.25	clear
1305	-	15.51	0.076	7.01	4.49	266.9	-	650	38.25	clear
1310	-	15.52	0.076	6.99	4.50	267.4	1.36	650	38.24	clear
1315	-	15.51	0.076	6.93	4.45	268.5	1.25	650	38.24	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)

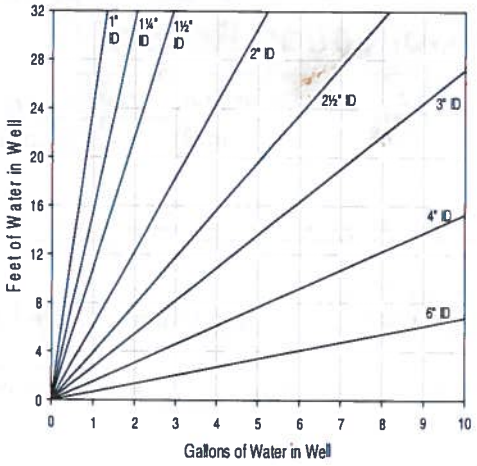
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D2-(GW)-060617	40-mL vials	3	HCl	VOCs	1400
RE120D2-(GW)-060617	1-L amber	2	none	1,4-Dioxane	1400

Comments: Level Logger present

Signature _____ Date 06 06 2017

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
1320	–	15.48	0.076	6.65	4.26	280.7	–	650	38.24	clear
1325	–	15.46	0.076	6.64	4.24	282.7	1.56	650	38.23	clear
1330	–	15.46	0.076	6.62	4.28	280.8	–	650	38.23	clear
1335	–	15.45	0.076	6.58	4.36	279.1	–	650	38.23	clear
1340	10 Gal	15.41	0.076	6.39	4.42	275.3	1.72	650	38.22	clear
1345	–	15.42	0.076	6.40	4.49	276.2	–	650	38.22	clear
1350	–	15.42	0.076	6.39	4.41	276.3	1.67	650	38.22	clear
1355	13.1 Gal	15.41	0.076	6.38	4.37	276.2	1.31	650	38.22	clear
Sample	1400									

Well ID: RE120 D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/ 6 /17 Time: Start 1130 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Shelley
Weather Conds: cloudy 60° Collector(s): _____

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

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

b. Water Table Depth 39.02 ft 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	

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
1155								200		ON, pull pump
1215								600		ON
1225		15.22	0.035	10.65	4.40	136.4	4.53	600	38.30	CLEAR/NONE
1230		15.22	0.036	9.91	4.28	135.2	-	600	38.21	CLEAR/NONE
1235		15.21	0.037	9.41	4.12	136.6	-	600	38.19	CLEAR/NONE
1240	5gal	15.20	0.038	9.11	4.13	135.6				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

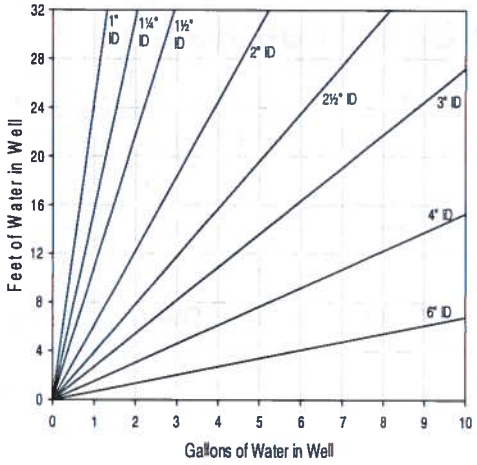
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120 D3-GW-060617	40-mL vials	3	HCl	VOCs	1340
	1-L amber	2	none	1,4-Dioxane	

Comments: check ball was stuck closed, pulled pump and reset

Signature _____ Date _____

Purge Volume Calculation



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

One screen volume (4-inch well)

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

Well ID: RE120 03

(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
1245		15.17	0.038	8.82	4.04	138.2	10.76	600	38.21	CLEAR/NONE
1250		15.20	0.038	8.44	4.00	140.3	-	600	38.21	CLEAR/NONE
1255		15.21	0.038	8.47	3.95	145.1				
1300		15.20	0.038	8.12	3.99	142.6			38.19	
1305	1gal	15.18	0.038	7.95	4.00	142.8				
1310		15.20	0.038	7.76	4.03	142.9	7.74			
1315		15.20	0.038	7.58	4.05	143.4	7.67			
1320		15.19	0.038	7.45	4.07	143.5	7.15	600	38.17	
1325		15.18	0.038	7.17	4.03	146.1	7.31			
1330	8gal	15.15	0.038	7.13	4.00	147.7				
1340										Sample

Well ID: RE12201

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 6 / 17 Time: Start 0815 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Curtis
Weather Conds: 55° cloudy Collector(s): T. Bell / P. Korech

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

a. Total Well Length 545 ft c. Length of Water Column 501.7 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 43.93 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	08L100232
QED	MP10	

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	Start									
0840	–	15.03	0.095	8.59	5.09	199.7	–	700	43.94	clear
0845	–	15.01	0.095	8.11	4.96	219.1	–	700	43.94	clear
0850	14.9	14.99	0.095	7.73	4.89	220.9	–	700	43.94	clear
0855	–	14.98	0.095	7.66	4.88	223.6	2.11	700	43.97	clear
0900	5 Gal	14.99	0.095	7.51	4.89	226.7	2.54	700	43.98	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)

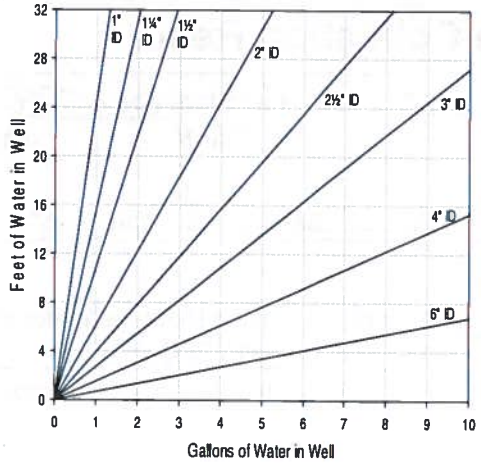
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12201-GW-060617	40-mL vials	3	HCl	VOCs	0950
RE12201-GW-060617	1-L amber	2	none	1,4-Dioxane	0950

Comments Level logger present in well

Signature _____ Date 6.6.2017

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
0905	—	14.98	0.095	7.13	4.93	227.3	-	700	43.99	clear
0910	-	15.00	0.095	7.10	4.91	222.1	2.25	700	44.00	clear
0915	-	15.01	0.095	6.89	5.05	225.1	-	700	44.02	clear
0920	-	14.99	0.095	6.83	5.05	228.9	2.37	700	44.04	clear
0925	10 Gal	14.99	0.095	6.75	5.05	229.2	—	700	44.06	clear
0930	-	14.95	0.095	6.55	5.16	226.9	1.49	700	44.10	clear
0935	-	14.93	0.096	6.51	5.08	231.5	1.62	700	44.12	clear
0940	-	14.92	0.096	6.49	5.07	232.3	1.36	700	44.13	clear
0945	13.1 Gal	14.91	0.096	6.48	5.04	233.7	1.23	700	44.14	clear
0950	Sample									

RESOLUTION CONSULTANTS

Well ID: RE122D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/6/17 Time: Start 0800 am/pm
Project No: 60266526 Finish 1000 am/pm
Site Location: Curtis
Weather Conds: Cloudy 55° Collector(s): S. WRIGHT

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

a. Total Well Length 61.5 ft c. Length of Water Column 57.1 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 44.12 ft d. Calculated System Volume (see back) 13 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	14C101881

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
0810	—	14.22	0.235	25.28	14.85	107.1	—	500	43.90	CLEAR/NONE
0815	0.5	14.52	0.113	11.97	11.80	114.6	—	500	44.09	CLEAR/NONE
0820	1	14.59	0.113	9.90	10.93	118.3	—	500	44.10	CLEAR/NONE
0825	1.5	14.54	0.113	8.73	9.90	114.8	0.98	500	44.10	CLEAR/NONE
0830	2	14.50	0.113	7.79	8.70	111.6	—	500	44.08	CLEAR/NONE
0835	2.5	14.57	0.113	7.16	7.92	111.4	—	500	44.08	CLEAR/NONE

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

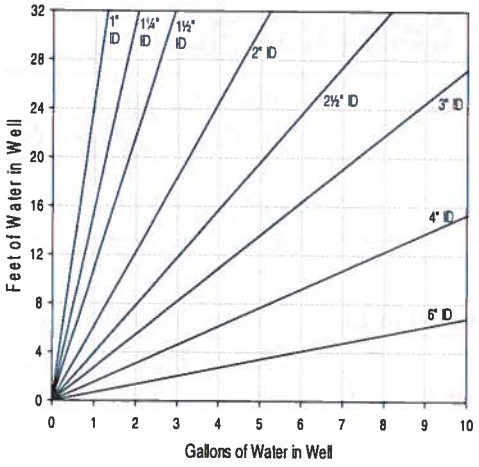
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D2-GW-060617	40-mL vials	3	HCl	VOCs	1000
RE122D2-GW-060617	1-L amber	2	none	1,4-Dioxane	1000

Comments

Signature _____ Date 6-6-17

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
0840	3	14.36	0.112	6.87	6.97	112.3	1.01	500	44.08	CLEAR/NONE
0845	3.5	14.47	0.111	6.59	6.40	114.3	-	500	44.08	CLEAR/NONE
0850	4	14.40	0.111	6.38	5.99	115.7	-	500	44.08	CLEAR/NONE
0855	4.75	14.40	0.111	6.29	5.76	116.3	-	600	44.08	CLEAR/NONE
0900	5.5	14.42	0.110	6.11	5.51	117.1	0.95	600	44.08	CLEAR/NONE
0905	6.25	14.47	0.110	5.97	5.33	117.6	-	600	44.08	CLEAR/NONE
0910	7	14.51	0.110	5.91	5.21	118.9	-	600	44.08	CLEAR/NONE
0915	7.5	14.54	0.110	5.92	5.18	119.3	-	500	44.08	CLEAR/NONE
0920	8	14.51	0.111	5.74	5.15	121.2	0.67	500	44.08	CLEAR/NONE
0925	8.5	14.51	0.112	5.73	5.14	124.5	-	500	44.08	CLEAR/NONE
0930	9	14.50	0.112	5.69	5.10	126.5	-	500	44.10	CLEAR/NONE
0935	9.75	14.48	0.112	5.68	5.06	127.2	-	600	44.12	CLEAR/NONE
0940	10.5	14.45	0.113	5.66	5.02	126.1	0.64	600	44.12	CLEAR/NONE
0945	11.25	14.42	0.113	5.62	4.99	126.3	-	600	44.13	CLEAR/NONE
0950	12	14.40	0.113	5.58	4.95	127.1	-	600	44.13	CLEAR/NONE
0955	12.75	14.38	0.114	5.55	4.93	127.5	-	600	44.13	CLEAR/NONE
1000	13.5	14.36	0.114	5.53	4.91	128.1	0.65	600	44.13	CLEAR/NONE

Well ID: RE12203

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 6 / 17 Time: Start 730 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Curtis
Weather Conds: Cloudy 55° Collector(s): _____

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

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

b. Water Table Depth 45.71 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	106 101453
LaMotte	2020	UB4525X

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
805								600		OH
820		14.51	0.021	4.42	4.76	-100.1			44.75	
825		14.72	0.020	3.99	4.75	-107.8				
830		14.75	0.020	3.62	4.93	-110.5				
835	5gal	14.72	0.020	3.48	4.92	-109.7				
840		14.72	0.020	3.57	4.87	107.2				

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)

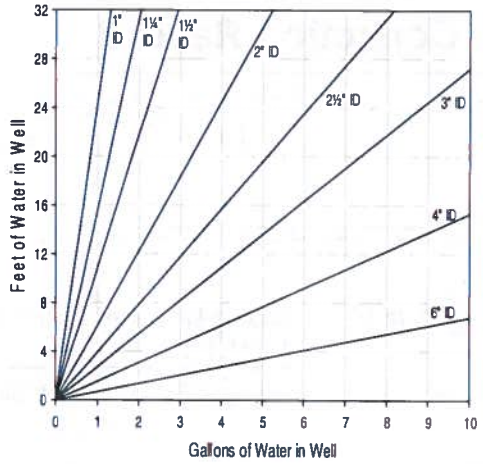
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12203-GW-060617	40-mL vials	3	HCl	VOCs	0940
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kaeth Date 6/6/17

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: 122D3

(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
845		14.67	0.020	3.75	4.84	-106.7	4.66	600	44.78	
850		14.81	0.020	3.51	4.88	-109.4				
855		14.58	0.020	3.43	4.87	-107.1				
900		14.62	0.020	3.31	4.89	-106.9				
905	1 gal	14.64	0.020	3.27	4.91	-109.5	3.75	600	44.80	
910		14.73	0.020	3.13	4.93	-110.5				
915		14.79	0.020	3.12	4.94	-111.4	3.03			
920		14.69	0.020	3.09	4.93	-111.3			44.84	
925		14.75	0.020	3.05	4.94	-115.3				
930	13.5	14.76	0.020	3.05	4.93	-117.2			44.86	
940										Sample

Well ID: RE123D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/7/17 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: NTA Yard
Weather Conds: mostly sunny 53° Collector(s): _____

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

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

b. Water Table Depth 49.46 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	18L100232
LaMotte	2020	

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								500		OH
855		13.87	0.109	11.24	5.14	263.4			49.50	
900		13.73	0.111	11.61	3.65	295.1		500		
905		14.06	0.114	10.01	4.09	248.8	26.4		49.50	
910		14.03	0.120	10.04	3.79	248.6				
915		13.86	0.122	9.75	3.31	275.0		450	49.50	

d. Acceptance criteria pass/fail

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

(continued on back)

If no or N/A - Explain below.

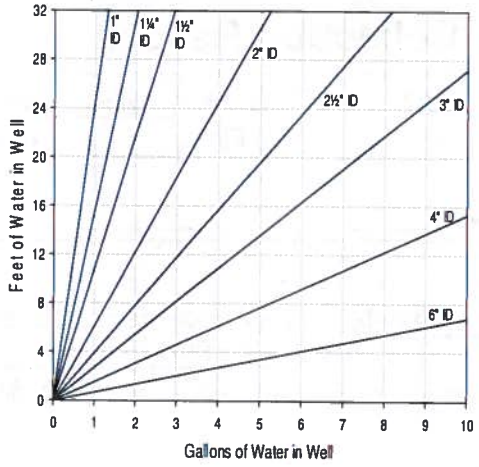
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D1-GW-060717	40-mL vials	3	HCl	VOCs	1040
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Karetta Date 6/7/17

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: RE12301

(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
920		13.89	0.121	9.40	3.40	273.8	2.18		49.50	
925	5gal	14.08	0.121	8.47	3.70	262.6				
930		14.09	0.121	8.93	3.94	254.1		450	4951	
935		14.12	0.121	8.59	3.72	267.3	1.89			
940		13.98	0.122	8.58	3.85	263.6				
945		13.84	0.121	8.55	3.46	282.7	1.20	400	4952	
950		13.86	0.121	8.51	3.55	274.3				
955		13.98	0.121	8.46	3.64	277.6			4951	
1000		14.02	0.121	8.41	3.67	277.8	0.89			
1005	10gal	13.94	0.121	8.48	3.65	274.9				
1010		13.95	0.121	8.33	3.80	274.6			4952	
1015		13.94	0.121	8.34	3.82	274.0		400		
1020		14.12	0.121	8.26	3.79	285.0	0.74			
1025		14.34	0.121	8.24	3.89	270.7			4952	
1030		14.37	0.121	8.18	3.91	270.3				
1035		14.49	0.120	8.19	3.82	278.5		400		
1040	13.5	14.65	0.120	8.14	3.92	274.3			4953	
1040										Sample

Well ID: RE123D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/7/17 Time: Start 800 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: MTA Yard
Weather Conds: mostly sunny 55° Collector(s): F. Bell / P. Hoeth

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

a. Total Well Length 660 ft c. Length of Water Column 609.24 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 50.76 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	14C101881
	QED	MP10	U6452972
	LaMotte	2020we	8140-0616

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 purge									
0855	–	13.62	0.042	11.75	12.70	117.8	0.63	600	50.81	clear
0900	–	13.95	0.044	8.62	10.26	98.7	–	600	50.83	clear
0905	–	14.01	0.045	7.73	8.79	99.2	–	600	50.84	clear
0910	–	13.90	0.043	8.72	8.18	96.6	–	650	50.85	clear
0915	5 Gal	13.53	0.042	9.76	6.74	87.5	1.15	650	50.84	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)

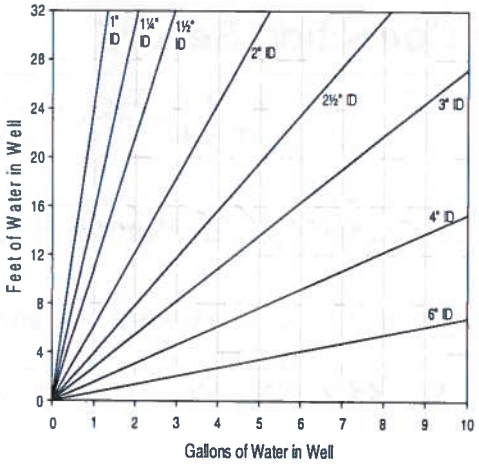
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D2-GW-060717	40-mL vials	3	HCl	VOCs	1015
RE123D2-GW-060717	1-L amber	2	none	1,4-Dioxane	1015

Comments

Signature _____ Date 6/7/2017

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
0920	-	13.53	0.042	9.91	6.23	83.7	-	600	50.83	clear
0925	-	14.31	0.041	9.66	5.06	80.3	-	600	50.83	clear
0930	-	13.68	0.042	9.73	4.71	78.4	1.26	600	50.82	Clear
0935	-	14.28	0.041	9.33	4.41	78.4	1.33	600	50.83	clear
0940	-	13.98	0.041	9.29	4.17	77.4	-	600	50.83	clear
0945	10 Gal	13.53	0.041	9.22	3.77	76.0	1.09	600	50.83	clear
0950	-	13.57	0.042	9.42	3.37	77.8	-	600	50.83	clear
0955	-	13.62	0.042	9.22	3.28	77.3	0.98	600	50.83	clear
1000	13.1	13.69	0.042	9.30	3.24	77.9	0.96	600	50.83	clear
1015	Sample time		-							

Well ID: RE123D3

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 7 / 17 Time: Start 800 am/pm
Project No: 60266526 Finish 1045 am/pm
Site Location: MTA Yard
Weather Conds: mostly sunny 55° Collector(s): S. WRIGHT

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

a. Total Well Length 840 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 50.59 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	10G101453

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	—	17.98	0.160	10.95	12.08	-110.9	26.5	400	50.64	CLEAR/NONE
0850	0.5	16.85	0.032	9.38	8.47	-107.9	—	400	50.64	CLEAR/NONE
0855	1	14.91	0.027	5.81	4.91	-36.2	—	400	50.64	CLEAR/NONE
0900	1.5	14.48	0.027	2.48	4.21	-37.7	—	400	50.64	CLEAR/NONE
0905	2	14.84	0.028	1.26	4.34	-51.2	12.27	400	50.65	CLEAR/NONE
0910	2.5	14.67	0.027	1.07	4.57	-62.6	—	400	50.65	CLEAR/NONE

(continued on back)

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

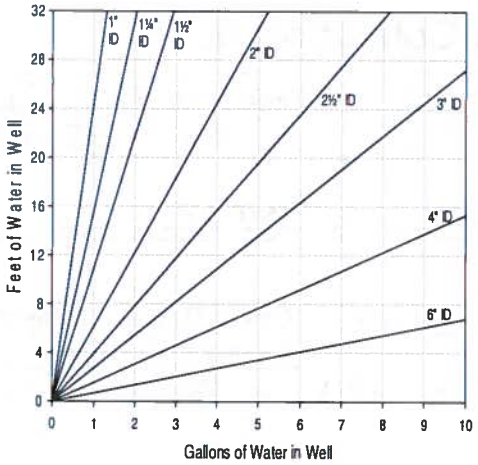
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D3-GW-060717	40-mL vials	3	HCl	VOCs	1045
RE123D3-GW-060717	1-L amber	2	none	1,4-Dioxane	1045

Comments

Signature Date 6-7-17

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
0915	3	14.26	0.026	0.90	4.71	-69.0	—	400	50.65	CLEAR / NONE
0920	3.5	14.27	0.026	0.83	4.57	-64.7	—	400	50.65	CLEAR / NONE
0925	4	14.49	0.027	0.73	4.90	-73.2	23.6	400	50.65	CLEAR / NONE
0930	4.5	14.68	0.030	0.67	5.33	-87.9	—	400	50.65	CLEAR / NONE
0935	5	14.95	0.033	0.59	5.47	-87.9	—	400	50.65	CLEAR / NONE
0940	5.5	14.82	0.033	0.59	5.59	-92.6	—	400	50.65	CLEAR / NONE
0945	6	14.27	0.032	0.54	5.47	-88.1	12.56	400	50.65	CLEAR / NONE
0950	6.75	14.33	0.032	0.50	5.53	-87.1	—	500	50.65	CLEAR / NONE
0955	7.5	14.35	0.032	0.48	5.54	-89.1	—	500	50.65	CLEAR / NONE
1000	8.25	14.45	0.031	0.47	5.54	-89.4	—	500	50.65	CLEAR / NONE
1005	9	14.42	0.031	0.43	5.52	-88.0	11.88	500	50.65	CLEAR / NONE
1010	9.75	14.33	0.030	0.40	5.46	-85.8	—	500	50.65	CLEAR / NONE
1015	10.5	14.40	0.030	0.42	5.46	-88.0	—	500	50.65	CLEAR / NONE
1020	11.25	14.45	0.029	0.39	5.49	-90.2	—	500	50.65	CLEAR / NONE
1025	11.75	14.50	0.029	0.36	5.46	-91.5	10.74	400	50.65	CLEAR / NONE
1030	12.25	14.52	0.029	0.35	5.46	-91.2	—	400	50.65	CLEAR / NONE
1035	12.75	14.54	0.029	0.34	5.49	-91.8	—	400	50.65	CLEAR / NONE
1040	13.25	14.56	0.029	0.33	5.47	-92.1	—	400	50.65	CLEAR / NONE
~~1045~~										

Well ID: RE105D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 7 / 17 Time: Start 1200 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Lincoln
Weather Conds: Sunny 70° Collector(s): PK

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

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

b. Water Table Depth 39.45 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%
- 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	14C101881

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
1215										OX
1220		15.17	0.119	7.60	3.87	89.7		600	39.32	
1225		15.08	0.119	6.92	3.42	84.4				
1230		15.10	0.117	6.18	3.03	79.3	1.15	650	39.34	
1235		15.02	0.116	5.74	2.73	81.9				
1240		15.03	0.116	5.89	2.72	81.7				

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)

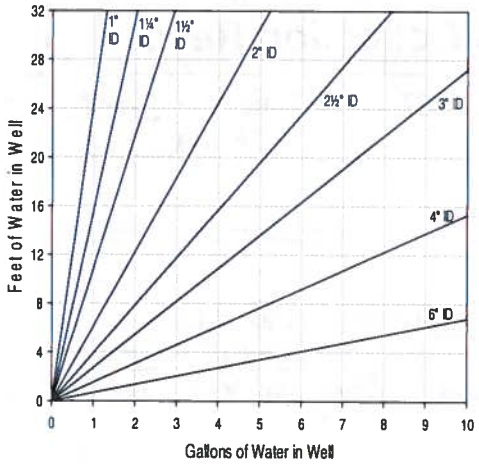
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D1-GW-060717	40-mL vials	3	HCl	VOCs	1340
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kaeth Date 6/7/17

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: RE105D1

(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
1245	5gal	15.07	0.116	4.78	2.63	81.7	2.00	650	39.31	
1250		15.06	0.116	4.77	2.56	78.6				
1255		15.11	0.116	4.69	2.52	76.5	1.85		39.33	
1300		15.01	0.115	4.54	2.49	76.1				
1305		14.95	0.115	4.42	2.45	75.3		650	39.32	
1310	10gal	14.92	0.115	3.85	2.44	74.5				
1315		15.08	0.116	3.87	2.43	74.3	1.50			
1320		15.00	0.116	3.89	2.40	74.8			39.31	
1325		14.82	0.116	3.95	2.39	74.4				
1330		14.88	0.115	3.82	2.38	73.9	1.47		39.32	
1340										Sample

RESOLUTION CONSULTANTS

Well ID: RE105D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 7 / 17 Time: Start 1200 am/pm
Project No: 60266526 Finish 1330 am/pm
Site Location: Lincoln
Weather Conds: sunny 70° Collector(s): S. WRIGHT

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

a. Total Well Length 755 ft c. Length of Water Column 715 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 40.12 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	08L100232

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
1210	—	19.98	0.063	36.29	5.36	205.3	—	600	40.12	CLEAR/NONE
1215	0.75	16.05	0.063	15.27	4.02	244.9	1.53	600	40.10	CLEAR/NONE
1220	1.5	15.29	0.063	9.65	2.02	326.1	—	600	40.10	CLEAR/NONE
1225	2.25	15.27	0.063	8.55	3.12	282.2	—	600	40.10	CLEAR/NONE
1230	3	15.26	0.063	7.55	3.50	271.6	—	600	40.10	CLEAR/NONE
1235	3.75	15.47	0.069	6.62	3.49	267.2		600	40.08	CLEAR/NONE

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

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

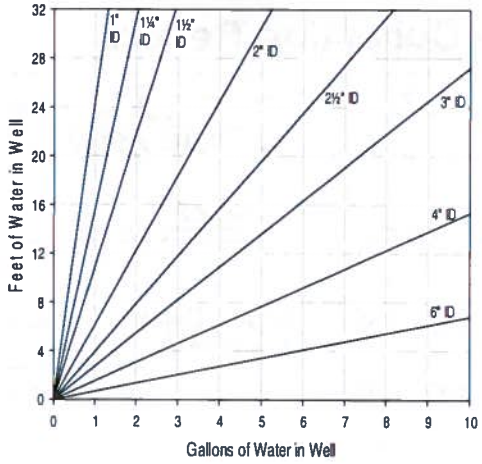
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D2-GW-060717	40-mL vials	3	HCl	VOCs	1330
RE105D2-GW-060717	1-L amber	2	none	1,4-Dioxane	1330

Comments

Signature Date 6-7-17

S

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
1240	4.5	15.38	0.079	6.45	3.43	269.8	1.19	600	40.08	CLEAR/NONE
1245	5.25	15.59	0.079	6.03	3.80	256.1	—	600	40.08	CLEAR/NONE
1250	6.25	15.60	0.078	5.87	3.66	263.7	—	600	40.10	CLEAR/NONE
1255	7.25	15.67	0.078	5.68	3.64	266.5	—	700	40.11	CLEAR/NONE
1300	8.25	15.64	0.077	5.52	3.55	272.4	—	700	40.11	CLEAR/NONE
1305	9.25	15.16	0.078	5.50	3.31	279.8	1.10	700	40.11	CLEAR/NONE
1310	10.25	15.47	0.077	5.24	3.69	269.9	—	700	40.11	CLEAR/NONE
1315	11.25	15.34	0.077	5.23	3.60	273.4	—	700	40.11	CLEAR/NONE
1320	12.25	15.32	0.078	5.22	3.65	269.9	—	700	40.11	CLEAR/NONE
1325	13.25	15.21	0.077	5.20	3.59	272.2	1.11	700	40.11	CLEAR/NONE
1330	S'									SAMPLED

RESOLUTION CONSULTANTS

Well ID: RG10801

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6 / 8 / 17 Time: Start 750 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Corona, Ca
Weather Conds: Sunny 50° Collector(s): _____

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

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

b. Water Table Depth 42.30 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	09L100232
LaMotte	2020	HB4525X

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										Oxi
820		15.29	0.094	9.32	5.74	245.7		600	42.16	
825		15.18	0.092	6.30	3.44	249.8			42.14	
830		15.17	0.092	6.27	3.91	279.6				
835		15.18	0.091	6.57	4.20	267.5	1.48	600	42.15	
840		15.25	0.091	6.41	4.32	274.3				

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)

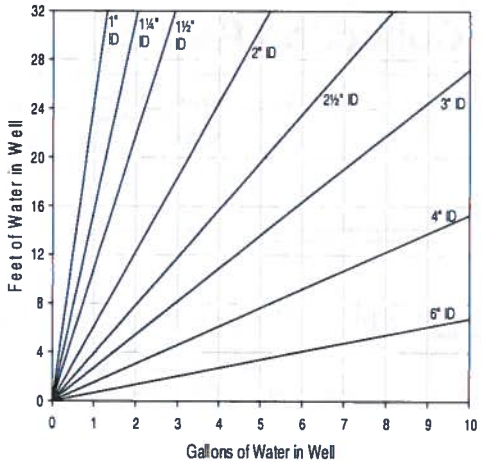
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RG10801-GW-060817	40-mL vials	3	HCl	VOCs	0840
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kneeth Date 6/8/17

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: RE108101 8:15

(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
845	5gal	15.38	0.091	6.75	4.65	261.3	1.10	600	42.16	
850		15.48	0.091	6.75	4.69	264.0				
855		15.44	0.091	6.78	4.59	272.6			42.24	
900		15.40	0.091	6.79	4.56	275.9	1.03			
905		15.46	0.091	6.76	4.52	279.8			42.30	
910	10gal	15.50	0.091	6.76	4.54	280.4		600		
915		15.53	0.091	6.61	4.82	269.3			42.38	
920		15.55	0.091	6.69	4.71	275.4	1.20			
925		15.60	0.091	6.73	4.67	279.5			42.50	
930	13.5	15.56	0.091	6.74	4.68	283.9	0.75			
940										Sample

Well ID: RE108D2

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/8/17 Time: Start 0800 am/pm
Project No: 60266526 Finish ____ am/pm
Site Location: CORONA | CEIL
Weather Conds: 70s, SUN Collector(s): S. WRIGHT

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

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

b. Water Table Depth 42.81 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	14C101881

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
0815	—	18.09	0.104	18.89	14.31	49.8	—	600	42.90	CLEAR/NONE
0820	0.75	15.62	0.092	15.28	12.56	51.0	—	600	42.88	CLEAR/NONE
0825	1.50	14.90	0.089	11.74	10.57	56.9	0.69	600	42.88	CLEAR/NONE
0830	2.25	14.90	0.088	10.08	9.74	57.5	—	600	42.88	CLEAR/NONE
0835	3	14.92	0.088	9.18	8.86	52.4	—	600	42.88	CLEAR/NONE
0840	3.75	14.97	0.087	8.18	8.15	49.3	—	600	42.88	CLEAR/NONE

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

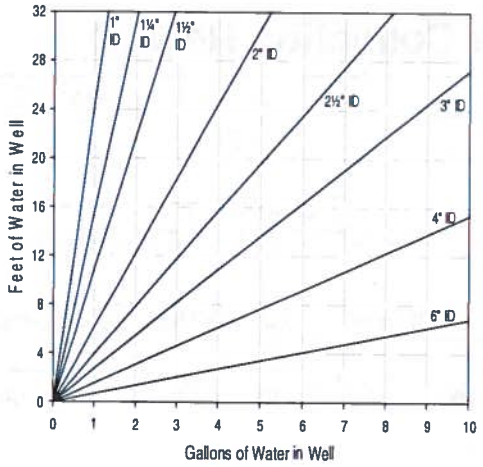
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108D2-GW-060817	40-mL vials	3	HCl	VOCs	0945
RE108D2-GW-060817	1-L amber	2	none	1,4-Dioxane	0945

Comments

Signature Date 6-8-17

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
0845	4.5	15.14	0.086	6.99	7.32	48.7	1.12	600	42.88	CLEAR/NONE
0850	5.25	15.29	0.086	6.13	6.59	48.6	–	600	42.90	CLEAR/NONE
0855	6	15.27	0.086	6.25	6.21	49.2	–	600	42.92	CLEAR/NONE
0900	6.75	15.20	0.086	6.03	5.98	49.9	–	600	42.94	CLEAR/NONE
0905	7.5	15.34	0.085	5.91	5.77	50.9	0.95	600	42.96	CLEAR/NONE
0910	8.25	15.33	0.085	5.89	5.62	52.1	–	600	42.98	CLEAR/NONE
0915	9	15.42	0.085	5.82	5.51	54.5	–	600	42.99	CLEAR/NONE
0920	9.75	15.40	0.085	5.82	5.46	55.8	–	600	43.00	CLEAR/NONE
0925	10.5	15.44	0.085	5.78	5.41	57.3	–	600	43.01	CLEAR/NONE
0930	11.25	15.42	0.085	5.76	5.37	58.2	1.01	600	43.02	CLEAR/NONE
0935	12	15.51	0.085	5.76	5.34	59.4	–	600	43.03	CLEAR/NONE
0940	12.75	15.46	0.085	5.75	5.31	60.1	–	600	43.04	CLEAR/NONE
0945	13.5	15.48	0.085	5.75	5.29	61.1	–	600	43.05	CLEAR/NONE

Well ID: RE117D1

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Hobson Court
Weather Conds: Sunny 75°
Date: 6/8/17
Time: Start 1215 am/pm
Finish 1345 am/pm
Collector(s): S. WRIGHT

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

a. Total Well Length 575 ft
b. Water Table Depth 24.23 ft
c. Length of Water Column _____ ft (a-b)
d. Calculated System Volume (see back) 16.3 gal.
Casing Diameter/Material 4-inch PVC
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	

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
1150	—	20.62	0.047	13.82	7.50	86.1	—	450	23.80	CLEAR/NONE
1155	0.5	16.52	0.035	6.70	5.95	90.8	-	450	23.78	CLEAR/NONE
1200	1	16.38	0.033	4.60	5.51	82.2	3.89	450	23.70	CLEAR/NONE
1205	1.5	16.95	0.033	4.36	5.28	81.7	—	450	23.70	CLEAR/NONE
1210	2	16.33	0.033	4.29	5.18	81.0	—	450	23.70	CLEAR/NONE
1215	2.5	15.97	0.032	4.70	5.05	80.6	—	450	23.70	CLEAR/NONE

(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

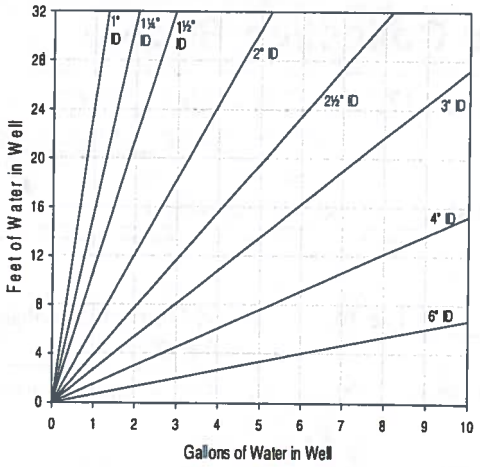
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE117D1-GW-060817	40-mL vials	3	HCl	VOCs	1345
RE117D1-GW-060817	1-L amber	2	none	1,4-Dioxane	1345

Comments

Signature

Date 6-8-17

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
1220	3.25	15.71	0.032	7.64	4.86	85.4	6.52	600	23.21	CLEAR/NONE
1225	4	15.76	0.032	7.68	4.91	84.2	—	600	22.90	CLEAR/NONE
1230	4.75	15.71	0.032	7.45	4.82	86.4	—	600	22.98	CLEAR/NONE
1235	5.5	15.72	0.032	7.25	4.83	85.7	—	600	22.98	CLEAR/NONE
1240	6.25	16.14	0.032	6.96	4.82	85.4	23.5	600	22.98	CLEAR/NONE
1245	7	16.25	0.032	6.88	4.83	84.8	—	600	23.00	CLEAR/NONE
1250	7.75	16.01	0.031	6.79	4.81	85.5	—	600	22.98	CLEAR/NONE
1255	8.5	15.97	0.031	6.71	4.79	86.4	—	600	22.98	CLEAR/NONE
1300	9.5	15.99	0.032	7.07	4.78	86.8	17.8	~~600~~	22.98	CLEAR/NONE
1305	10.5	15.99	0.032	7.05	4.79	86.3	23.7	700	22.98	SLIGHTLY CLOUDY/NONE
1310	11.5	15.97	0.032	6.92	4.81	85.9	—	700	23.00	" " "
1315	12.5	15.92	0.032	6.83	4.81	86.2	—	700	23.00	" " "
1320	13.25	15.83	0.032	6.66	4.81	86.4	—	600	23.00	" " "
1325	14	15.67	0.032	6.65	4.80	86.9	18.3	600	23.00	" " "
1330	14.75	15.45	0.032	6.62	4.79	88.1	—	600	22.97	" " "
1335	15.5	15.38	0.032	6.58	4.78	89.1	—	600	22.97	" " "
1340	16.25	15.36	0.032	6.49	4.76	89.5	—	600	22.97	" " "

Well ID: RE11702

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 6/8/17 Time: Start 1215 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Bethpage
Weather Conds: sunny 75° Collector(s): _____

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

a. Total Well Length 760 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 23.63 ft d. Calculated System Volume (see back) 163 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	08L100232
LaMotte	2020	WB4525X

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
1150										OX
1200		17.40	0.026	53.02	2.67	311.0		500	23.63	
1205		17.76	0.027	18.60	3.57	264.0		600		
1210		16.71	0.027	11.82	2.72	306.1	6.68		23.61	
1215		16.47	0.028	9.58	2.66	310.7				
1220		16.49	0.028	8.81	3.01	298.3			23.61	

(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:

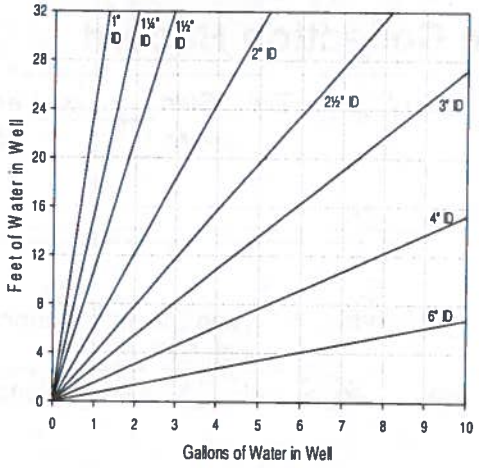
Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE11702-GW-060817	40-mL vials	3	HCl	VOCs	1340
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kuretz Date 6/8/17

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: RE117.02

(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
1225	5 gal	16.58	0.027	8.33	3.13	289.5	18.8	600	23.62	
1230		16.20	0.027	7.54	3.70	260.1				
1235		16.22	0.027	6.84	3.42	271.2			23.59	
1240		17.48	0.027	6.42	3.79	253.3				
1245		17.73	0.027	6.11	3.95	246.2	12.0		23.57	
1250		17.49	0.027	5.81	3.77	255.1				
1255	10 gal	17.11	0.028	5.31	3.79	254.8	10.79	600	23.56	
1300		17.08	0.028	5.20	3.75	257.4	8.49			
1305		17.17	0.028	4.96	3.70	260.1		600	23.55	
1310		17.31	0.028	4.71	3.85	254.1				
1315		17.01	0.028	4.47	3.48	270.8	5.48		23.54	
1320		16.85	0.028	4.35	3.86	277.1	4.89			
1325	15 gal	16.59	0.028	4.12	3.52	270.0	4.47		23.53	
1330		16.22	0.028	3.99	3.47	274.2				
1335	16.5	16.08	0.028	3.83	3.41	280.1	3.86		23.52	
1340										Sample

RESOLUTION CONSULTANTS

Well ID: RE126D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: S. NASSAU / LYNN
Weather Conds: 70s, SUN
Date: 6/9/17
Time: Start 0825 am/pm
Finish 1015 am/pm
Collector(s): S. WRIGHT

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

a. Total Well Length _____ ft
b. Water Table Depth 47.71 ft
c. Length of Water Column _____ ft (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	08L100232

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
0835	—	20.49	0.013	27.17	4.45	230.7	6.24	600	46.88	CLEAR/NONE
0840	0.75	15.31	0.031	14.20	4.30	266.7	—	600	47.50	CLEAR/NONE
0845	1.5	14.88	0.030	10.60	2.56	362.3	—	600	47.62	CLEAR/NONE
0850	2.25	14.90	0.030	9.30	3.46	312.2	—	600	47.72	CLEAR/NONE
0855	3	15.10	0.030	8.69	3.60	305.1	6.31	600	47.74	CLEAR/NONE
0900	3.75	15.21	0.030	8.48	3.90	286.3	—	600	47.79	CLEAR/NONE

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

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

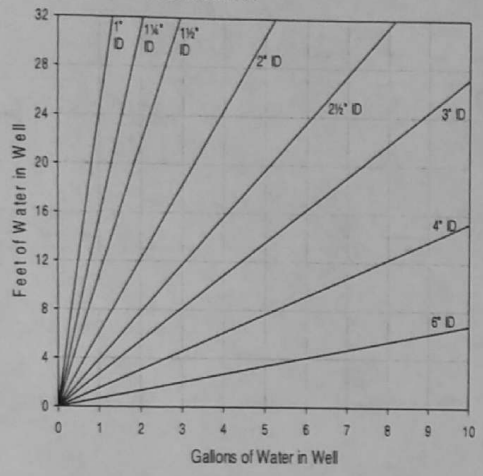
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126D3-GW-060917	40-mL vials	3	HCl	VOCs	1015
RE126BB-GW-060917	1-L amber	2	none	1,4-Dioxane	1015

Comments

Signature

Date 6-9-17

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: RE126 D3

(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
0905	4.5	15.45	0.030	8.34	3.92	287.3	–	600	47.80	CLEAR/NONE
0910	5.25	15.80	0.030	8.12	4.59	250.9	6.11	600	47.84	CLEAR/NONE
0915	6	15.67	0.030	8.05	4.55	253.8	–	600	47.85	CLEAR/NONE
0920	6.75	15.70	0.030	8.09	4.54	258.3	–	600	47.85	CLEAR/NONE
0925	7.5	15.70	0.030	7.97	4.34	272.2	1.87	600	47.90	CLEAR/NONE
0930	8.25	15.60	0.030	8.03	4.44	267.5	–	600	47.92	CLEAR/NONE
0935	9	15.60	0.030	7.86	4.06	288.8	–	600	47.94	CLEAR/NONE
0940	9.75	15.47	0.030	7.97	4.32	274.9	–	600	47.95	CLEAR/NONE
0945	10.5	15.71	0.030	7.62	4.55	263.7	1.55	600	47.96	CLEAR/NONE
0950	11.25	15.65	0.031	7.66	4.60	261.1	–	600	47.96	CLEAR/NONE
0955	12	15.49	0.030	7.72	4.45	273.0	–	600	48.00	CLEAR/NONE
1000	12.75	15.42	0.030	7.71	4.29	275.4	–	600	48.00	CLEAR/NONE
1005	13.5	15.40	0.031	7.68	4.18	280.2	1.41	600	48.01	CLEAR/NONE

RESOLUTION CONSULTANTS

Well ID: RE126 DZ

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Lyon & S. Nausson
Weather Conds: Sunny, 79°-61°F
Date: 6/ 9 /17
Time: Start 0830 am/pm
Finish _____ am/pm
Collector(s): T. Bell

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

a. Total Well Length _____ ft
b. Water Table Depth 47.95 ft
c. Length of Water Column _____ ft (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	14C101881
QED	MP10	

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	Pumping	0845								
0855	-	14.07	0.112	13.09	4.91	109.8	-	650	48.15	clear
0900	-	13.91	0.112	5.74	5.03	99.5	1.29	700	48.19	clear
0905	-	13.97	0.112	5.63	5.06	97.6	-	700	48.21	clear
0910	-	13.99	0.112	5.12	5.10	94.2	1.83	700	48.23	clear
0915	5 Gal	14.09	0.112	5.10	5.07	91.7	-	700	48.24	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.

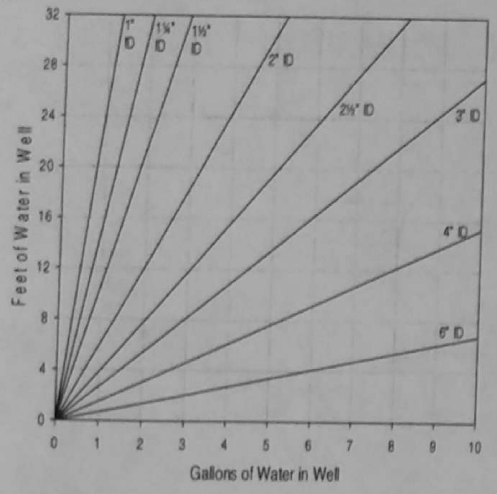
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE126DZ-GW-060917	40-mL vials	3	HCl	VOCs	1010
RE126DZ-GW-060917	1-L amber	2	none	1,4-Dioxane	1010

Comments

Signature _____ Date 06-09-17

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: RE126 02

(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
0920	-	14.18	0.112	4.55	5.07	89.6	1.25	700	48.30	clear
0925	-	14.27	0.112	4.22	5.06	88.5	-	700	48.31	clear
0930	-	14.15	0.112	4.10	5.06	87.6	1.56	700	48.32	clear
0935	-	14.30	0.113	4.03	5.06	86.4	-	700	48.32	clear
0940	10 Gal	14.17	0.112	3.96	5.06	86.1	1.88	700	48.32	clear
0945	-	14.34	0.112	3.83	5.05	85.1	-	700	48.33	clear
0950	-	14.30	0.112	3.84	5.04	85.0	1.96	700	48.33	clear
0955	-	14.30	0.112	3.75	5.04	84.8	1.99	700	48.34	clear
1000	13.1	14.25	0.112	3.75	5.04	84.5	2.03	700	48.34	clear
1010	Sample time.									

Appendix B

Analytical Data Validation – Resolution Consultants

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — Naval Weapons Industrial Reserve Plant Bethpage	
Laboratory:	Katahdin Analytical	
Sample Delivery Groups:	SK4608, SK4712, SK4750, SK4810, SK4902, and SK4970	
Analyses/Method:	Volatile Organic Compounds by United States Environmental Protection Agency SW-846 Method 8260C, and 1,4-Dioxane by United States Environmental Protection Agency SW-846 Method 8270D via Selective Ion Monitoring	
Validation Level:	Stage 3	
Project Number:	0888812477.SA.DV	
Prepared by:	Dana Miller/Resolution Consultants	Completed on: 09/07/2017
Reviewed by:	Tina Clemmey/Resolution Consultants	File Name: BETHPAGE 9_8260C_8270D

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage Site on 1 to 9 June 2017 in accordance with the following Sampling and Analysis Plans:

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

Sample Identification	Matrix/Sample Type	Analysis
TB01-WQ-060117	Trip Blank	8260C
RE103D1-GW-060117	Groundwater	8260C/8270D_SIM
RE103D2-GW-060117	Groundwater	8260C/8270D_SIM
RE103D3-GW-060117	Groundwater	8260C/8270D_SIM
DUP01-GW-060117	Duplicate of RE103D2-GW-060117	8260C/8270D_SIM
TT101D-GW-060117	Groundwater	8260C/8270D_SIM
TT101D1-GW-060117	Groundwater	8260C/8270D_SIM
TT101D2-GW-060117	Groundwater	8260C/8270D_SIM
FB01-WQ-060117	Field Blank	8260C/8270D_SIM

Sample Identification	Matrix/Sample Type	Analysis
TB02-WQ-060517	Trip Blank	8260C
RE104D3-GW-060517	Groundwater	8260C/8270D_SIM
RE126D1-GW-060517	Groundwater	8260C/8270D_SIM
RE131D1-GW-060217	Groundwater	8260C/8270D_SIM
RE131D2-GW-060217	Groundwater	8260C/8270D_SIM
RE131D3-GW-060217	Groundwater	8260C/8270D_SIM
RE125D1-GW-060217	Groundwater	8260C/8270D_SIM
RE125D2-GW-060217	Groundwater	8260C/8270D_SIM
RE125D3-GW-060217	Groundwater	8260C/8270D_SIM
RE104D1-GW-060517	Groundwater	8260C/8270D_SIM
RE104D2-GW-060517	Groundwater	8260C/8270D_SIM
TB03-WQ-060617	Trip Blank	8260C
RE122D1-GW-060617	Groundwater	8260C/8270D_SIM
RE122D2-GW-060617	Groundwater	8260C/8270D_SIM
RE122D3-GW-060617	Groundwater	8260C/8270D_SIM
FB02-WQ-060617	Field Blank	8260C/8270D_SIM
RE120D1-GW-060617	Groundwater	8260C/8270D_SIM
RE120D2-GW-060617	Groundwater	8260C/8270D_SIM
RE120D3-GW-060617	Groundwater	8260C/8270D_SIM
DUP02-GW-060617	Duplicate of RE120D1-GW-060617	8260C/8270D_SIM
TB04-WQ-060717	Trip Blank	8260C
RE123D1-GW-060717	Groundwater	8260C/8270D_SIM
RE123D2-GW-060717	Groundwater	8260C/8270D_SIM
RE123D3-GW-060717	Groundwater	8260C/8270D_SIM
RE105D1-GW-060717	Groundwater	8260C/8270D_SIM
RE105D2-GW-060717	Groundwater	8260C/8270D_SIM
TB05-WQ-060817	Trip Blank	8260C
RE108D1-GW-060817	Groundwater	8260C/8270D_SIM
RE108D2-GW-060817	Groundwater	8260C/8270D_SIM
RE117D1-GW-060817	Groundwater	8260C/8270D_SIM
RE117D2-GW-060817	Groundwater	8260C/8270D_SIM
TB06-WQ-060917	Trip Blank	8260C
RE126D2-GW-060917	Groundwater	8260C/8270D_SIM
RE126D3-GW-060917	Groundwater	8260C/8270D_SIM

Note:
SIM = Selective Ion Monitoring

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), *National Functional Guidelines for Superfund Organic Methods Data Review* (U.S. EPA September 2016), *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (U.S. EPA January 2009), 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 recovery
- ✓ Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Laboratory control sample (LCS) /laboratory control sample duplicate results(LCSD)
- ✓ Field duplicates
- ✓ Internal standards
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. Acceptable data parameters for which all criteria were met, no qualification was performed, and/or non-conformance or other issues that were noted during validation, but did not result in qualification of data are not discussed further. The symbol (✗) indicates that a QC non-conformance resulted in the qualification of data. Any QC non-conformance that resulted in the qualification of data is discussed below.

RESULTS

Initial Calibration/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. Data qualification to the analytes associated with the specific ICAL was as follows:

Initial Calibration 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:

Initial Calibration Verification 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:

Continuing Calibration Verification 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 Table's 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 Chart:

Blank type	Blank result	Sample result	Action
	Detects	**Not Detected**	**No Qualification**
Method, Storage, Trip, Field, or Equipment	≤ LOQ	< LOQ	Report sample at LOQ and qualify as non-detect (U)
		≥ LOQ or ≥ 2x Blank Result for Methylene chloride, Acetone, and 2-Butanone	Use professional judgement
	≥ LOQ	< LOQ	Report sample at LOQ and qualify as non-detect (U)
		≥ LOD but < Blank Result	Report at sample result and qualify as non-detect (U) or reject the sample result as unusable (R)
		≥ LOQ and ≥ Blank Result or 2x Blank Result for Methylene chloride, Acetone, and 2-Butanone	Use professional judgement
	Gross Contamination	Detect	Report at sample result and qualify as unusable (R)

Notes:

LOQ = Limit of quantitation
U = Undetected
R = Rejected

Lab blank non-conformance is summarized in Attachment A in Table A-4.

Surrogate Spike Recovery

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**
Lower Limit ≤ %R or RPD ≤ Upper Limit	No qualification	No qualification
% R > Upper Limit	J	No qualification
20% <%R < Lower Limit	J	UJ
% R < 20%	J	Rejected

Notes:
%R = Percent recovery
RPD = Relative percent differences
J = Estimated value
UJ = Undetected and estimated

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

Qualification 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. Attachment B provides a summary of all qualified results during this data review.

ATTACHMENTS

Attachment A: Non-Conformance Summary Tables
Attachment B: Qualified Results Summary during Data Review

Attachment A
Non-Conformance Summary Table

Table A-1 Initial Calibration Non-Conformance								
SDG	**Method**	**Analyte**	**Instrument ID/ Calibration Date**	**RSD**	**RSD Limit**	**Associated Sample**	**Lab ID**	**Qualifiers**
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	DUP01-GW-060117	SK4608-5	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	FB01-WQ-060117	SK4608-9	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE103D1-GW-060117	SK4608-2DL2	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE103D2-GW-060117	SK4608-3DL2	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE103D3-GW-060117	SK4608-4	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	TB01-WQ-060117	SK4608-1	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	TT101D1-GW-060117	SK4608-7	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	TT101D2-GW-060117	SK4608-8	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	TT101D-GW-060117	SK4608-6	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE104D1-GW-060517	SK4712-8	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE104D2-GW-060517	SK4712-9	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE104D3-GW-060517	SK4712-10	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE125D1-GW-060217	SK4712-5	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE125D2-GW-060217	SK4712-6	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE125D3-GW-060217	SK4712-7	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE126D1-GW-060517	SK4712-11	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE131D1-GW-060217	SK4712-2	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE131D2-GW-060217	SK4712-3	Detects: J Non-detects: UJ

Table A-1 Initial Calibration Non-Conformance								
SDG	**Method**	**Analyte**	**Instrument ID/ Calibration Date**	**RSD**	**RSD Limit**	**Associated Sample**	**Lab ID**	**Qualifiers**
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	RE131D3-GW-060217	SK4712-4	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	GCMS-S 05-JUN-17	**24.9742**	15	TB02-WQ-060517	SK4712-1	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	TB03-WQ-060617	SK4750-1	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	FB02-WQ-060617	SK4750-5	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE122D3-GW-060617	SK4750-4	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE120D3-GW-060617	SK4750-8	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE122D2-GW-060617	SK4750-3DL2	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE120D1-GW-060617	SK4750-6DL2	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE122D2-GW-060617	SK4750-3DL	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE120D1-GW-060617	SK4750-6DL	Detects: J Non-detects: UJ
SK4750	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE122D1-GW-060617	SK4750-2	Detects: J Non-detects: UJ
SK4810	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	TB04-WQ-060717	SK4810-1	Detects: J Non-detects: UJ
SK4810	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE123D1-GW-060717	SK4810-2	Detects: J Non-detects: UJ
SK4810	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE123D2-GW-060717	SK4810-3	Detects: J Non-detects: UJ
SK4810	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE123D3-GW-060717	SK4810-4	Detects: J Non-detects: UJ
SK4810	8260C	Acetone	GCMS-P 13-JUN-17	**25.42371**	15	RE105D1-GW-060717	SK4810-5	Detects: J Non-detects: UJ
SK4810	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.21255**	15	RE105D2-GW-060717	SK4810-6DL	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-S 23-JUN-17	**15.0226**	15	TB05-WQ-060817	SK4902-1RA	Detects: J Non-detects: UJ

Table A-1 Initial Calibration Non-Conformance								
SDG	**Method**	**Analyte**	**Instrument ID/ Calibration Date**	**RSD**	**RSD Limit**	**Associated Sample**	**Lab ID**	**Qualifiers**
SK4902	8260C	m+p-Xylenes	GCMS-S 23-JUN-17	**15.0226**	15	RE108D1-GW-060817	SK4902-2RA	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-S 23-JUN-17	**15.0226**	15	RE117D1-GW-060817	SK4902-4RA	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-S 23-JUN-17	**15.0226**	15	RE117D2-GW-060817	SK4902-5RA	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-S 23-JUN-17	**15.0226**	15	RE108D2-GW-060817	SK4902-3DL4	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-S 23-JUN-17	**15.0226**	15	RE108D2-GW-060817	SK4902-3DL3	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.2125**	15	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.2125**	15	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.2125**	15	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.2125**	15	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.2125**	15	RE108D2-GW-060817	SK4902-3DL2	Detects: J Non-detects: UJ
SK4902	8260C	m+p-Xylenes	GCMS-W 19-JUN-17	**15.2125**	15	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ

Notes:

SDG = Sample delivery group
RSD = Relative standard deviation
ID = Identification
Bold = Above the 15% control limit.
J = Estimated value; one or more quality control parameters for calibration were outside control limits.
UJ = Undetected and estimated; one or more quality control parameters for calibration were outside control limits.

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifiers
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	DUP01-GW-060117	SK4608-5	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	FB01-WQ-060117	SK4608-9	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	RE103D1-GW-060117	SK4608-2DL2	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	RE103D2-GW-060117	SK4608-3DL2	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	RE103D3-GW-060117	SK4608-4	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	TB01-WQ-060117	SK4608-1	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	TT101D1-GW-060117	SK4608-7	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	TT101D2-GW-060117	SK4608-8	Detects: J Non-detects: UJ
SK4608	8260C	Acetone	S6022A.D	**156.49**	80-120	TT101D-GW-060117	SK4608-6	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE104D1-GW-060517	SK4712-8	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE104D2-GW-060517	SK4712-9	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE104D3-GW-060517	SK4712-10	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE125D1-GW-060217	SK4712-5	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE125D2-GW-060217	SK4712-6	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE125D3-GW-060217	SK4712-7	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE126D1-GW-060517	SK4712-11	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE131D1-GW-060217	SK4712-2	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE131D2-GW-060217	SK4712-3	Detects: J Non-detects: UJ
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	RE131D3-GW-060217	SK4712-4	Detects: J Non-detects: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifiers
SK4712	8260C	Acetone	S6022A.D	**156.49**	80-120	TB02-WQ-060517	SK4712-1	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	TB03-WQ-060617	SK4750-1	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	FB02-WQ-060617	SK4750-5	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE122D3-GW-060617	SK4750-4	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE120D3-GW-060617	SK4750-8	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE122D2-GW-060617	SK4750-3DL2	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE120D1-GW-060617	SK4750-6DL2	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE122D2-GW-060617	SK4750-3DL	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE120D1-GW-060617	SK4750-6DL	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE122D1-GW-060617	SK4750-2	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	RE122D1-GW-060617	SK4750-2DL2	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	RE120D2-GW-060617	SK4750-7DL	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	DUP02-GW-060617	SK4750-9DL	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	RE120D2-GW-060617	SK4750-7RA	Detects: J Non-detects: UJ
SK4750	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	DUP02-GW-060617	SK4750-9RA	Detects: J Non-detects: UJ
SK4810	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	TB04-WQ-060717	SK4810-1	Detects: J Non-detects: UJ
SK4810	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE123D1-GW-060717	SK4810-2	Detects: J Non-detects: UJ
SK4810	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE123D2-GW-060717	SK4810-3	Detects: J Non-detects: UJ
SK4810	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE123D3-GW-060717	SK4810-4	Detects: J Non-detects: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifiers
SK4810	8260C	Dichlorodifluoromethane	P1104A.D	**78.37**	80-120	RE105D1-GW-060717	SK4810-5	Detects: J Non-detects: UJ
SK4810	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	RE105D2-GW-060717	SK4810-6DL2	Detects: J Non-detects: UJ
SK4810	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	RE105D2-GW-060717	SK4810-6DL	Detects: J Non-detects: UJ
SK4810	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	RE105D2-GW-060717	SK4810-6DL	Detects: J Non-detects: UJ
SK4810	8260C	4-methyl-2-pentanone	W0081A.D	**74.91**	80-120	RE105D2-GW-060717	SK4810-6DL	Detects: J Non-detects: UJ
SK4970	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	TB06-WQ-060917	SK4970-1	Detects: J Non-detects: UJ
SK4970	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	RE126D3-GW-060917	SK4970-3	Detects: J Non-detects: UJ
SK4970	8260C	Dichlorodifluoromethane	S6241.D	**128.25**	80-120	RE126D2-GW-060917	SK4970-2	Detects: J Non-detects: UJ
SK4902	8260C	Acetone	S6302A.D	**146.01**	80-120	TB05-WQ-060817	SK4902-1RA	Detects: J Non-detects: UJ
SK4902	8260C	Acetone	S6302A.D	**146.01**	80-120	RE108D1-GW-060817	SK4902-2RA	Detects: J Non-detects: UJ
SK4902	8260C	Acetone	S6302A.D	**146.01**	80-120	RE117D1-GW-060817	SK4902-4RA	Detects: J Non-detects: UJ
SK4902	8260C	Acetone	S6302A.D	**146.01**	80-120	RE117D2-GW-060817	SK4902-5RA	Detects: J Non-detects: UJ
SK4902	8260C	Acetone	S6302A.D	**146.01**	80-120	RE108D2-GW-060817	SK4902-3DL4	Detects: J Non-detects: UJ
SK4902	8260C	Acetone	S6302A.D	**146.01**	80-120	RE108D2-GW-060817	SK4902-3DL3	Detects: J Non-detects: UJ
SK4902	8260C	2-Hexanone	S6302A.D	**127.09**	80-120	TB05-WQ-060817	SK4902-1RA	Detects: J Non-detects: UJ
SK4902	8260C	2-Hexanone	S6302A.D	**127.09**	80-120	RE108D1-GW-060817	SK4902-2RA	Detects: J Non-detects: UJ
SK4902	8260C	2-Hexanone	S6302A.D	**127.09**	80-120	RE117D1-GW-060817	SK4902-4RA	Detects: J Non-detects: UJ
SK4902	8260C	2-Hexanone	S6302A.D	**127.09**	80-120	RE117D2-GW-060817	SK4902-5RA	Detects: J Non-detects: UJ
SK4902	8260C	2-Hexanone	S6302A.D	**127.09**	80-120	RE108D2-GW-060817	SK4902-3DL4	Detects: J Non-detects: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifiers
SK4902	8260C	2-Hexanone	S6302A.D	**127.09**	80-120	RE108D2-GW-060817	SK4902-3DL3	Detects: J Non-detects: UJ
SK4902	8260C	trans-1,3-Dichloropropene	S6302A.D	**127.17**	80-120	TB05-WQ-060817	SK4902-1RA	Detects: J Non-detects: UJ
SK4902	8260C	trans-1,3-Dichloropropene	S6302A.D	**127.17**	80-120	RE108D1-GW-060817	SK4902-2RA	Detects: J Non-detects: UJ
SK4902	8260C	trans-1,3-Dichloropropene	S6302A.D	**127.17**	80-120	RE117D1-GW-060817	SK4902-4RA	Detects: J Non-detects: UJ
SK4902	8260C	trans-1,3-Dichloropropene	S6302A.D	**127.17**	80-120	RE117D2-GW-060817	SK4902-5RA	Detects: J Non-detects: UJ
SK4902	8260C	trans-1,3-Dichloropropene	S6302A.D	**127.17**	80-120	RE108D2-GW-060817	SK4902-3DL4	Detects: J Non-detects: UJ
SK4902	8260C	trans-1,3-Dichloropropene	S6302A.D	**127.17**	80-120	RE108D2-GW-060817	SK4902-3DL3	Detects: J Non-detects: UJ
SK4902	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ
SK4902	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	RE108D2-GW-060817	SK4902-3DL2	Detects: J Non-detects: UJ
SK4902	8260C	Dichlorodifluoromethane	W0081A.D	**121.08**	80-120	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ
SK4902	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ
SK4902	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	RE108D2-GW-060817	SK4902-3DL2	Detects: J Non-detects: UJ
SK4902	8260C	Carbon Disulfide	W0081A.D	**76.63**	80-120	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ

Table A-2
Initial Calibration Verification Non-Conformance

SDG	Method	Analyte	ICV ID	%R	Limit	Associated Samples	Lab ID	Qualifiers
SK4902	8260C	4-Methyl-2-Pentanone	W0081A.D	**74.91**	80-120	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	8260C	4-Methyl-2-Pentanone	W0081A.D	**74.91**	80-120	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ
SK4902	8260C	4-Methyl-2-Pentanone	W0081A.D	**74.91**	80-120	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	8260C	4-Methyl-2-Pentanone	W0081A.D	**74.91**	80-120	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	8260C	4-Methyl-2-Pentanone	W0081A.D	**74.91**	80-120	RE108D2-GW-060817	SK4902-3DL2	Detects: J Non-detects: UJ
SK4902	8260C	4-Methyl-2-Pentanone	W0081A.D	**74.91**	80-120	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ

Notes:
SDG = Sample delivery group
ICV = Initial calibration verification
ID = Identification
%R = Percent recovery
Bold = Outside the 80-120 control limit.
J = Estimated value; one or more quality control parameters for calibration were outside control limits.
UJ = Undetected and estimated; one or more quality control parameters for calibration were outside control limits.

Table A-3 Continuing Calibration Verification Non-Conformance							
SDG	**Lab ID/ Calibration ID**	**Analyte**	**%D**	**%D Limit**	**Associated Samples**	**Lab ID**	**Qualifiers**
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	DUP01-GW-060117	SK4608-5	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	FB01-WQ-060117	SK4608-9	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	RE103D1-GW-060117	SK4608-2DL2	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	RE103D2-GW-060117	SK4608-3DL2	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	RE103D3-GW-060117	SK4608-4	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	TB01-WQ-060117	SK4608-1	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	TT101D1-GW-060117	SK4608-7	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	TT101D2-GW-060117	SK4608-8	Detects: J Non-detects: UJ
SK4608	WG206505-4 GCMS-S	Acetone	**-23.17926**	+/- 20%	TT101D-GW-060117	SK4608-6	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	TB02-WQ-060517	SK4712-1	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE131D3-GW-060217	SK4712-4	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE125D3-GW-060217	SK4712-7	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE104D1-GW-060517	SK4712-8	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE126D1-GW-060517	SK4712-11	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE131D2-GW-060217	SK4712-3DL	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE125D2-GW-060217	SK4712-6DL	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Dichlorodifluoromethane	**40.68921**	+/- 20%	RE125D2-GW-060217	SK4712-6	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	TB02-WQ-060517	SK4712-1	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE131D3-GW-060217	SK4712-4	Detects: J Non-detects: UJ

Table A-3 Continuing Calibration Verification Non-Conformance							
SDG	**Lab ID/ Calibration ID**	**Analyte**	**%D**	**%D Limit**	**Associated Samples**	**Lab ID**	**Qualifiers**
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE125D3-GW-060217	SK4712-7	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE104D1-GW-060517	SK4712-8	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE126D1-GW-060517	SK4712-11	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE131D2-GW-060217	SK4712-3DL	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE125D2-GW-060217	SK4712-6DL	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Bromomethane	**39.69048**	+/- 20%	RE125D2-GW-060217	SK4712-6	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	TB02-WQ-060517	SK4712-1	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE131D3-GW-060217	SK4712-4	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE125D3-GW-060217	SK4712-7	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE104D1-GW-060517	SK4712-8	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE126D1-GW-060517	SK4712-11	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE131D2-GW-060217	SK4712-3DL	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE125D2-GW-060217	SK4712-6DL	Detects: J Non-detects: UJ
SK4712	WG206619-4 GCMS-S	Chloroethane	**28.30933**	+/- 20%	RE125D2-GW-060217	SK4712-6	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Dichlorodifluoromethane	**42.75495**	+/- 20%	RE131D3-GW-060217	SK4712-4RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Dichlorodifluoromethane	**42.75495**	+/- 20%	RE125D1-GW-060217	SK4712-5RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Dichlorodifluoromethane	**42.75495**	+/- 20%	RE104D1-GW-060517	SK4712-8RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Dichlorodifluoromethane	**42.75495**	+/- 20%	RE104D2-GW-060517	SK4712-9RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Dichlorodifluoromethane	**42.75495**	+/- 20%	RE126D1-GW-060517	SK4712-11RA	Detects: J Non-detects: UJ

Table A-3 Continuing Calibration Verification Non-Conformance							
SDG	**Lab ID/ Calibration ID**	**Analyte**	**%D**	**%D Limit**	**Associated Samples**	**Lab ID**	**Qualifiers**
SK4712	WG206697-4 GCMS-S	Bromomethane	**23.16008**	+/- 20%	RE131D3-GW-060217	SK4712-4RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Bromomethane	**23.16008**	+/- 20%	RE125D1-GW-060217	SK4712-5RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Bromomethane	**23.16008**	+/- 20%	RE104D1-GW-060517	SK4712-8RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Bromomethane	**23.16008**	+/- 20%	RE104D2-GW-060517	SK4712-9RA	Detects: J Non-detects: UJ
SK4712	WG206697-4 GCMS-S	Bromomethane	**23.16008**	+/- 20%	RE126D1-GW-060517	SK4712-11RA	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	TB03-WQ-060617	SK4750-1	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	FB02-WQ-060617	SK4750-5	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE122D3-GW-060617	SK4750-4	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE120D3-GW-060617	SK4750-8	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE122D2-GW-060617	SK4750-3DL2	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE120D1-GW-060617	SK4750-6DL2	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE122D2-GW-060617	SK4750-3DL	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE120D1-GW-060617	SK4750-6DL	Detects: J Non-detects: UJ
SK4750	WG207251-4 GCMS-P	Dichlorodifluoromethane	**-21.93324**	+/- 20%	RE122D1-GW-060617	SK4750-2	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Dichlorodifluoromethane	**40.79904**	+/- 20%	TB04-WQ-060717	SK4810-1	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Dichlorodifluoromethane	**40.79904**	+/- 20%	RE123D1-GW-060717	SK4810-2	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Dichlorodifluoromethane	**40.79904**	+/- 20%	RE123D2-GW-060717	SK4810-3	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Dichlorodifluoromethane	**40.79904**	+/- 20%	RE123D3-GW-060717	SK4810-4	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Dichlorodifluoromethane	**40.79904**	+/- 20%	RE105D1-GW-060717	SK4810-5	Detects: J Non-detects: UJ

Table A-3 Continuing Calibration Verification Non-Conformance							
SDG	**Lab ID/ Calibration ID**	**Analyte**	**%D**	**%D Limit**	**Associated Samples**	**Lab ID**	**Qualifiers**
SK4810	WG207450-4 GCMS-P	Bromomethane	**23.39808**	+/- 20%	TB04-WQ-060717	SK4810-1	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Bromomethane	**23.39808**	+/- 20%	RE123D1-GW-060717	SK4810-2	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Bromomethane	**23.39808**	+/- 20%	RE123D2-GW-060717	SK4810-3	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Bromomethane	**23.39808**	+/- 20%	RE123D3-GW-060717	SK4810-4	Detects: J Non-detects: UJ
SK4810	WG207450-4 GCMS-P	Bromomethane	**23.39808**	+/- 20%	RE105D1-GW-060717	SK4810-5	Detects: J Non-detects: UJ
SK4810	WG207674-4 GCMS-W	Dichlorodifluoromethane	**27.78692**	+/- 20%	RE105D2-GW-060717	SK4810-6DL	Detects: J Non-detects: UJ
SK4810	WG207674-4 GCMS-W	Chloroethane	**25.57811**	+/- 20%	RE105D2-GW-060717	SK4810-6DL	Detects: J Non-detects: UJ
SK4902	WG207973-4 GCMS-S	Trichlorofluoromethane	**22.15162**	+/- 20%	TB05-WQ-060817	SK4902-1RA	Detects: J Non-detects: UJ
SK4902	WG207973-4 GCMS-S	Trichlorofluoromethane	**22.15162**	+/- 20%	RE108D1-GW-060817	SK4902-2RA	Detects: J Non-detects: UJ
SK4902	WG207973-4 GCMS-S	Trichlorofluoromethane	**22.15162**	+/- 20%	RE117D1-GW-060817	SK4902-4RA	Detects: J Non-detects: UJ
SK4902	WG207973-4 GCMS-S	Trichlorofluoromethane	**22.15162**	+/- 20%	RE117D2-GW-060817	SK4902-5RA	Detects: J Non-detects: UJ
SK4902	WG207973-4 GCMS-S	Trichlorofluoromethane	**22.15162**	+/- 20%	RE108D2-GW-060817	SK4902-3DL3	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Acetone	**22.54174**	+/- 20%	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Acetone	**22.54174**	+/- 20%	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Acetone	**22.54174**	+/- 20%	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Acetone	**22.54174**	+/- 20%	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Acetone	**22.54174**	+/- 20%	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Dichlorodifluoromethane	**21.04622**	+/- 20%	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Dichlorodifluoromethane	**21.04622**	+/- 20%	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ

Table A-3 Continuing Calibration Verification Non-Conformance							
SDG	**Lab ID/ Calibration ID**	**Analyte**	**%D**	**%D Limit**	**Associated Samples**	**Lab ID**	**Qualifiers**
SK4902	WG207747-4 GCMS-W	Dichlorodifluoromethane	**21.04622**	+/- 20%	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Dichlorodifluoromethane	**21.04622**	+/- 20%	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Dichlorodifluoromethane	**21.04622**	+/- 20%	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Bromomethane	**-25.20359**	+/- 20%	TB05-WQ-060817	SK4902-1	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Bromomethane	**-25.20359**	+/- 20%	RE108D1-GW-060817	SK4902-2	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Bromomethane	**-25.20359**	+/- 20%	RE117D1-GW-060817	SK4902-4	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Bromomethane	**-25.20359**	+/- 20%	RE117D2-GW-060817	SK4902-5	Detects: J Non-detects: UJ
SK4902	WG207747-4 GCMS-W	Bromomethane	**-25.20359**	+/- 20%	RE108D2-GW-060817	SK4902-3DL	Detects: J Non-detects: UJ

Notes:

SDG = Sample delivery group
ID = Identification
%D = Percent difference
Bold = Outside the +/-20% control limit.
J = Estimated value; one or more quality control parameters for calibration were outside control limits.
UJ = Undetected and estimated; one or more quality control parameters for calibration were outside control limits.

Table A-4 Lab Blank Non-Conformance						
SDG	**Blank**	**Lab Sample ID**	**Batch**	**Analyte**	**Blank Results (UG_L)**	**Detected Associated Sample Qualified U**
SK4810	WG207674-2-SK4810	WG207674-2	WG207674	Acetone	26	RE105D2-GW-060717

Notes:

SDG = Sample delivery group
ID = Identification
UG_L = Micrograms per liter
U = Associated samples qualified undetected "U" due to blank detections.

Table A-5 Surrogate Spike Recovery Non-Conformance							
SDG	**Sample ID**	**Laboratory ID**	**Batch**	**Surrogate**	**%R**	**Control Limit**	**Qualifier**
SK4750	DUP02-GW-060617	SK4750-9RA	WG207479	DIBROMOFLUOROMETHANE	**116**	85-115	Detects: J
SK4712	RE104D1-GW-060517	SK4712-8	WG206619	1,2-DICHLOROETHANE-D4	**122**	70-120	Detects: J
SK4712	RE104D1-GW-060517	SK4712-8	WG206619	DIBROMOFLUOROMETHANE	**117**	85-115	Detects: J
SK4712	RE104D1-GW-060517	SK4712-8RA	WG206697	1,2-DICHLOROETHANE-D4	**127**	70-120	Detects: J
SK4712	RE104D1-GW-060517	SK4712-8RA	WG206697	DIBROMOFLUOROMETHANE	**117**	85-115	Detects: J
SK4712	RE104D2-GW-060517	SK4712-9	WG206619	1,2-DICHLOROETHANE-D4	**121**	70-120	Detects: J
SK4810	RE105D2-GW-060717	SK4810-6DL2	WG207565	DIBROMOFLUOROMETHANE	**117**	85-115	Detects: J
SK4810	RE105D2-GW-060717	SK4810-6DL	WG207674	1,2-DICHLOROETHANE-D4	**123**	70-120	Detects: J
SK4712	RE125D1-GW-060217	SK4712-5	WG206619	DIBROMOFLUOROMETHANE	**116**	85-115	Detects: J
SK4712	RE125D1-GW-060217	SK4712-5RA	WG206697	1,2-DICHLOROETHANE-D4	**123**	70-120	Detects: J
SK4712	RE125D2-GW-060217	SK4712-6DL	WG206619	1,2-DICHLOROETHANE-D4	**123**	70-120	Detects: J
SK4712	RE125D2-GW-060217	SK4712-6DL	WG206619	DIBROMOFLUOROMETHANE	**116**	85-115	Detects: J
SK4712	RE125D2-GW-060217	SK4712-6	WG206619	1,2-DICHLOROETHANE-D4	**124**	70-120	Detects: J
SK4712	RE125D2-GW-060217	SK4712-6	WG206619	DIBROMOFLUOROMETHANE	**118**	85-115	Detects: J
SK4712	RE126D1-GW-060517	SK4712-11	WG206619	1,2-DICHLOROETHANE-D4	**124**	70-120	Detects: J
SK4712	RE126D1-GW-060517	SK4712-11RA	WG206697	DIBROMOFLUOROMETHANE	**118**	85-115	Detects: J
SK4712	RE131D2-GW-060217	SK4712-3DL	WG206619	1,2-DICHLOROETHANE-D4	**123**	70-120	Detects: J
SK4712	RE131D2-GW-060217	SK4712-3DL	WG206619	DIBROMOFLUOROMETHANE	**118**	85-115	Detects: J
SK4712	RE131D2-GW-060217	SK4712-3	WG206619	1,2-DICHLOROETHANE-D4	**122**	70-120	Detects: J
SK4712	RE131D3-GW-060217	SK4712-4	WG206619	1,2-DICHLOROETHANE-D4	**121**	70-120	Detects: J
SK4712	RE131D3-GW-060217	SK4712-4RA	WG206697	1,2-DICHLOROETHANE-D4	**122**	70-120	Detects: J
SK4712	RE131D3-GW-060217	SK4712-4RA	WG206697	DIBROMOFLUOROMETHANE	**117**	85-115	Detects: J
SK4970	RE126D2-GW-060917	SK4970-2DL	WG207565	1,2-DICHLOROETHANE-D4	**123**	70-120	Detects: J
SK4970	RE126D2-GW-060917	SK4970-2DL	WG207565	DIBROMOFLUOROMETHANE	**117**	85-115	Detects: J
SK4902	RE108D1-GW-060817	SK4902-2	WG207747	1,2-DICHLOROETHANE-D4	**127**	70-120	Detects: J
SK4902	RE108D2-GW-060817	SK4902-3DL	WG207747	1,2-DICHLOROETHANE-D4	**130**	70-120	Detects: J
SK4902	RE117D1-GW-060817	SK4902-4	WG207747	1,2-DICHLOROETHANE-D4	**128**	70-120	Detects: J
SK4902	RE117D2-GW-060817	SK4902-5	WG207747	1,2-DICHLOROETHANE-D4	**129**	70-120	Detects: J
SK4902	TB05-WQ-060817	SK4902-1	WG207747	1,2-DICHLOROETHANE-D4	**126**	70-120	Detects: J

Notes:

SDG = Sample delivery group
ID = Identification
%R = Percent recovery
Bold = Outside the surrogate control limits
J = Positive result qualified estimated and may be biased high.

Attachment B
Qualified Results Summary during Data Review

Table B-1
Qualified Results Summary during Data Review

Method	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
8260C	DUP01-GW-060117	SK4608-5	6/1/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	TETRACHLOROETHENE	2.6	UG_L		J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	CIS-1,2-DICHLOROETHENE	3.4	UG_L		J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	1,2-DICHLOROETHENE, TOTAL	3.4	UG_L		J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	CHLOROFORM	0.8	UG_L	J	J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	1,1,1-TRICHLOROETHANE	0.97	UG_L	J	J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	1,1-DICHLOROETHANE	2.3	UG_L		J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	1,1-DICHLOROETHENE	15	UG_L		J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	TRICHLOROFLUOROMETHANE	0.45	UG_L	J	J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	DICHLORODIFLUOROMETHANE	0.26	UG_L	J	J	J	s,c
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	19	UG_L		J	J	s
8260C	DUP02-GW-060617	SK4750-9RA	6/6/2017	1	1,1,2-TRICHLOROETHANE	1.2	UG_L		J	J	s
8260C	FB01-WQ-060117	SK4608-9	6/1/2017	1	ACETONE	2.3	UG_L	J	J	J	c
8260C	FB02-WQ-060617	SK4750-5	6/6/2017	1	ACETONE	4.5	UG_L	J	J	J	c
8260C	FB02-WQ-060617	SK4750-5	6/6/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE103D1-GW-060117	SK4608-2DL2	6/1/2017	2	ACETONE	5	UG_L	U	J	UJ	c
8260C	RE103D2-GW-060117	SK4608-3DL2	6/1/2017	2	ACETONE	5	UG_L	U	J	UJ	c
8260C	RE103D3-GW-060117	SK4608-4	6/1/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	TETRACHLOROETHENE	2.2	UG_L		J	J	s
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	CIS-1,2-DICHLOROETHENE	0.73	UG_L	J	J	J	s
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	1,2-DICHLOROETHENE, TOTAL	0.73	UG_L	J	J	J	s
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	1,1-DICHLOROETHENE	0.59	UG_L	J	J	J	s
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.4	UG_L		J	J	s
8260C	RE104D1-GW-060517	SK4712-8	6/5/2017	1	TRICHLOROETHENE	77	UG_L		J	J	s
8270D_SIM	RE104D1-GW-060517	SK4712-8	6/5/2017	1	1,4-DIOXANE	9	UG_L		J	J	s
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	CIS-1,2-DICHLOROETHENE	5.6	UG_L		J	J	s
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	1,2-DICHLOROETHENE, TOTAL	5.6	UG_L		J	J	s
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	CHLOROFORM	0.94	UG_L	J	J	J	s
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D2-GW-060517	SK4712-9	6/5/2017	1	TRICHLOROETHENE	15	UG_L		J	J	s

Table B-1
Qualified Results Summary during Data Review

Method	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
8270D_SIM	RE104D2-GW-060517	SK4712-9	6/5/2017	1	1,4-DIOXANE	0.44	UG_L		J	J	s
8260C	RE104D3-GW-060517	SK4712-10	6/5/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE104D3-GW-060517	SK4712-10	6/5/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D3-GW-060517	SK4712-10	6/5/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE104D3-GW-060517	SK4712-10	6/5/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE105D1-GW-060717	SK4810-5	6/7/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE105D1-GW-060717	SK4810-5	6/7/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE105D1-GW-060717	SK4810-5	6/7/2017	1	DICHLORODIFLUOROMETHANE	0.77	UG_L	J	J	J	c
8260C	RE105D2-GW-060717	SK4810-6DL2	6/7/2017	40	TRICHLOROETHENE	1700	UG_L		J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	4-METHYL-2-PENTANONE	45	UG_L		J	J	s,c
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	M- AND P-XYLENE	4	UG_L	U	J	UJ	c
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	TETRACHLOROETHENE	2.7	UG_L	J	J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	CIS-1,2-DICHLOROETHENE	3.7	UG_L	J	J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	1,2-DICHLOROETHENE, TOTAL	3.7	UG_L	J	J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	CARBON TETRACHLORIDE	2.2	UG_L	J	J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	ACETONE	10	UG_L	B	U	U	bl
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	CHLOROFORM	2.1	UG_L	J	J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	CHLOROETHANE	4	UG_L	U	J	UJ	c
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	CARBON DISULFIDE	2	UG_L	U	J	UJ	c
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	1,1-DICHLOROETHANE	1.7	UG_L	J	J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	1,1-DICHLOROETHENE	8.2	UG_L		J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	DICHLORODIFLUOROMETHANE	4	UG_L	U	J	UJ	c
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	18	UG_L		J	J	s
8260C	RE105D2-GW-060717	SK4810-6DL	6/7/2017	4	1,1,2-TRICHLOROETHANE	1.4	UG_L	J	J	J	s
8260C	RE120D1-GW-060617	SK4750-6DL	6/6/2017	2	ACETONE	5	UG_L	U	J	UJ	c
8260C	RE120D1-GW-060617	SK4750-6DL	6/6/2017	2	DICHLORODIFLUOROMETHANE	2	UG_L	U	J	UJ	c
8260C	RE120D2-GW-060617	SK4750-7RA	6/6/2017	1	DICHLORODIFLUOROMETHANE	0.32	UG_L	J	J	J	c
8260C	RE120D3-GW-060617	SK4750-8	6/6/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE120D3-GW-060617	SK4750-8	6/6/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE122D1-GW-060617	SK4750-2	6/6/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE122D1-GW-060617	SK4750-2	6/6/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE122D2-GW-060617	SK4750-3DL	6/6/2017	4	ACETONE	10	UG_L	U	J	UJ	c
8260C	RE122D2-GW-060617	SK4750-3DL	6/6/2017	4	DICHLORODIFLUOROMETHANE	4	UG_L	U	J	UJ	c
8260C	RE122D3-GW-060617	SK4750-4	6/6/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE122D3-GW-060617	SK4750-4	6/6/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE123D1-GW-060717	SK4810-2	6/7/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE123D1-GW-060717	SK4810-2	6/7/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE123D1-GW-060717	SK4810-2	6/7/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c

Table B-1
Qualified Results Summary during Data Review

Method	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
8260C	RE123D2-GW-060717	SK4810-3	6/7/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE123D2-GW-060717	SK4810-3	6/7/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE123D2-GW-060717	SK4810-3	6/7/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE123D3-GW-060717	SK4810-4	6/7/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE123D3-GW-060717	SK4810-4	6/7/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE123D3-GW-060717	SK4810-4	6/7/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	TETRACHLOROETHENE	7.1	UG_L		J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	CIS-1,2-DICHLOROETHENE	4.2	UG_L		J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	1,2-DICHLOROETHENE, TOTAL	4.2	UG_L		J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	CHLOROFORM	0.92	UG_L	J	J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	1,1-DICHLOROETHANE	2.1	UG_L		J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	1,1-DICHLOROETHENE	2.9	UG_L		J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	DICHLORODIFLUOROMETHANE	0.7	UG_L	J	J	J	s,c
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	13	UG_L		J	J	s
8260C	RE125D1-GW-060217	SK4712-5	6/2/2017	1	TRICHLOROETHENE	180	UG_L		J	J	s
8270D_SIM	RE125D1-GW-060217	SK4712-5	6/2/2017	1	1,4-DIOXANE	12	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6DL	6/2/2017	5	TRICHLOROETHENE	230	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	TETRACHLOROETHENE	1.4	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	CIS-1,2-DICHLOROETHENE	4	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,2-DICHLOROETHENE, TOTAL	4	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	CHLOROFORM	0.57	UG_L	J	J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,1,1-TRICHLOROETHANE	0.5	UG_L	J	J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,1-DICHLOROETHANE	1	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,1-DICHLOROETHENE	6.6	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	TRICHLOROFLUOROMETHANE	0.27	UG_L	J	J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	19	UG_L		J	J	s
8260C	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,1,2-TRICHLOROETHANE	0.47	UG_L	J	J	J	s
8270D_SIM	RE125D2-GW-060217	SK4712-6	6/2/2017	1	1,4-DIOXANE	13	UG_L		J	J	s
8260C	RE125D3-GW-060217	SK4712-7	6/2/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE125D3-GW-060217	SK4712-7	6/2/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c

Table B-1
Qualified Results Summary during Data Review

Method	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
8260C	RE125D3-GW-060217	SK4712-7	6/2/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE125D3-GW-060217	SK4712-7	6/2/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE126D1-GW-060517	SK4712-11	6/5/2017	1	TETRACHLOROETHENE	0.85	UG_L	J	J	J	s
8260C	RE126D1-GW-060517	SK4712-11	6/5/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE126D1-GW-060517	SK4712-11	6/5/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE126D1-GW-060517	SK4712-11	6/5/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE126D1-GW-060517	SK4712-11	6/5/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE126D1-GW-060517	SK4712-11	6/5/2017	1	TRICHLOROETHENE	43	UG_L		J	J	s
8270D_SIM	RE126D1-GW-060517	SK4712-11	6/5/2017	1	1,4-DIOXANE	7	UG_L		J	J	s
8260C	RE131D1-GW-060217	SK4712-2	6/2/2017	1	ACETONE	11	UG_L		J	J	c
8260C	RE131D1-GW-060217	SK4712-2	6/2/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D1-GW-060217	SK4712-2	6/2/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D1-GW-060217	SK4712-2	6/2/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	TETRACHLOROETHENE	4.2	UG_L		J	J	s
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	CIS-1,2-DICHLOROETHENE	3.7	UG_L		J	J	s
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	1,2-DICHLOROETHENE, TOTAL	3.7	UG_L		J	J	s
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	1,1-DICHLOROETHENE	1.8	UG_L		J	J	s
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	190	UG_L		J	J	s
8260C	RE131D2-GW-060217	SK4712-3	6/2/2017	1	TRICHLOROETHENE	45	UG_L		J	J	s
8270D_SIM	RE131D2-GW-060217	SK4712-3	6/2/2017	1	1,4-DIOXANE	12	UG_L		J	J	s
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	TETRACHLOROETHENE	1.9	UG_L		J	J	s
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	CIS-1,2-DICHLOROETHENE	0.45	UG_L	J	J	J	s
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	1,2-DICHLOROETHENE, TOTAL	0.45	UG_L	J	J	J	s
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	1,1-DICHLOROETHENE	0.82	UG_L	J	J	J	s
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	170	UG_L		J	J	s
8260C	RE131D3-GW-060217	SK4712-4	6/2/2017	1	TRICHLOROETHENE	6.3	UG_L		J	J	s
8270D_SIM	RE131D3-GW-060217	SK4712-4	6/2/2017	1	1,4-DIOXANE	1.8	UG_L		J	J	s
8260C	TB01-WQ-060117	SK4608-1	6/1/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	TB02-WQ-060517	SK4712-1	6/5/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c

Table B-1
Qualified Results Summary during Data Review

Method	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
8260C	TB02-WQ-060517	SK4712-1	6/5/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	TB02-WQ-060517	SK4712-1	6/5/2017	1	CHLOROETHANE	1	UG_L	U	J	UJ	c
8260C	TB02-WQ-060517	SK4712-1	6/5/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	TB03-WQ-060617	SK4750-1	6/6/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	TB03-WQ-060617	SK4750-1	6/6/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	TB04-WQ-060717	SK4810-1	6/7/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	TB04-WQ-060717	SK4810-1	6/7/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	TB04-WQ-060717	SK4810-1	6/7/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	TT101D1-GW-060117	SK4608-7	6/1/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	TT101D2-GW-060117	SK4608-8	6/1/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	TT101D-GW-060117	SK4608-6	6/1/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE126D2-GW-060917	SK4970-2	6/9/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE126D2-GW-060917	SK4970-2DL	6/9/2017	10	TRICHLOROETHENE	480	UG_L		J	J	s
8260C	RE126D3-GW-060917	SK4970-3	6/9/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	TB06-WQ-060917	SK4970-1	6/9/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	4-METHYL-2-PENTANONE	2.5	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	M- AND P-XYLENE	1	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	TETRACHLOROETHENE	1.5	UG_L		J	J	s
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	CIS-1,2-DICHLOROETHENE	0.27	UG_L	J	J	J	s
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	1,2-DICHLOROETHENE, TOTAL	0.27	UG_L	J	J	J	s
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	CARBON DISULFIDE	0.5	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.57	UG_L	J	J	J	s
8260C	RE108D1-GW-060817	SK4902-2	6/8/2017	1	TRICHLOROETHENE	38	UG_L		J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL2	6/8/2017	50	TRICHLOROETHENE	3000	UG_L		J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	4-METHYL-2-PENTANONE	12	UG_L	U	J	UJ	c
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	M- AND P-XYLENE	5	UG_L	U	J	UJ	c
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	CIS-1,2-DICHLOROETHENE	6.6	UG_L		J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	1,2-DICHLOROETHENE, TOTAL	6.6	UG_L	J	J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	CARBON TETRACHLORIDE	1.2	UG_L	J	J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	ACETONE	12	UG_L	U	J	UJ	c
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	CHLOROFORM	3.8	UG_L	J	J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	BROMOMETHANE	5	UG_L	U	J	UJ	c
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	CARBON DISULFIDE	2.5	UG_L	U	J	UJ	c
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	1,1-DICHLOROETHANE	4.2	UG_L	J	J	J	s
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	1,1-DICHLOROETHENE	6	UG_L		J	J	s

Table B-1
Qualified Results Summary during Data Review

Method	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	DICHLORODIFLUOROMETHANE	5	UG_L	U	J	UJ	c
8260C	RE108D2-GW-060817	SK4902-3DL	6/8/2017	5	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.9	UG_L	J	J	J	s
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	4-METHYL-2-PENTANONE	2.5	UG_L	U	J	UJ	c
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	M- AND P-XYLENE	1	UG_L	U	J	UJ	c
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	CARBON DISULFIDE	0.5	UG_L	U	J	UJ	c
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	RE117D1-GW-060817	SK4902-4	6/8/2017	1	TRICHLOROETHENE	15	UG_L		J	J	s
8260C	RE117D2-GW-060817	SK4902-5	6/8/2017	1	4-METHYL-2-PENTANONE	2.5	UG_L	U	J	UJ	c
8260C	RE117D2-GW-060817	SK4902-5	6/8/2017	1	M- AND P-XYLENE	1	UG_L	U	J	UJ	c
8260C	RE117D2-GW-060817	SK4902-5	6/8/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	RE117D2-GW-060817	SK4902-5	6/8/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	RE117D2-GW-060817	SK4902-5	6/8/2017	1	CARBON DISULFIDE	0.5	UG_L	U	J	UJ	c
8260C	RE117D2-GW-060817	SK4902-5	6/8/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c
8260C	TB05-WQ-060817	SK4902-1	6/8/2017	1	4-METHYL-2-PENTANONE	2.5	UG_L	U	J	UJ	c
8260C	TB05-WQ-060817	SK4902-1	6/8/2017	1	M- AND P-XYLENE	1	UG_L	U	J	UJ	c
8260C	TB05-WQ-060817	SK4902-1	6/8/2017	1	ACETONE	2.5	UG_L	U	J	UJ	c
8260C	TB05-WQ-060817	SK4902-1	6/8/2017	1	BROMOMETHANE	1	UG_L	U	J	UJ	c
8260C	TB05-WQ-060817	SK4902-1	6/8/2017	1	CARBON DISULFIDE	0.5	UG_L	U	J	UJ	c
8260C	TB05-WQ-060817	SK4902-1	6/8/2017	1	DICHLORODIFLUOROMETHANE	1	UG_L	U	J	UJ	c

Notes:
ID = Identification
DF = Dilution factor
RC = Reason code
UG_L = Micrograms per liter
U = ***Undetected*** — The analyte was analyzed but undetected or was qualified as undetected during data review due to blank artifacts.
J = ***Estimated Value*** — One or more quality control parameters were outside control limits or the analyte concentration was less than the limit of quantitation.
UJ = ***Undetected and Estimated*** — The analyte was analyzed but undetected and was estimated because of a quality control outlier.
B = Indicates that the analyte was detected in the lab blank that was analyzed concurrently with the sample (laboratory qualifier).

Qualification Reason Codes (multiple reason codes may be applied):
bl = Lab blank contamination
c = Calibration issue
s = Surrogate spike percent recovery

Appendix C

Analytical Data Validation – ARCADIS

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

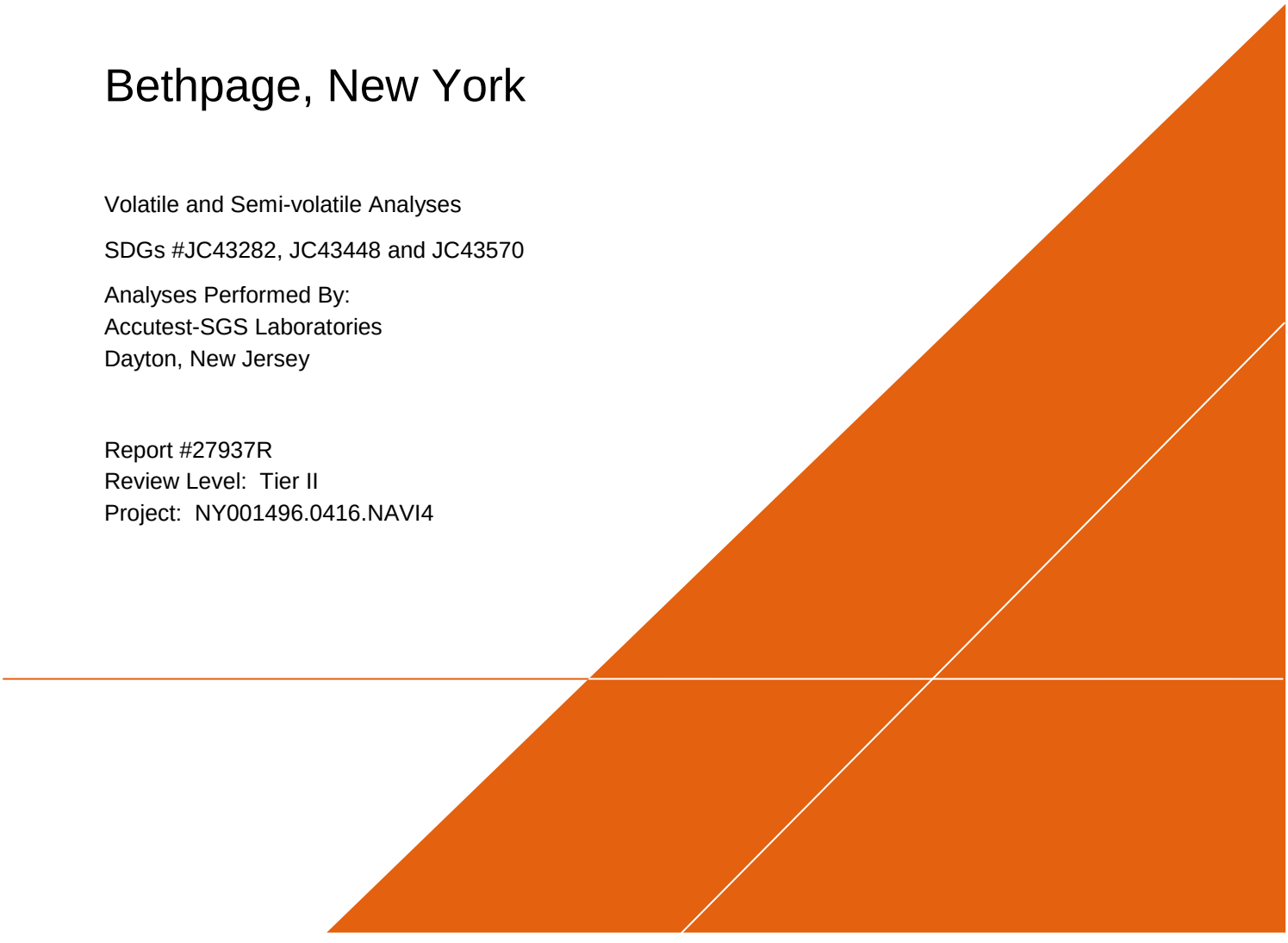
Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs #JC43282, JC43448 and JC43570

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

Report #27937R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC43282, JC43448, and JC43570 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
JC43282	BPOW 5-4	JC43282-1	Water	05/12/2017		X	X			
	TB051217AR1	JC43282-2	Water	05/12/2017		X				
JC43448	BPOW 5-3	JC43448-1	Water	05/15/2017		X	X			
	TB051517AR1	JC43448-2	Water	05/15/2017		X				
JC43570	BPOW 5-7	JC43570-1	Water	05/16/2017		X	X			
	TB051617AR1	JC43570-2	Water	05/16/2017		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 SGS-Accutest Laboratory). The associated SDGs are: JC43282X/423199, JC43448X/423480, and JC43570X/423719.

2. Matrix spike/matrix spike duplicate (MS/MSD) was performed on sample location BPOW 5-7 for 1,4-Dioxane analyses.

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

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

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) methods 524.2 and 522-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

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

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

Compounds were 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 for SDG JC43282, JC43448 or JC43570.

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 was not performed on sample locations associated with SDGs JC43282, JC43448, or JC43570.

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 JC43282, JC43448, and JC43570.

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 the SDGs validated as part of this report.

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 was not performed on a sample location associated with SDG JC43282, JC43448 or JC43570.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were identified in sample location TB051217AR1, TB051517AR1 and TB051617AR1. The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. TICs are qualified as estimated (JN).

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

DATA VALIDATION CHECKLIST FOR VOCs

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

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 associated with SDGs JC43282, JC43448, or JC43570.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC43570.

A MS/MSD was not performed on a sample location associated with SDG JC43282 or JC43448.

5. Laboratory Control Sample (LCS) Analysis

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

All compounds associated with the LCS analysis exhibited recoveries within the control limits in SDG JC43282, JC43448 and JC43570.

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 the SDGs validated as part of this report.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: 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: July 11, 2017

PEER REVIEW: Todd Church

DATE: July 12, 2017

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 # JC43282

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #: 212-365-4651

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	MeHg	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
1	BPOW 5-4		5/12/2017	12:18	JB	GW	5	3								2	3	2		
2	TB051217AR1		5/12/2017	8:00	—	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

LAB USE ONLY

SUB
V963

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASSESSMENT ZBTH
LABEL VERIFICATION JK

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	Albina Redzepagic	5/12/2017 13:32	Chris Law 5/12/17 13:32	Chris Law	5/12/17 18:35	
2						
3						
4						
5						

Custody Seal # | [ ] Intact [ ] Not intact | Preserved where applicable [ ] | On Ice [x] | Cooler Temp. 2.9 °C

Report of Analysis

Client Sample ID:	BPOW 5-4		
Lab Sample ID:	JC43282-1	**Date Sampled:**	05/12/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109481.D	1	05/17/17 23:18	BK	n/a	n/a	V1B5210
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-4		
Lab Sample ID:	JC43282-1	**Date Sampled:**	05/12/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	96%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

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:	TB051217AR1		
Lab Sample ID:	JC43282-2	**Date Sampled:**	05/12/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/12/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109482.D	1	05/17/17 23:49	BK	n/a	n/a	V1B5210
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB051217AR1		
Lab Sample ID:	JC43282-2	**Date Sampled:**	05/12/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/12/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.47	1.3	ug/l	JN
	Total TIC, Volatile		1.3	ug/l	J N

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

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

SGS ACCUTEST

CHAIN OF CUSTODY 423199

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 #: JC43282X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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	SB522SIM14DIOX , 1,4-Dioxane via EPA 522 (low PQL required)
1X	BPOW 5-4		5/12/17	12:18:00 PM	JB	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)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/2/2017

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

2 bottles per sample w/NAHSO4 preservative

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5-15-17 1700	1 FEDEX	2		2 5/16/17 9:20
3			3	4		4
5			5	Custody Seals: 6334/6334	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: JC43282X GEL Work Order: 423199

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: 02 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43282X**	**Date Collected:**	**05/12/2017 12:18**	**Matrix:**	**WATER**
Lab Sample ID:	**423199001**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 15:25**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1910.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.12	ug/L	0.100	0.100	0.200

ACCUTEST LABORATORIES

GW
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43448

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Radzyapsk 212-365-4651 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
1	BPOW 5-3		5/15/2017	14:40	AR	GW	5	3								2	3	2		
2	TB051517AR1		5/15/2017	9:00	—	TB	2	2									2			

Number of preserved Bottles

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

LAB USE ONLY: SUB, V991

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASESSMENT 3/31/22
LABEL VERIFICATION OK

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

	Relinquished by Sampler:	Date Time:	Received By:
1	Albina Radzyapsk	5/15/2017 16:25	1
2	Relinquished By:	Date Time:	Received By:
	1	5/16/17 11:00	2
3	Relinquished by Sampler:	Date Time:	Received By:
	2	5/16/17 17:10	3
4	Relinquished By:	Date Time:	Received By:
	3		4
5	Relinquished by:	Date Time:	Received By:
	4		5

Custody Seal # | [x] Intact [ ] Not intact | Preserved where applicable [ ] | On Ice [x] | Cooler Temp. 2.0°C

Report of Analysis

Client Sample ID:	BPOW 5-3		
Lab Sample ID:	JC43448-1	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109640.D	1	05/24/17 21:24	BK	n/a	n/a	V1B5216
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-3		
Lab Sample ID:	JC43448-1	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

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:	TB051517AR1		
Lab Sample ID:	JC43448-2	**Date Sampled:**	05/15/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/16/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109641.D	1	05/24/17 21:55	BK	n/a	n/a	V1B5216
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	4.6	5.0	3.8	ug/l	J
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB051517AR1		
Lab Sample ID:	JC43448-2	**Date Sampled:**	05/15/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/16/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.47	1.2	ug/l	JN
	Total TIC, Volatile		1.2	ug/l	J N

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

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

SGS ACCUTEST

CHAIN OF CUSTODY 423480

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: JC43448X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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 , 1,4-Dioxane via EPA522, Low PQL required

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 , 1,4-Dioxane via EPA522, Low PQL required	LAB USE ONLY
1X	BPOW 5-3		5/15/17	2:40:00 PM	AR	AQ										X	

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/6/2017

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

15 day GEL STD TAT

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

2 bottles per sample with NaHSO4 preservative

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

Relinquished by Sampler: 1	Date Time: 1150 5-17-17	Received By: 1 FED EX	Relinquished By: 2	Date Time: 5/18/17 4:39	Received By: 2 5/18/17 9:40
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 # 639 [ ] 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: JC43446X GEL Work Order: 423480

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: 07 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43446X**	**Date Collected:**	**05/15/2017 14:40**	**Matrix:**	**WATER**
Lab Sample ID:	**423480001**	**Date Received:**	**05/18/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1667329**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/06/2017 15:17**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/06/2017 09:22**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060617.B\s6f0605.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.28	ug/L	0.100	0.100	0.200

ACCUTEST LABORATORIES

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 # JC43570

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #: 212-465

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 5-7		5/16/2017	1550	AR	GW	15	9								9	6			
2	TB051617 AR 1		5/16/2017	9:00	—	TB	2	2								2				SUB V1009

INITIAL ASSESSMENT 5/16 MM
LABEL VERIFICATION TW

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

OU2 Hydro
MS/MSD for BPOW 5-7
3 x Volume collected

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	Albina Redzepagic	5/16/17 1730	Chris Land 5/17/17 11:00	Chris Land	5/17/17 1645	
2						
3						
4						
5						

Custody Seal #: [x] Intact [ ] Not intact
Preserved where applicable: [ ]
On Ice: [x]
Cooler Temp. 2.6°C

Report of Analysis

Client Sample ID:	BPOW 5-7		
Lab Sample ID:	JC43570-1	**Date Sampled:**	05/16/17
Matrix:	AQ - Ground Water	**Date Received:**	05/17/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109656.D	1	05/25/17 07:17	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-7		
Lab Sample ID:	JC43570-1	**Date Sampled:**	05/16/17
Matrix:	AQ - Ground Water	**Date Received:**	05/17/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

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:	TB051617AR1		
Lab Sample ID:	JC43570-2	**Date Sampled:**	05/16/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/17/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109657.D	1	05/25/17 07:49	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB051617AR1		
Lab Sample ID:	JC43570-2	**Date Sampled:**	05/16/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/17/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.48	1.3	ug/l	JNB
	Total TIC, Volatile		~~0~~ 1.3	ug/l	JN

(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 423719

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 # JC43570X

Client / Reporting Information	Project Information	Billing Information (if different from Report to)
Company Name: SGS Accutest	Project Name: Navy Wells, OU2, Bethpage, NY	
Street Address: 2235 Route 130	Street	
City: Dayton State: NJ Zip: 08810	City State	Company Name
Project Contact: diane.komar@sgs.com E-mail	Project #	Street Address
Phone #: 732-329-0200 Fax #	Client Purchase Order #	City State Zip
Sampler(s) Name(s): AR Phone	Project Manager	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 , 1,4-Dioxane via EPA 522, Low PQL required	LAB USE ONLY
1X	BPOW 5-7		5/16/17	3:50:00 PM	AR	AQ										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 6/7/2017

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: 2 bottles per sample with NaHSO4

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	5-19-17 1700	1 FED EX	2	5-20-17 8:55	2
3	Date Time:	3	4	Date Time:	4
5	Date Time:	5	Custody Seal # 649	[ ] Intact [ ] Not intact	Preserved where applicable [ ] On Ice [ ] Cooler Temp.

$650

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: JC43570X GEL Work Order: 423719

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: 08 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43570X**	**Date Collected:**	**05/16/2017 15:50**	**Matrix:**	**WATER**
Lab Sample ID:	**423719001**	**Date Received:**	**05/20/2017 08:55**		
Client Sample:	**1X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-7**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1667329**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/06/2017 16:33**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/06/2017 09:22**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060617.B\s6f0608.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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

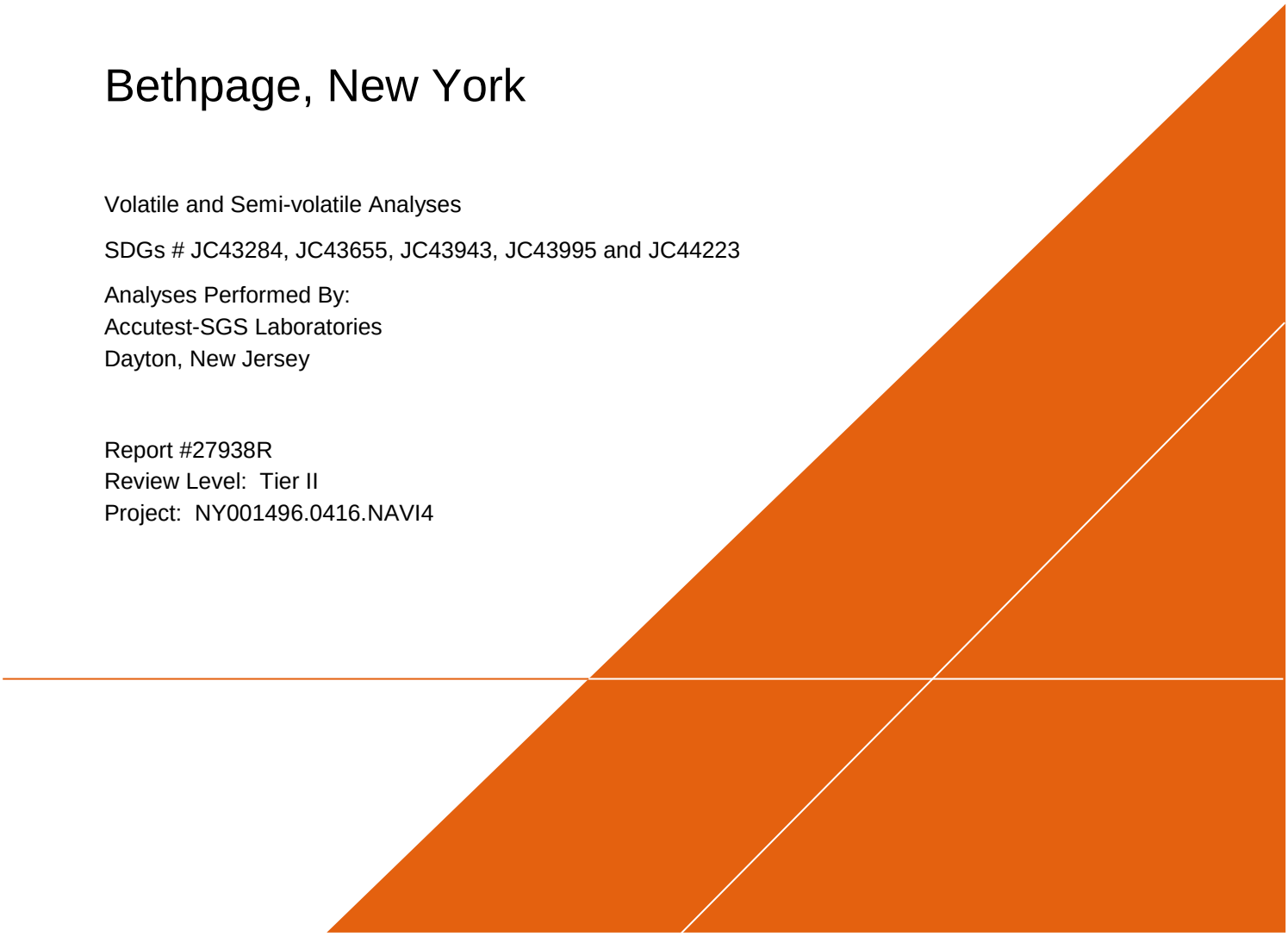
Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs # JC43284, JC43655, JC43943, JC43995 and JC44223

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

Report #27938R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # JC43284, JC43655, JC43943, JC43995 and JC44223 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
JC43284	BPOW 5-5	JC43284-1	Water	05/11/2017		X*	X			
	BPOW 5-6	JC43284-2	Water	05/11/2017		X*	X			
	REP051117AR1	JC43284-3	Water	05/11/2017	BPOW 5-5	X*	X			
	TB051117AR1	JC43284-4	Water	05/11/2017		X*				
JC43655	BPOW 5-1	JC43655-1	Water	05/17/2017		X	X			
	BPOW 5-2	JC43655-2	Water	05/17/2017		X	X			
	TB051717AR1	JC43665-3	Water	05/17/2017		X				
JC43943	BPOW 6-1	JC43943-1	Water	05/22/2017		X	X			
	BPOW 6-2	JC43943-2	Water	05/22/2017		X	X			
	TB052217AD1	JC43943-3	Water	05/22/2017		X				
JC43995	BPOW 6-3	JC43995-1	Water	05/23/2017		X	--			
	TB052317AD1	JC43995-2	Water	05/23/2017		X				
	BPOW 6-4	JC43995-3	Water	05/23/2017		X	--			
JC44223	BPOW6-5	JC44223-1	Water	05/25/2017		X	--			
	BPOW6-6	JC44223-2	Water	05/25/2017		X	--			
	TB052517AR1	JC44223-3	Water	05/25/2017		X				

Notes:

1. Volatile analysis of samples BPOW 5- 5, BPOW 5-6 and TB051117AR1 were inadvertently analyzed by method 8260C(*) instead method 524.2, as was requested on the chain of custody.

2. EPA Method 522 Semi-volatile analysis for 1,4-Dioxane was performed by GEL Laboratories, LLC, located in Charleston, South Carolina (subcontracted via SGS-Accutest Laboratory). The associated SDGs are: JC43284X/423201, JC43655X/423720, and JC43943X/424039

3. SGS Accutest Inadvertently did not send the SVOC samples in SDGs JC43995 and JC44223 to GEL laboratories for Method 522-SIM analysis (as requested on the chain-of-custody).

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

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

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 method 8260C, EPA 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.
SW-846 8260C			

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 JC43284 or JC44223.

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 for SDGs JC43655 or JC43995.

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

Sample Locations	Analytes	Sample Result	Qualification
SDG JC43943: BPOW 6-2	TIC: Tetrahydrofuran (RT 10.48) (TB, MB)	Detected sample results less than 5 times blank result	R

Note:

RL Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. 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 was not performed on a sample location associated with SDGs JC43284, JC43655, JC43943, JC43995 or JC44223.

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 JC43284, JC43655, JC43943 and JC44223.

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

Sample Locations	Compound	LCS Recovery
SDG JC43995: BPOW 6-3 TB052317AD1 BPOW 6-4	Freon 113	>UL

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

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

6. Field Duplicate Analysis

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

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC43284: BPOW 5-5/ REP05117AR1	All compounds	U	U	AC

Notes:

AC = Acceptable

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

A field duplicate was not collected with a sample location associated with SDGs JC43655, JC43943, JC43995 or JC44223.

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 was not performed on a sample location associated with SDGs JC43284, JC43655, JC43943, JC43995 or JC44223.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were identified in sample location TB051717AR1, BPOW 6-2, TB052217AD1 and TB052317AD1. The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. TICs are qualified as estimated (JN).

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

DATA VALIDATION CHECKLIST FOR VOCs

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

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

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

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 associated with SDGs JC43284, JC43655 or JC43943.

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 SDGs JC43284, JC43655, and JC43943.

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 JC43284, JC43655 or JC43943.

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 JC43284, JC43655, and JC43943.

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.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC43284: BPOW 5-5/ REP05117AR1	1,4-Dioxane	1.34	1.39	AC

Notes:

AC = Acceptable

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

A field duplicate was not collected with a sample location associated with the SDGs JC43655 or JC43943.

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		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: July 17, 2017

PEER REVIEW: Todd Church

DATE: July 18, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

GW
WTB

CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST LABORATORIES

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

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43284

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): Allyson Redzepagic 212-365-4654 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Na2S2O3	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 5-5		5/11/2017	1305	AD	GW	5	3								2	3	2			SUB V963
2	BPOW 5-6		5/11/2017	1315	AR	GW	5	3								2	3	2			
3	REPOS1117AR1		5/11/2017	—	AR	GW	5	3								2	3	2			
4	TBOS1117AR1		5/11/2017	9:00	—	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*

Approved By (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

OU2 Hydro
INITIAL ASESSMENT
LABEL VERIFICATION

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5/11/17 4:45pm	Chris Laul 5/12/17 8:33	Chris Laul	5/12/17 1835	
2						
3						
4						
5						

Custody Seal # | Intact / Not Intact | Preserved where applicable | On Ice | Cooler Temp. 2.1 °C IR

5.1 5

JC43284: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC43284-1	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133198.D	1	05/20/17 03:23	JP	n/a	n/a	V2E5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC43284-1	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC43284-2	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133199.D	1	05/20/17 03:50	JP	n/a	n/a	V2E5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC43284-2	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	91%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID:	REP051117AR1		
Lab Sample ID:	JC43284-3	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133200.D	1	05/20/17 04:17	JP	n/a	n/a	V2E5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	REP051117AR1		
Lab Sample ID:	JC43284-3	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID: TB051117AR1
Lab Sample ID: JC43284-4
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/11/17
Date Received: 05/12/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133180.D	1	05/19/17 19:13	JP	n/a	n/a	V2E5825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB051117AR1		
Lab Sample ID:	JC43284-4	**Date Sampled:**	05/11/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		76-120%
17060-07-0	1,2-Dichloroethane-D4	91%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

SGS ACCUTEST

CHAIN OF CUSTODY 423207

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 # JC43284X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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	SB522SIM14DIOX , 1,4-Dioxane via EPA 522 (Low PQL required).
1X	BPOW 5-5		5/11/17	1:05:00 PM	AD	AQ	2								2	X
2X	BPOW 5-6		5/11/17	1:15:00 PM	AD	AQ	2								2	X
3X	REP051117AR1		5/11/17	12:00:00 AM	AD	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)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/2/2017

21 day std GEL TAT

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

2 bottles per sample w/NA2HSO4 preservative.

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

Relinquished by Sampler: 1	Date Time: 5-15-17 1100	Received By: 1 FEDEX	Relinquished By: 2	Date Time:	Received By: 2 5/16/17 9:20
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 # 634 634	[ ] 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: JC43284X GEL Work Order: 423201

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: 02 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43284X**	**Date Collected:**	**05/11/2017 13:05**	**Matrix:**	**WATER**
Lab Sample ID:	**423201001**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 15:50**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1911.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.34	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43284X**	**Date Collected:**	**05/11/2017 13:15**	**Matrix:**	**WATER**
Lab Sample ID:	**423201002**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 16:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1912.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.129	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43284X**	**Date Collected:**	**05/11/2017 12:00**	**Matrix:**	**WATER**
Lab Sample ID:	**423201003**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**REP051117AR1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 16:41**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1913.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.39	ug/L	0.100	0.100	0.200

ACCUTEST LABORATORIES

GW
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43655

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): Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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:

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	Lab Use Only	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	TBROW 5-1		5/17/2017	13:55	SD	GW	5	3							2		3	2			SUB
2	TBROW 5-2		5/17/2017	1405	AR	GW	5	3							2		3	2			V1030
3	TB05171TAR-1		5/17/2017	9:00	—	TB	2	2									2				

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASSESSMENT ZA 5/18
LABEL VERIFICATION JK

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro

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

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		5/17/17 1544	1	2	5-18-17 1020	2
3		5/18/17 1120	3	4		4
5			5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp.

03.7 EP

5.1.5

JC43655: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC43655-1	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109692.D	1	05/26/17 04:28	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC43655-1	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC43655-2	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109693.D	1	05/26/17 04:59	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC43655-2	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

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:	TB051717AR1		
Lab Sample ID:	JC43655-3	**Date Sampled:**	05/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109694.D	1	05/26/17 05:30	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB051717AR1		
Lab Sample ID:	JC43655-3	**Date Sampled:**	05/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.49	1.3	ug/l	JN
	Total TIC, Volatile		1.3	ug/l	J N

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

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

SGS ACCUTEST

CHAIN OF CUSTODY

423720

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: JC43655X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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 , 1,4-Dioxane via EPA522, low PQL Required.

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 Required.	LAB USE ONLY
1X	BPOW 5-1		5/17/17	1:55:00 PM	AR	AQ	2									2	X	
2X	BPOW 5-2		5/17/17	2:05:00 PM	AR	AQ	2									2	X	

Number of preserved Bottles

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/8/2017

15 business day GEL TAT

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

2 bottles per sample with NaHSO4

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

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		5-19-17 1700	FEDEX	2	5-20-17 8:55	
3				4		
5						

Custody Seal # 649 & 650 [ ] 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: JC43655X GEL Work Order: 423720

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: 08 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43655X**	**Date Collected:**	**05/17/2017 13:55**	**Matrix:**	**WATER**
Lab Sample ID:	**423720001**	**Date Received:**	**05/20/2017 08:55**		
Client Sample:	**1X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1667329**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/06/2017 15:42**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/06/2017 09:22**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060617.B\s6f0606.D**		**RTX-624**		

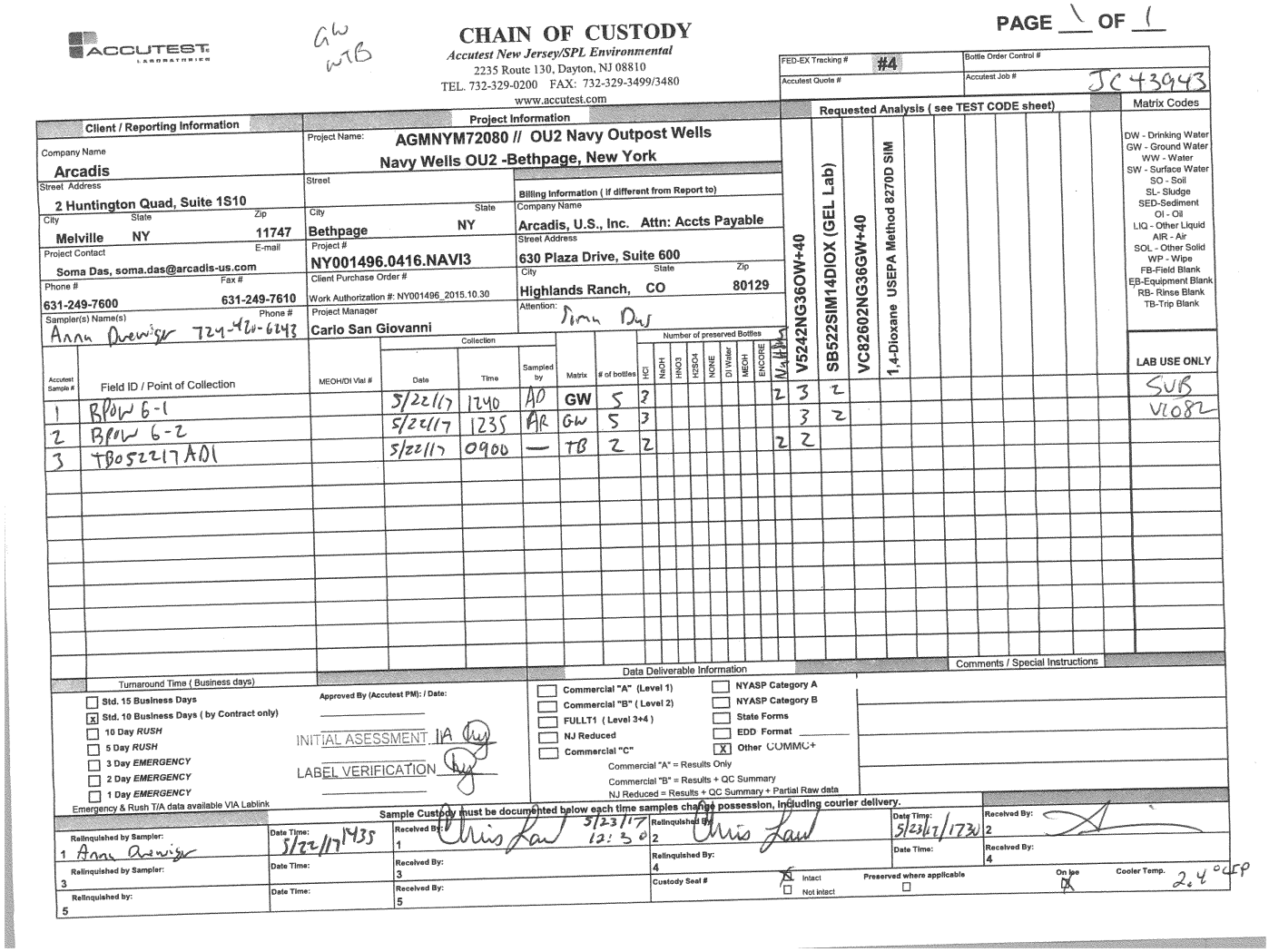
CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43655X**	**Date Collected:**	**05/17/2017 14:05**	**Matrix:**	**WATER**
Lab Sample ID:	**423720002**	**Date Received:**	**05/20/2017 08:55**		
Client Sample:	**2X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1667329**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/06/2017 16:07**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/06/2017 09:22**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060617.B\s6f0607.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
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 # JC43943

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) / Phone #: Anna Drewniak 724-420-6243

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #
Work Authorization #: NY001496_2015.10.30
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: Anna Dw

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	NaHSO4	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 6-1		5/22/17	1240	AD	GW	5	3								2	3	2			SUB
2	BPOW 6-2		5/22/17	1235	AR	GW	5	3									3	2			VL082
3	TB052217AD1		5/22/17	0900	—	TB	2	2								2	2				

Matrix Codes

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

INITIAL ASESSMENT: IA
LABEL VERIFICATION:

Data Deliverable Information

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

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

Comments / Special Instructions

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

1 Relinquished by Sampler: Anna Drewniak	Date Time: 5/22/17 1435	Received By: 1 Chris Law	5/23/17 12:30	Relinquished By: 2 Chris Law	Date Time: 5/23/17 1730	Received By: 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 #	[X] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [X] Cooler Temp. 2.4 °C/D

5.1
5

Report of Analysis

Client Sample ID:	BPOW 6-1		
Lab Sample ID:	JC43943-1	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109653.D	1	05/25/17 05:42	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-1		
Lab Sample ID:	JC43943-1	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	BPOW 6-2		
Lab Sample ID:	JC43943-2	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109654.D	1	05/25/17 06:14	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-2		
Lab Sample ID:	JC43943-2	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	~~10.48~~	~~1.3~~	~~ug/l~~	~~JNB~~ R
	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:	TB052217AD1		
Lab Sample ID:	JC43943-3	**Date Sampled:**	05/22/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109655.D	1	05/25/17 06:46	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB052217AD1		
Lab Sample ID:	JC43943-3	**Date Sampled:**	05/22/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.48	1.3	ug/l	JNB
	Total TIC, Volatile		~~0~~ 1.3	ug/l	JN

(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

424039

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 # JC43943X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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	SB522SIM14DIOX , 1,4-Dioxane via EPA 522, Low PQL required
1X	BPOW 6-1		5/22/17	12:40:00 PM	AD	AQ	2								2	X
2X	BPOW 6-2		5/22/17	12:35:00 PM	AD	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 Due 6/13/2017

STD GEL TAT

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

2 bottles per sample preserved with NaHSO4

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

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

Relinquished by Sampler: 1	Date Time: 5-24-17 1700	Received By: 1 FEDEX	Relinquished By: 2	Date Time:	Received By: 2 5/25/17 9:10
Relinquished by Sampler: 3	Date Time:	Received By: 3 5/25/17	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 502 [ ] 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: 424039 GEL Work Order: 424039

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 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**424039**	**Date Collected:**	**05/22/2017 12:40**	**Matrix:**	**WATER**
Lab Sample ID:	**424039001**	**Date Received:**	**05/25/2017 09:10**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1671313**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/08/2017 22:00**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/08/2017 08:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060817.B\s6f0813.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:	**424039**	**Date Collected:**	**05/22/2017 12:35**	**Matrix:**	**WATER**
Lab Sample ID:	**424039002**	**Date Received:**	**05/25/2017 09:10**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1671313**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/08/2017 22:48**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/08/2017 08:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060817.B\s6f0815.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
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 # JC43995

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): Aron Drewniak Phone #: 724-420-6243

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 6-3		5/23/17	1135	AD	GW	5	3							2	3	2			SUB
2	TBOS23/17A01		5/23/17	0900	—	TB	2	2								2				V1092
3	BPOW 6-4		5/23/17	1250	JB	GW	5	3							2	3	2			

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASSESSMENT 3B(A)
LABEL VERIFICATION DS

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	5/23/17 1450	1 Chris Law 5/24/17 12:25	2 Chris Law	5/24/17 1750	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[X] Intact [ ] Not Intact	Preserved where applicable [ ]

On Ice [X] Cooler Temp. 2.2°C IP

5.1.5

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC43995-1	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109729.D	1	05/27/17 20:54	BK	n/a	n/a	V1B5221
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113 [b]	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC43995-1	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

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:	TB052317AD1		
Lab Sample ID:	JC43995-2	**Date Sampled:**	05/23/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109730.D	1	05/27/17 21:26	BK	n/a	n/a	V1B5221
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113 [b]	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB052317AD1		
Lab Sample ID:	JC43995-2	**Date Sampled:**	05/23/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	97%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.47	1.3	ug/l	JN
	Total TIC, Volatile		1.3	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.
(b) This compound in BS is outside in house QC limits bias high.

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

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC43995-3	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109731.D	1	05/27/17 21:58	BK	n/a	n/a	V1B5221
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113 [b]	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC43995-3	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%

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

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 # JC44223

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #: 212-365-4651

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

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

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	5035/SUB	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 6-5		5/25/17	1235	JB	GW	5	3								2	3	2			SUB
2	BPOW 6-6		5/25/17	1230	AK	GW	5	3								2	3	2			V1125
3	TB052517AR1		5/25/17	9:00	—	TB	2	2									2				

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASESSMENT 3A Sum
LABEL VERIFICATION DB

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 Albina Redzepagic	5/25/2017 14:05	1 Chris Lord	2 Chris Lord 5/26/17 9:35	5/26/17 1735	2
3		3	4		4
5		5	Custody Seal # 64 Intact / Not intact	Preserved where applicable	On Ice ☒ Cooler Temp. 1.3°C

5.1.5

Report of Analysis

Client Sample ID:	BPOW6-5		
Lab Sample ID:	JC44223-1	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109815.D	1	06/02/17 17:37	BK	n/a	n/a	V1B5227
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	JC44223-1	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

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:	JC44223-2	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109816.D	1	06/02/17 18:09	BK	n/a	n/a	V1B5227
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	JC44223-2	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	96%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

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:	TB052517AR1		
Lab Sample ID:	JC44223-3	**Date Sampled:**	05/25/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109817.D	1	06/02/17 18:41	BK	n/a	n/a	V1B5227
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB052517AR1		
Lab Sample ID:	JC44223-3	**Date Sampled:**	05/25/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

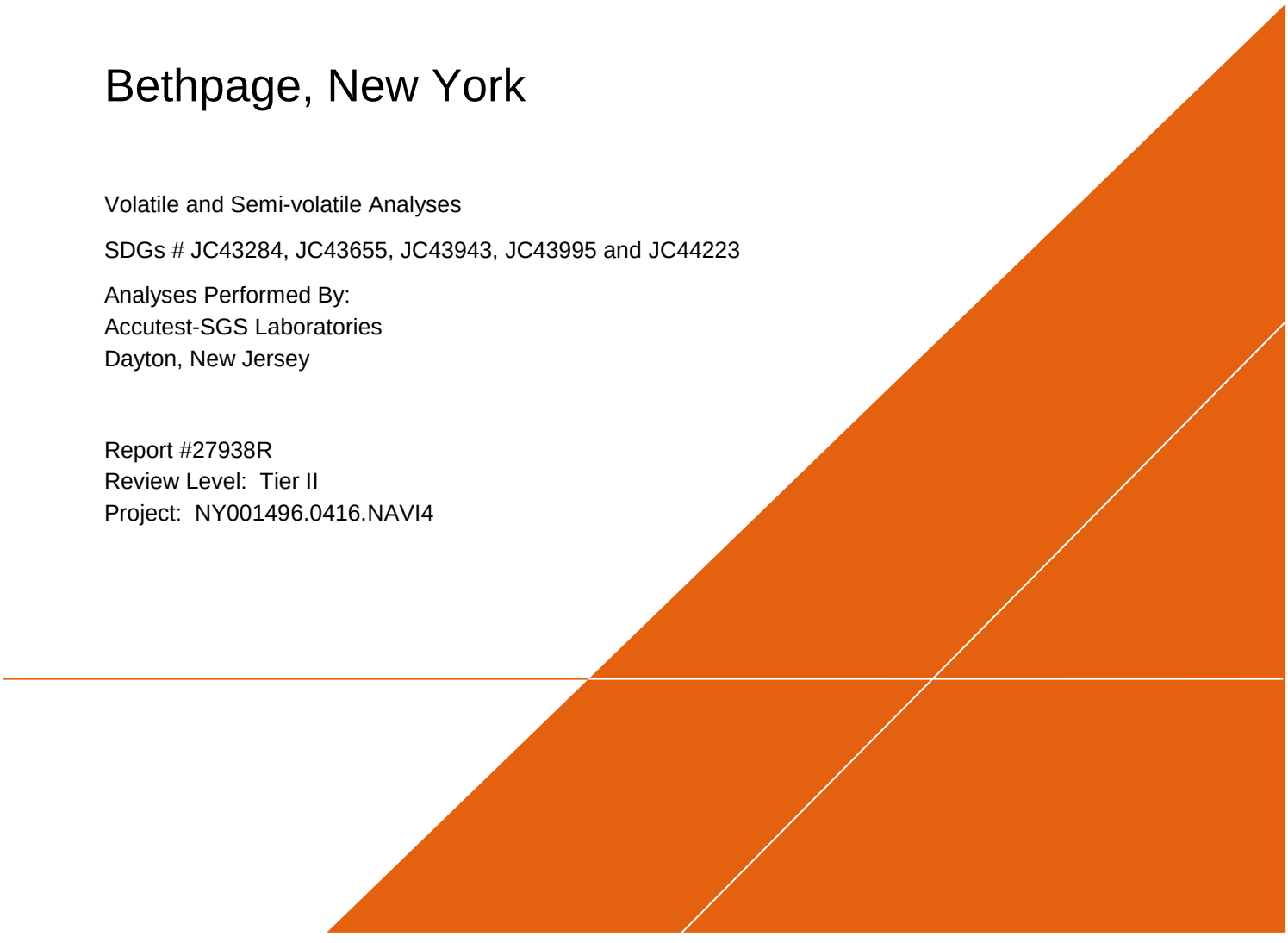
Bethpage, New York

Volatile and Semi-volatile Analyses

SDGs # JC43284, JC43655, JC43943, JC43995 and JC44223

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

Report #27938R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # JC43284, JC43655, JC43943, JC43995 and JC44223 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
JC43284	BPOW 5-5	JC43284-1	Water	05/11/2017		X*	X			
	BPOW 5-6	JC43284-2	Water	05/11/2017		X*	X			
	REP051117AR1	JC43284-3	Water	05/11/2017	BPOW 5-5	X*	X			
	TB051117AR1	JC43284-4	Water	05/11/2017		X*				
JC43655	BPOW 5-1	JC43655-1	Water	05/17/2017		X	X			
	BPOW 5-2	JC43655-2	Water	05/17/2017		X	X			
	TB051717AR1	JC43665-3	Water	05/17/2017		X				
JC43943	BPOW 6-1	JC43943-1	Water	05/22/2017		X	X			
	BPOW 6-2	JC43943-2	Water	05/22/2017		X	X			
	TB052217AD1	JC43943-3	Water	05/22/2017		X				
JC43995	BPOW 6-3	JC43995-1	Water	05/23/2017		X	--			
	TB052317AD1	JC43995-2	Water	05/23/2017		X				
	BPOW 6-4	JC43995-3	Water	05/23/2017		X	--			
JC44223	BPOW6-5	JC44223-1	Water	05/25/2017		X	--			
	BPOW6-6	JC44223-2	Water	05/25/2017		X	--			
	TB052517AR1	JC44223-3	Water	05/25/2017		X				

Notes:

1. Volatile analysis of samples BPOW 5- 5, BPOW 5-6 and TB051117AR1 were inadvertently analyzed by method 8260C(*) instead method 524.2, as was requested on the chain of custody.

2. EPA Method 522 Semi-volatile analysis for 1,4-Dioxane was performed by GEL Laboratories, LLC, located in Charleston, South Carolina (subcontracted via SGS-Accutest Laboratory). The associated SDGs are: JC43284X/423201, JC43655X/423720, and JC43943X/424039

3. SGS Accutest Inadvertently did not send the SVOC samples in SDGs JC43995 and JC44223 to GEL laboratories for Method 522-SIM analysis (as requested on the chain-of-custody).

ANALYTICAL DATA PACKAGE DOCUMENTATION

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

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

Note:
QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 method 8260C, EPA 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.
SW-846 8260C			

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 JC43284 or JC44223.

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 for SDGs JC43655 or JC43995.

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

Sample Locations	Analytes	Sample Result	Qualification
SDG JC43943: BPOW 6-2	TIC: Tetrahydrofuran (RT 10.48) (TB, MB)	Detected sample results less than 5 times blank result	R

Note:

RL Reporting limit

3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. 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 was not performed on a sample location associated with SDGs JC43284, JC43655, JC43943, JC43995 or JC44223.

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 JC43284, JC43655, JC43943 and JC44223.

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

Sample Locations	Compound	LCS Recovery
SDG JC43995: BPOW 6-3 TB052317AD1 BPOW 6-4	Freon 113	>UL

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

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

6. Field Duplicate Analysis

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

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC43284: BPOW 5-5/ REP05117AR1	All compounds	U	U	AC

Notes:

AC = Acceptable

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

A field duplicate was not collected with a sample location associated with SDGs JC43655, JC43943, JC43995 or JC44223.

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 was not performed on a sample location associated with SDGs JC43284, JC43655, JC43943, JC43995 or JC44223.

8. System Performance and Overall Assessment

Tentatively identified compounds (TICs) were identified in sample location TB051717AR1, BPOW 6-2, TB052217AD1 and TB052317AD1. The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. TICs are qualified as estimated (JN).

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

DATA VALIDATION CHECKLIST FOR VOCs

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

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

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

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 associated with SDGs JC43284, JC43655 or JC43943.

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 SDGs JC43284, JC43655, and JC43943.

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 JC43284, JC43655 or JC43943.

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 JC43284, JC43655, and JC43943.

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.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC43284: BPOW 5-5/ REP05117AR1	1,4-Dioxane	1.34	1.39	AC

Notes:

AC = Acceptable

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

A field duplicate was not collected with a sample location associated with the SDGs JC43655 or JC43943.

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		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: July 17, 2017

PEER REVIEW: Todd Church

DATE: July 18, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

GW
WTB

CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST LABORATORIES

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

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43284

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): Allyson Redzepagic 212-365-4654 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Na2S2O3	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 5-5		5/11/2017	1305	AD	GW	5	3								2	3	2			SUB V963
2	BPOW 5-6		5/11/2017	1315	AR	GW	5	3								2	3	2			
3	REPOS1117AR1		5/11/2017	—	AR	GW	5	3								2	3	2			
4	TBOS1117AR1		5/11/2017	9:00	—	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*

Approved By (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

OU2 Hydro
INITIAL ASESSMENT
LABEL VERIFICATION

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5/11/17 4:45pm	Chris Laul 5/12/17 8:33	Chris Laul	5/12/17 1835	
2						
3						
4						
5						

Custody Seal # | Intact / Not Intact | Preserved where applicable | On Ice | Cooler Temp. 2.1 °C IR

5.1 5

JC43284: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC43284-1	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133198.D	1	05/20/17 03:23	JP	n/a	n/a	V2E5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC43284-1	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC43284-2	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133199.D	1	05/20/17 03:50	JP	n/a	n/a	V2E5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC43284-2	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	91%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID:	REP051117AR1		
Lab Sample ID:	JC43284-3	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133200.D	1	05/20/17 04:17	JP	n/a	n/a	V2E5826
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	REP051117AR1		
Lab Sample ID:	JC43284-3	**Date Sampled:**	05/11/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID: TB051117AR1
Lab Sample ID: JC43284-4
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/11/17
Date Received: 05/12/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133180.D	1	05/19/17 19:13	JP	n/a	n/a	V2E5825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB051117AR1		
Lab Sample ID:	JC43284-4	**Date Sampled:**	05/11/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		76-120%
17060-07-0	1,2-Dichloroethane-D4	91%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

SGS ACCUTEST

CHAIN OF CUSTODY 423207

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 # JC43284X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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	SB522SIM14DIOX , 1,4-Dioxane via EPA 522 (Low PQL required).
1X	BPOW 5-5		5/11/17	1:05:00 PM	AD	AQ	2								2	X
2X	BPOW 5-6		5/11/17	1:15:00 PM	AD	AQ	2								2	X
3X	REP051117AR1		5/11/17	12:00:00 AM	AD	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)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/2/2017

21 day std GEL TAT

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

2 bottles per sample w/NA2HSO4 preservative.

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

Relinquished by Sampler: 1	Date Time: 5-15-17 1100	Received By: 1 FEDEX	Relinquished By: 2	Date Time:	Received By: 2 5/16/17 9:20
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 # 634 634	[ ] 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: JC43284X GEL Work Order: 423201

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: 02 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43284X**	**Date Collected:**	**05/11/2017 13:05**	**Matrix:**	**WATER**
Lab Sample ID:	**423201001**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 15:50**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1911.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.34	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43284X**	**Date Collected:**	**05/11/2017 13:15**	**Matrix:**	**WATER**
Lab Sample ID:	**423201002**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 16:15**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1912.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.129	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43284X**	**Date Collected:**	**05/11/2017 12:00**	**Matrix:**	**WATER**
Lab Sample ID:	**423201003**	**Date Received:**	**05/16/2017 09:20**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**REP051117AR1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1665630**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**05/19/2017 16:41**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**05/19/2017 11:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s051917.B\s6e1913.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.39	ug/L	0.100	0.100	0.200

ACCUTEST LABORATORIES

GW
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43655

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): Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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:

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	Lab Use Only	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	TBROW 5-1		5/17/2017	13:55	SD	GW	5	3							2		3	2			SUB
2	TBROW 5-2		5/17/2017	1405	AR	GW	5	3							2		3	2			V1030
3	TB05171TAR-1		5/17/2017	9:00	—	TB	2	2									2				

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASSESSMENT ZA 5/18
LABEL VERIFICATION JK

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro

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

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		5/17/17 1544	1	2	5-18-17 1020	2
3		5/18/17 1120	3	4		4
5			5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp.

03.7 EP

5.1.5

JC43655: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC43655-1	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109692.D	1	05/26/17 04:28	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC43655-1	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC43655-2	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109693.D	1	05/26/17 04:59	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-2		
Lab Sample ID:	JC43655-2	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

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:	TB051717AR1		
Lab Sample ID:	JC43655-3	**Date Sampled:**	05/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109694.D	1	05/26/17 05:30	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB051717AR1		
Lab Sample ID:	JC43655-3	**Date Sampled:**	05/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.49	1.3	ug/l	JN
	Total TIC, Volatile		1.3	ug/l	J N

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

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

SGS ACCUTEST

CHAIN OF CUSTODY

423720

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: JC43655X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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 , 1,4-Dioxane via EPA522, low PQL Required.

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 Required.	LAB USE ONLY
1X	BPOW 5-1		5/17/17	1:55:00 PM	AR	AQ	2									2	X	
2X	BPOW 5-2		5/17/17	2:05:00 PM	AR	AQ	2									2	X	

Number of preserved Bottles

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/8/2017

15 business day GEL TAT

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

2 bottles per sample with NaHSO4

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

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		5-19-17 1700	FEDEX	2	5-20-17 8:55	
3				4		
5						

Custody Seal # 649 & 650 [ ] 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: JC43655X GEL Work Order: 423720

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: 08 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43655X**	**Date Collected:**	**05/17/2017 13:55**	**Matrix:**	**WATER**
Lab Sample ID:	**423720001**	**Date Received:**	**05/20/2017 08:55**		
Client Sample:	**1X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1667329**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/06/2017 15:42**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/06/2017 09:22**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060617.B\s6f0606.D**		**RTX-624**		

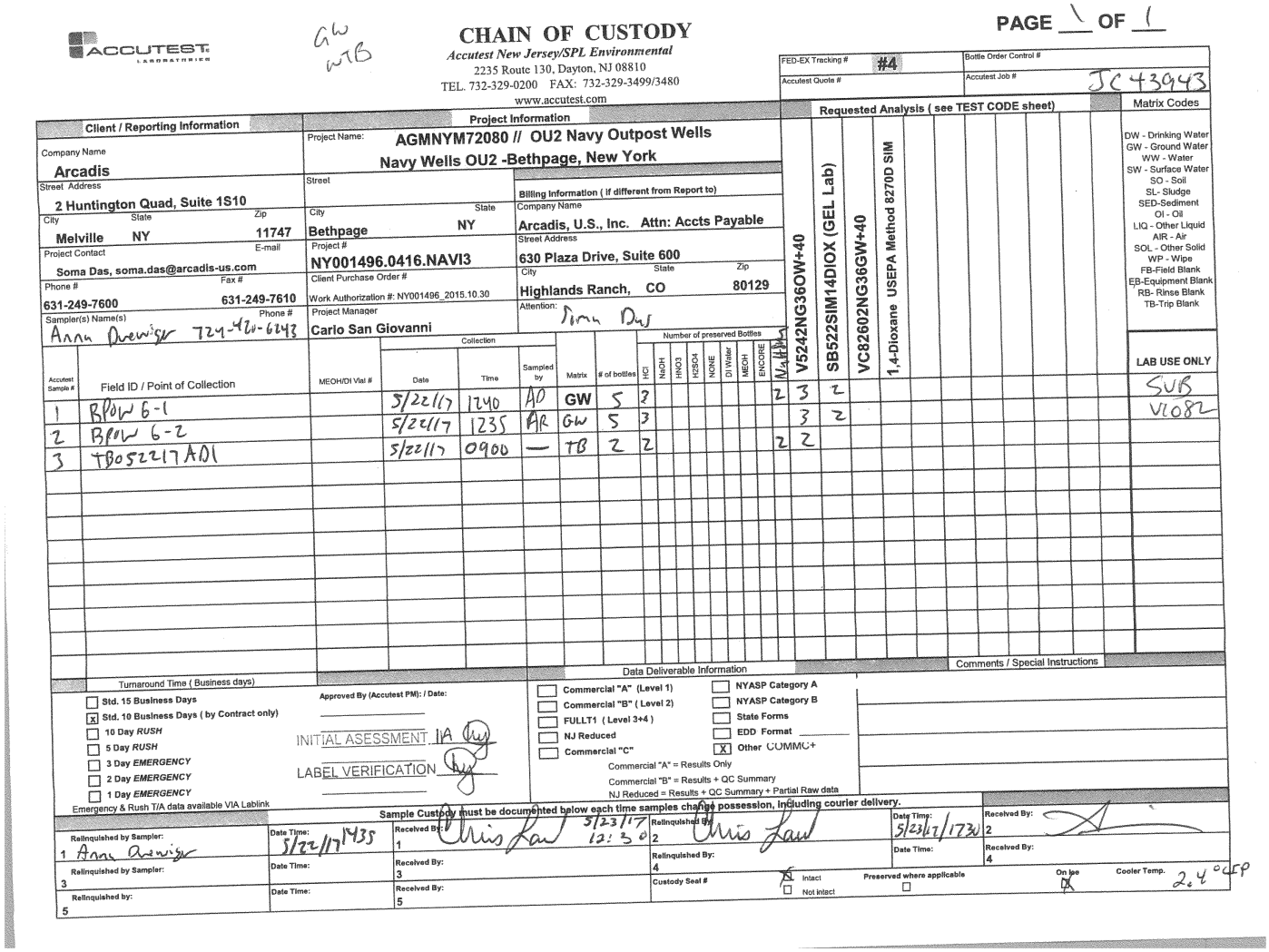
CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	U	0.100	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC43655X**	**Date Collected:**	**05/17/2017 14:05**	**Matrix:**	**WATER**
Lab Sample ID:	**423720002**	**Date Received:**	**05/20/2017 08:55**		
Client Sample:	**2X**	**Client:**	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 5-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1667329**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/06/2017 16:07**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/06/2017 09:22**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060617.B\s6f0607.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
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 # JC43943

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) / Phone #: Anna Drewniak 724-420-6243

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #
Work Authorization #: NY001496_2015.10.30
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: Anna Dw

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	NaHSO4	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 6-1		5/22/17	1240	AD	GW	5	3								2	3	2			SUB
2	BPOW 6-2		5/22/17	1235	AR	GW	5	3									3	2			VL082
3	TB052217AD1		5/22/17	0900	—	TB	2	2								2	2				

Matrix Codes

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

INITIAL ASESSMENT: IA
LABEL VERIFICATION:

Data Deliverable Information

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

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

Comments / Special Instructions

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

1 Relinquished by Sampler: Anna Drewniak	Date Time: 5/22/17 1435	Received By: 1 Chris Law	5/23/17 12:30	Relinquished By: 2 Chris Law	Date Time: 5/23/17 1730	Received By: 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 #	[X] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [X] Cooler Temp. 2.4 °C/D

5.1
5

Report of Analysis

Client Sample ID:	BPOW 6-1		
Lab Sample ID:	JC43943-1	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109653.D	1	05/25/17 05:42	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-1		
Lab Sample ID:	JC43943-1	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	BPOW 6-2		
Lab Sample ID:	JC43943-2	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109654.D	1	05/25/17 06:14	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-2		
Lab Sample ID:	JC43943-2	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	~~10.48~~	~~1.3~~	~~ug/l~~	~~JNB~~ R
	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:	TB052217AD1		
Lab Sample ID:	JC43943-3	**Date Sampled:**	05/22/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109655.D	1	05/25/17 06:46	BK	n/a	n/a	V1B5217
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB052217AD1		
Lab Sample ID:	JC43943-3	**Date Sampled:**	05/22/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/23/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.48	1.3	ug/l	JNB
	Total TIC, Volatile		~~0~~ 1.3	ug/l	JN

(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

424039

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 # JC43943X

Client / Reporting Information

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

Project Information

Project Name: Navy Wells, OU2, 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	SB522SIM14DIOX , 1,4-Dioxane via EPA 522, Low PQL required
1X	BPOW 6-1		5/22/17	12:40:00 PM	AD	AQ	2								2	X
2X	BPOW 6-2		5/22/17	12:35:00 PM	AD	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 Due 6/13/2017

STD GEL TAT

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

2 bottles per sample preserved with NaHSO4

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

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

Relinquished by Sampler: 1	Date Time: 5-24-17 1700	Received By: 1 FEDEX	Relinquished By: 2	Date Time:	Received By: 2 5/25/17 9:10
Relinquished by Sampler: 3	Date Time:	Received By: 3 5/25/17	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 502 [ ] 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: 424039 GEL Work Order: 424039

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 JUN 2017 **Title: Data Validator**

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**424039**	**Date Collected:**	**05/22/2017 12:40**	**Matrix:**	**WATER**
Lab Sample ID:	**424039001**	**Date Received:**	**05/25/2017 09:10**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1671313**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/08/2017 22:00**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/08/2017 08:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060817.B\s6f0813.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:	**424039**	**Date Collected:**	**05/22/2017 12:35**	**Matrix:**	**WATER**
Lab Sample ID:	**424039002**	**Date Received:**	**05/25/2017 09:10**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1671313**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**06/08/2017 22:48**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/08/2017 08:30**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s060817.B\s6f0815.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
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 # JC43995

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): Aron Drewniak Phone #: 724-420-6243

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 6-3		5/23/17	1135	AD	GW	5	3							2	3	2			SUB
2	TBOS23/17A01		5/23/17	0900	—	TB	2	2								2				V1092
3	BPOW 6-4		5/23/17	1250	JB	GW	5	3							2	3	2			

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASSESSMENT 3B(A)
LABEL VERIFICATION DS

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	5/23/17 1450	1 Chris Law 5/24/17 12:25	2 Chris Law	5/24/17 1750	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[X] Intact [ ] Not Intact	Preserved where applicable [ ]

On Ice [X] Cooler Temp. 2.2°C IP

5.1.5

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC43995-1	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109729.D	1	05/27/17 20:54	BK	n/a	n/a	V1B5221
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113 [b]	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC43995-1	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

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:	TB052317AD1		
Lab Sample ID:	JC43995-2	**Date Sampled:**	05/23/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109730.D	1	05/27/17 21:26	BK	n/a	n/a	V1B5221
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113 [b]	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB052317AD1		
Lab Sample ID:	JC43995-2	**Date Sampled:**	05/23/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	97%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
109-99-9	Furan, tetrahydro-	10.47	1.3	ug/l	JN
	Total TIC, Volatile		1.3	ug/l	J N

(a) EPA 524.2 is not a certified method for non-potable water samples.
(b) This compound in BS is outside in house QC limits bias high.

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

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC43995-3	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109731.D	1	05/27/17 21:58	BK	n/a	n/a	V1B5221
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113 [b]	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC43995-3	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%

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

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 # JC44223

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #: 212-365-4651

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

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

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	5035/SUB	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	BPOW 6-5		5/25/17	1235	JB	GW	5	3								2	3	2			SUB
2	BPOW 6-6		5/25/17	1230	AK	GW	5	3								2	3	2			V1125
3	TB052517AR1		5/25/17	9:00	—	TB	2	2									2				

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASESSMENT 3A Sum
LABEL VERIFICATION DB

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 Albina Redzepagic	5/25/2017 14:05	1 Chris Lord	2 Chris Lord 5/26/17 9:35	5/26/17 1735	2
3		3	4		4
5		5	Custody Seal # 64 Intact / Not intact	Preserved where applicable	On Ice ☒ Cooler Temp. 1.3°C

5.1.5

Report of Analysis

Client Sample ID:	BPOW6-5		
Lab Sample ID:	JC44223-1	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109815.D	1	06/02/17 17:37	BK	n/a	n/a	V1B5227
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	JC44223-1	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

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:	JC44223-2	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109816.D	1	06/02/17 18:09	BK	n/a	n/a	V1B5227
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	JC44223-2	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	96%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

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:	TB052517AR1		
Lab Sample ID:	JC44223-3	**Date Sampled:**	05/25/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109817.D	1	06/02/17 18:41	BK	n/a	n/a	V1B5227
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB052517AR1		
Lab Sample ID:	JC44223-3	**Date Sampled:**	05/25/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/26/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

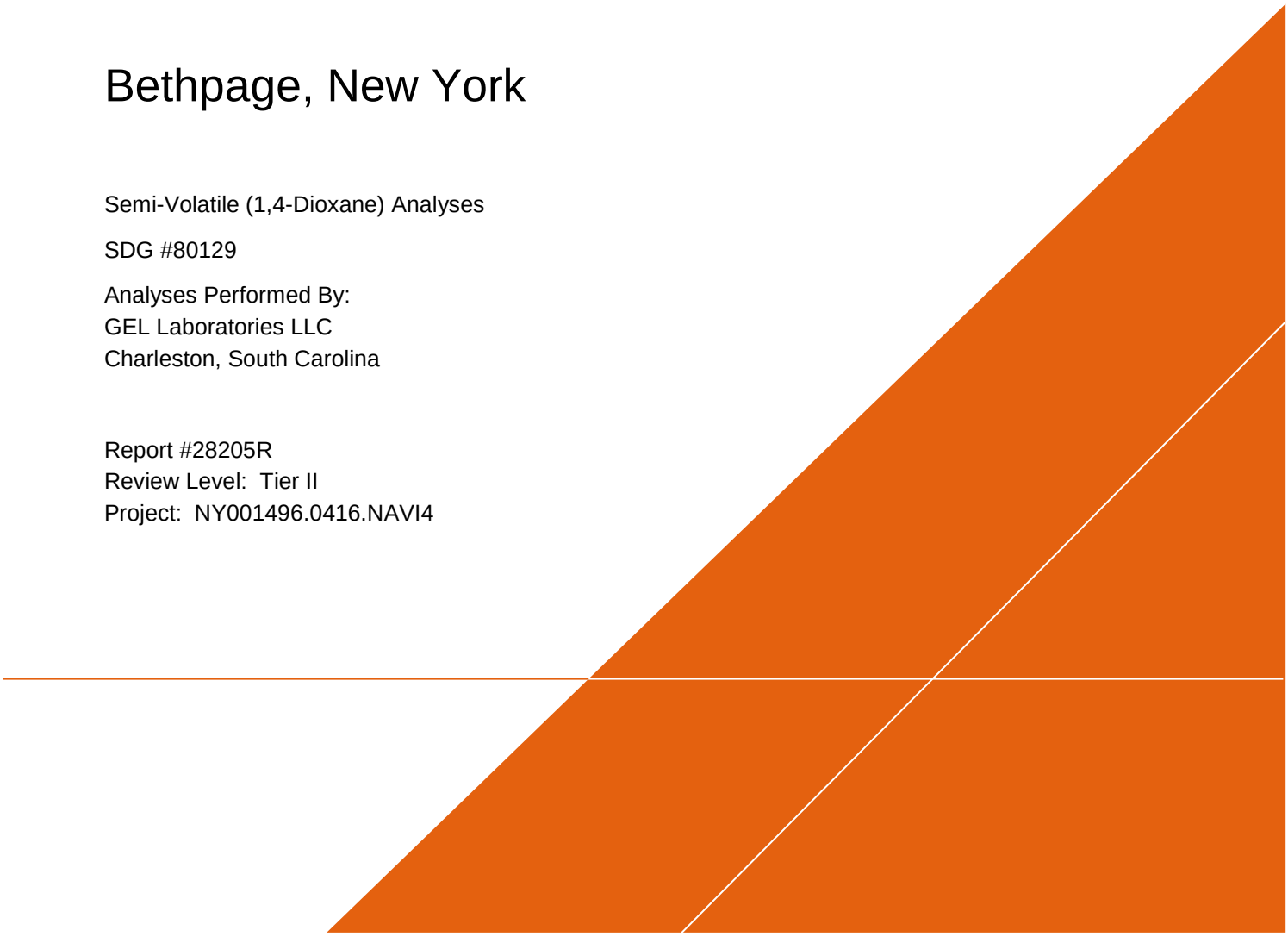
Bethpage, New York

Semi-Volatile (1,4-Dioxane) Analyses

SDG #80129

Analyses Performed By:
GEL Laboratories LLC
Charleston, South Carolina

Report #28205R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #80129 samples collected in association with the Navy Wells at the 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
80129 (Work order 428460)	BPOW 6-3	428460001	Water	07/20/2017			X			
	BPOW 6-4	428460002	Water	07/20/2017			X			
	BPOW 6-5	428460003	Water	07/20/2017			X			
	BPOW 6-6	428460004	Water	07/20/2017			X			

Note:

1. The samples contained in this SDG are associated with the samples presented in SGS-Accutest data packages, SDGs: JC43995 and JC44223.

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) Method 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.

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.

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

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

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 15, 2017

PEER REVIEW: Todd Church

DATE: August 16, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

428460

ACCUTEST LABORATORIES

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 #

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Prezorski Phone #: 516-297-6247

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Na2S2O3	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
	BPOW G-3		7-20-17	1127	AD	GW	2									2		2		
	BPOW G-4		7-20-17	1125	AD	GW	2									2		2		
	BPOW G-5		7-20-17	1520	AD	GW	2									2		2		
	BPOW G-6		7-20-17	1512	AD	GW	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

LAB USE ONLY

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)
- [ ] 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

1 Week TAT OU2 Hydro
Bill to: Accutest Labs, Dayton, NJ
Attn: Jake Crook

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

1 Relinquished by Sampler:	Date Time: 7/20/17 1845	Received By: 1	7/21/17 9:00	Relinquished By:	Date Time: / Received By: 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 #	[ ] Intact [ ] Not intact / Preserved where applicable [ ] / On Ice [ ] / Cooler Temp.

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ACTL	SDG/AR/COC/Work Order: 428460
Received By: Stacy Boone	Date Received: 21-JULY-17
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 8101 2201 5621

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?		✓	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry Ice None Other: *all temperatures are recorded in Celsius TEMP: 1 C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes No___ N/A (If unknown, select No) VOA vials free of headspace? Yes No___ N/A Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 7/21/17 Page 1 of 1

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 80129 GEL Work Order: 428460

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: 26 JUL 2017 **Title: Data Validator**

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 11:27**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460001**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/25/2017 17:18**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2509.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

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 11:25**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460002**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/25/2017 17:43**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2510.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.104	ug/L	0.100	0.100	0.200

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 15:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460003**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/26/2017 05:56**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2539.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

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 15:12**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460004**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/26/2017 06:20**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2540.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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

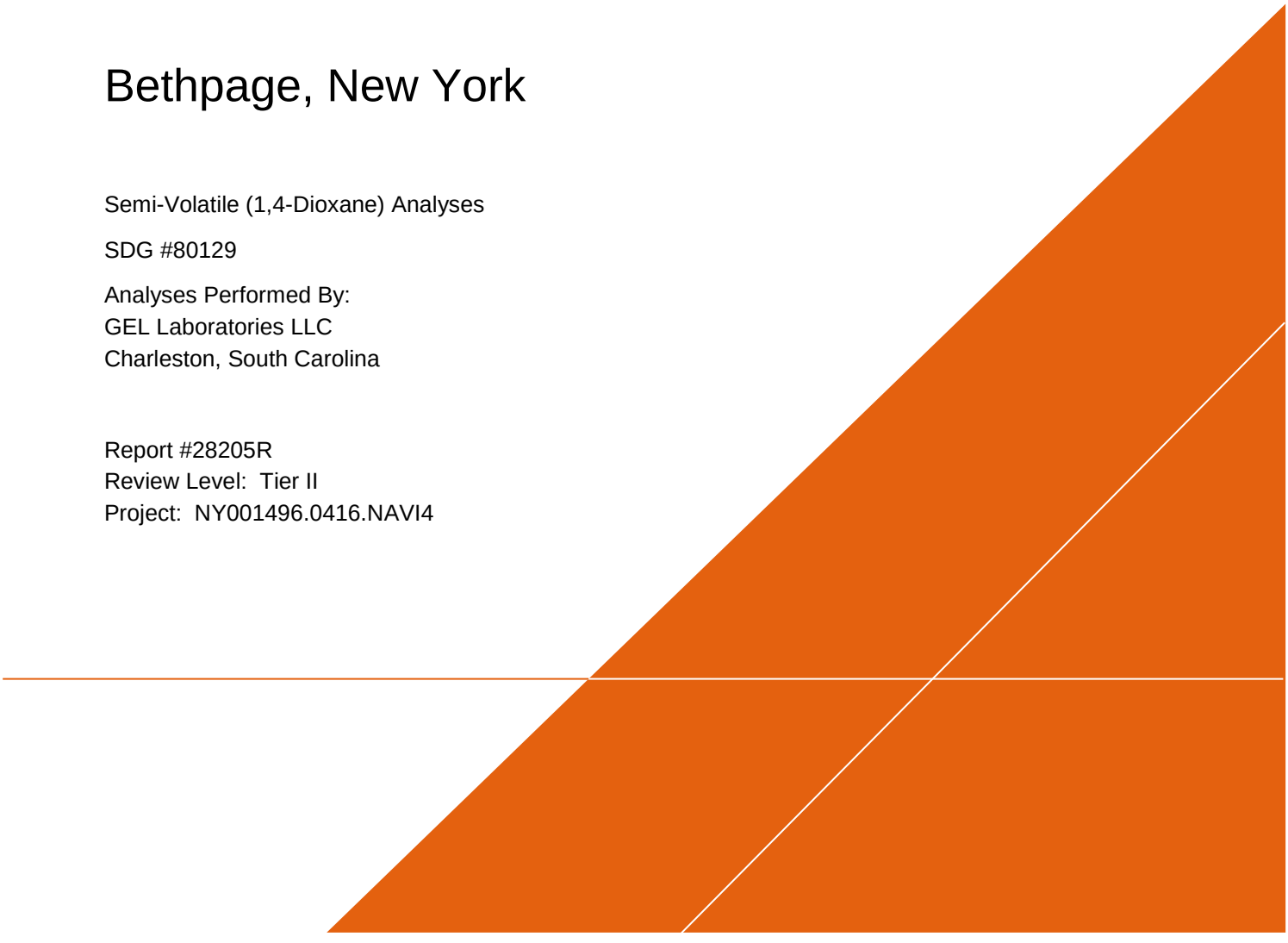
Bethpage, New York

Semi-Volatile (1,4-Dioxane) Analyses

SDG #80129

Analyses Performed By:
GEL Laboratories LLC
Charleston, South Carolina

Report #28205R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #80129 samples collected in association with the Navy Wells at the 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
80129 (Work order 428460)	BPOW 6-3	428460001	Water	07/20/2017			X			
	BPOW 6-4	428460002	Water	07/20/2017			X			
	BPOW 6-5	428460003	Water	07/20/2017			X			
	BPOW 6-6	428460004	Water	07/20/2017			X			

Note:

1. The samples contained in this SDG are associated with the samples presented in SGS-Accutest data packages, SDGs: JC43995 and JC44223.

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) Method 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.

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.

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

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

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 15, 2017

PEER REVIEW: Todd Church

DATE: August 16, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

428460

ACCUTEST LABORATORIES

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 #

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Pat Prezorski Phone #: 516-297-6247

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Na2S2O3	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
	BPOW G-3		7-20-17	1127	AD	GW	2									2		2		
	BPOW G-4		7-20-17	1125	AD	GW	2									2		2		
	BPOW G-5		7-20-17	1520	AD	GW	2									2		2		
	BPOW G-6		7-20-17	1512	AD	GW	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

LAB USE ONLY

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)
- [ ] 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

1 Week TAT OU2 Hydro
Bill to: Accutest Labs, Dayton, NJ
Attn: Jake Crook

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

1 Relinquished by Sampler:	Date Time: 7/20/17 1845	Received By: 1	7/21/17 9:00	Relinquished By:	Date Time: / Received By: 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 #	[ ] Intact [ ] Not intact / Preserved where applicable [ ] / On Ice [ ] / Cooler Temp.

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ACTL	SDG/AR/COC/Work Order: 428460
Received By: Stacy Boone	Date Received: 21-JULY-17
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 8101 2201 5621

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?		✓	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry Ice None Other: *all temperatures are recorded in Celsius TEMP: 1 C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes No___ N/A (If unknown, select No) VOA vials free of headspace? Yes No___ N/A Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 7/21/17 Page 1 of 1

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

ACTL003 SGS Accutest

Client SDG: 80129 GEL Work Order: 428460

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: 26 JUL 2017 **Title: Data Validator**

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 11:27**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460001**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/25/2017 17:18**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2509.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

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 11:25**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460002**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/25/2017 17:43**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2510.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.104	ug/L	0.100	0.100	0.200

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 15:20**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460003**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/26/2017 05:56**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2539.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

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**80129**	**Date Collected:**	**07/20/2017 15:12**	**Matrix:**	**GROUND WATER**
Lab Sample ID:	**428460004**	**Date Received:**	**07/21/2017 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW 6-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1684773**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/26/2017 06:20**	**Analyst:**	**LOF**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/25/2017 09:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s072517.B\s6g2540.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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

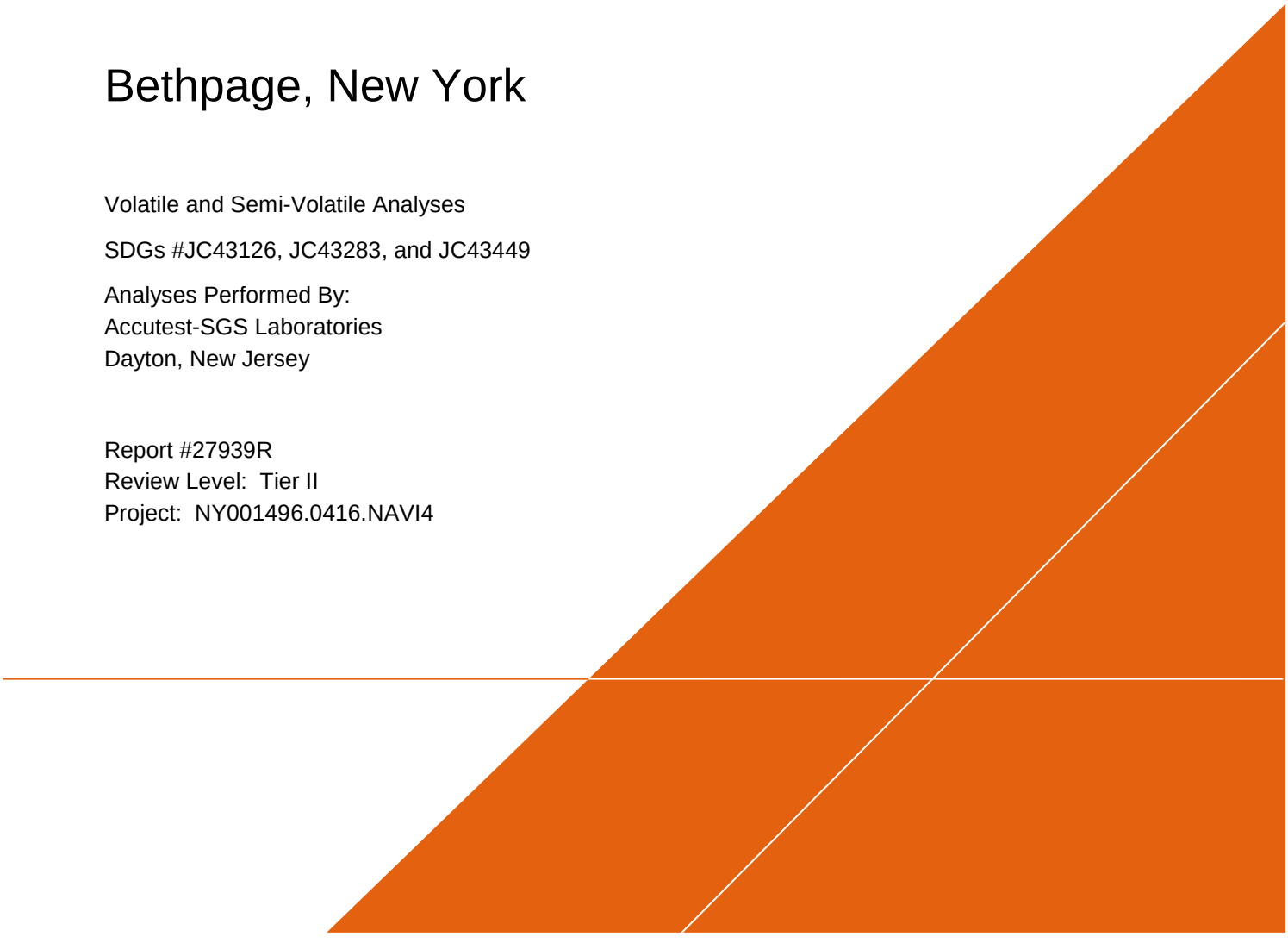
Bethpage, New York

Volatile and Semi-Volatile Analyses

SDGs #JC43126, JC43283, and JC43449

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

Report #27939R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC43126, JC43283, and JC43449 for samples collected in association with the Navy Wells located at the Bethpage, New York 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
JC43126	RE-107D1	JC43126-1	Water	05/10/2017		X	X			
	TB051017AD1	JC43126-2	Water	05/10/2017		X				
	FB051017AD1	JC43126-3	Water	05/10/2017		X	X			
	RE-107D2	JC43126-4	Water	05/10/2017		X	X			
JC43283	RE107D3	JC43283-1	Water	05/12/2017		X	X			
	FB051217AD1	JC43283-2	Water	05/12/2017		X	X			
	TB051217AD1	JC43283-3	Water	05/12/2017		X				
JC43449	RE114D1	JC43449-1	Water	05/16/2017		X	X			
	FB051517AD1	JC43449-2	Water	05/16/2017		X	X			
	RE114D2	JC43449-3	Water	05/16/2017		X	X			
	TB051517AD1	JC43449-4	Water	05/16/2017		X				
	REP051517AD1	JC43449-5	Water	05/16/2017		X	X			

Note:

1. Matrix spike (MS) analysis was performed on sample location RE-107D2 for VOC analysis (Trichloroethene only).

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 8260C and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	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 JC43126, JC43283, and JC43449.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

The MS exhibited acceptable recoveries in SDG JC43126 (associated with diluted Trichloroethene result only).

A MS/MSD was not performed on a sample location associated with SDGs JC43283 or JC43449.

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 JC43283: RE107D3 FB051217AD1 TB051217AD1	Vinyl chloride	>UL

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

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

All compounds associated with the LCS analysis exhibited recoveries within the control limits in SDGs JC43126 and JC43449.

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 JC43449: RE114D1/ REP0501517AD1	Carbon tetrachloride	2.0	1.4	AC
	Chloroform	2.3	2.2	AC
	1,1-Dichloroethane	1.2	1.1	AC
	1,1-Dichloroethene	3.5	2.9	AC
	cis-1,2-Dichloroethene	4.7	4.4	AC
	Freon 113	13.9	5.5	AC
	1,1,1-Trichloroethane	0.36 J	0.36 J	AC
	1,1,2-Trichloroethane	1.3	1.4	AC
	Trichloroethene	415	390	6.2%

Notes:

AC = Acceptable

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

A field duplicate was not collected with a sample location associated with SDGs JC43126 or JC43283.

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 was performed on sample location RE114D2 (SDG JC43449); the laboratory duplicate exhibited acceptable RPD.

A laboratory duplicate was not performed on a sample location associated SDGs JC43126 and JC43283.

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: SW-846 8260C	.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		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8270D-SIM	Water	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination with any 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 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 was not performed on a sample location associated with SDGs JC43126, JC43283 or JC43449.

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 all SDGs.

6. Field Duplicate Analysis

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

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC43449: RE114D1/ REP0501517AD1	1,1-Dioxane	4.17	4.56	8.9%

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 JC43126 or JC43283.

7. System Performance and Overall Assessment

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
SDG JC43126	RE-107D2	Trichloroethene	--	194 D	194 D
SDG JC43449	RE114D1	Trichloroethene	--	415 D	415 D
	REP051517AD1	Trichloroethene	--	390 D	390 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

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

DATA VALIDATION CHECKLIST FOR SVOCs

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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: July 19, 2017

PEER REVIEW: Todd Church

DATE: July 19, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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 # JC43126

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Anna Dworzyk Phone #: 724-926-6043

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street: Cretcut Place
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-10701		5/10/17	1355	AD	GW	5	3										3	2	
2	TB051017AD1		5/10/17	900	—	TB	2	2										2		
3	FB051017AD1		5/10/17	1040	AD	FB	5	3										3	2	E26
4	RE-10702		5/10/17	1423	PP	GW	5	3										3	2	V040

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

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

Comments / Special Instructions

OU2 Hydro

INITIAL ASSESSMENT RF 24
LABEL VERIFICATION TRL

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	Anna Dworzyk	5/10/17 4:30pm	1	2		2
3		5/11/17 1040	3	4	5-11-17 1544	
5			5			

Custody Seal # — Intact / Not intact — Preserved where applicable — On Ice — Cooler Temp: 03.3 039

5.1.5

Report of Analysis

Client Sample ID: RE-107D1
Lab Sample ID: JC43126-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/10/17
Date Received: 05/11/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B71300.D	1	05/16/17 23:26	HT	n/a	n/a	V4B2931
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	1.0	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE-107D1		
Lab Sample ID:	JC43126-1	**Date Sampled:**	05/10/17
Matrix:	AQ - Ground Water	**Date Received:**	05/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	15.2	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	113%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

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

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

Report of Analysis

Client Sample ID: RE-107D1
Lab Sample ID: JC43126-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/10/17
Date Received: 05/11/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P59747.D	1	05/19/17 06:25	JJ	05/17/17	OP2896A	E3P2801
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	4.33	0.11	0.054	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		29-124%
321-60-8	2-Fluorobiphenyl	46%		23-122%
1718-51-0	Terphenyl-d14	62%		22-130%

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: TB051017AD1
Lab Sample ID: JC43126-2
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/10/17
Date Received: 05/11/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B71297.D	1	05/16/17 22:02	HT	n/a	n/a	V4B2931
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB051017AD1		
Lab Sample ID:	JC43126-2	**Date Sampled:**	05/10/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	112%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

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

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

Report of Analysis

Client Sample ID:	FB051017AD1		
Lab Sample ID:	JC43126-3	**Date Sampled:**	05/10/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B71299.D	1	05/16/17 22:59	HT	n/a	n/a	V4B2931
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	FB051017AD1		
Lab Sample ID:	JC43126-3	**Date Sampled:**	05/10/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	113%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	105%		78-117%

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

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

Report of Analysis

Client Sample ID: FB051017AD1
Lab Sample ID: JC43126-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/10/17
Date Received: 05/11/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P59748.D	1	05/19/17 06:56	JJ	05/17/17	OP2896A	E3P2801
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		29-124%
321-60-8	2-Fluorobiphenyl	57%		23-122%
1718-51-0	Terphenyl-d14	67%		22-130%

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

Report of Analysis

Client Sample ID:	RE-107D2		
Lab Sample ID:	JC43126-4	**Date Sampled:**	05/10/17
Matrix:	AQ - Ground Water	**Date Received:**	05/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B71298.D	1	05/16/17 22:30	HT	n/a	n/a	V4B2931
Run #2	4B71317.D	5	05/17/17 12:58	HT	n/a	n/a	V4B2932

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.35	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	0.30	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.80	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	4.1	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	34.9	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	8.6	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE-107D2		
Lab Sample ID:	JC43126-4	**Date Sampled:**	05/10/17
Matrix:	AQ - Ground Water	**Date Received:**	05/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	194 [a]	5.0	1.3	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	112%	108%	73-122%
2037-26-5	Toluene-D8	100%	99%	84-119%
460-00-4	4-Bromofluorobenzene	104%	104%	78-117%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID: RE-107D2
Lab Sample ID: JC43126-4
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/10/17
Date Received: 05/11/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M94990.D	1	05/25/17 13:18	AN	05/17/17	OP2896A	E2M4211
Run #2	3P59749.D	1	05/19/17 07:27	JJ	05/17/17	OP2896A	E3P2801

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	9.58	1.1	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%	59%	29-124%
321-60-8	2-Fluorobiphenyl	59%	44%	23-122%
1718-51-0	Terphenyl-d14	70%	54%	22-130%

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

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43283

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): Anna Dwojak Phone #

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-10703		5/12/17	1245	AD	GW	5	3										3	2	SUB
2	FB051217 AD1		5/12/17	935	AD	FB	5	3										3	2	V963
3	TB051217 AD1		5/12/17	900	—	TB	2	2										2		

Matrix Codes

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASESSMENT ZB-TH
LABEL VERIFICATION JL

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

Relinquished by Sampler: 1 Anna Dwojak	Date Time: 5/12/17 13:40	Received By: 1 Chris Land	Relinquished By: 2 Chris Land 5/12/17 13:40	Date Time: 5/12/17 1830	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 #	[x] Intact [ ] Not Intact	Preserved where applicable [ ] On Ice [x] Cooler Temp. 2.4 °C IR

5.1 5

JC43283: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE107D3		
Lab Sample ID:	JC43283-1	**Date Sampled:**	05/12/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133153.D	1	05/19/17 03:52	JP	n/a	n/a	V2E5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	4.5	5.0	1.2	ug/l	J
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	0.40	1.0	0.23	ug/l	J
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE107D3		
Lab Sample ID:	JC43283-1	**Date Sampled:**	05/12/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	0.27	1.0	0.26	ug/l	J
75-01-4	Vinyl chloride [a]	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

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

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

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

Report of Analysis

Client Sample ID:	RE107D3		
Lab Sample ID:	JC43283-1	**Date Sampled:**	05/12/17
Matrix:	AQ - Ground Water	**Date Received:**	05/12/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P59894.D	1	05/25/17 12:12	KM	05/18/17	OP2948A	E3P2809
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.097	0.047	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		29-124%
321-60-8	2-Fluorobiphenyl	67%		23-122%
1718-51-0	Terphenyl-d14	76%		22-130%

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:	FB051217AD1		
Lab Sample ID:	JC43283-2	**Date Sampled:**	05/12/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133151.D	1	05/19/17 02:58	JP	n/a	n/a	V2E5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB051217AD1		
Lab Sample ID:	JC43283-2	**Date Sampled:**	05/12/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

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

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

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

Report of Analysis

Client Sample ID:	FB051217AD1		
Lab Sample ID:	JC43283-2	**Date Sampled:**	05/12/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/12/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3P59967.D	1	05/30/17 21:48	KM	05/26/17	OP3213A	E3P2811
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		29-124%
321-60-8	2-Fluorobiphenyl	63%		23-122%
1718-51-0	Terphenyl-d14	74%		22-130%

(a) Sample extracted outside the holding time due to login error.

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:	TB051217AD1		
Lab Sample ID:	JC43283-3	**Date Sampled:**	05/12/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133152.D	1	05/19/17 03:25	JP	n/a	n/a	V2E5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB051217AD1		
Lab Sample ID:	JC43283-3	**Date Sampled:**	05/12/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/12/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	104%		78-117%

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

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

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

GW
FB
TB

CHAIN OF CUSTODY

PAGE 1 OF 1

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

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43449

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): Anna Dweniger Phone #: 724-426-6647

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

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

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE-114D1		5/15/17	1405	PP	GW	5	3				2						3	2	E39
2	FB051517AD1		5/15/17	1110	AD	FB	5	3				2						3	2	V994
3	RE-114D2		5/15/17	1400	AD	GW	15	9				6						9	6	
4	TB051517AD1		5/15/17	0900	—	TB	2	2										2		
5	REP051517AD1		5/15/17	—	—	GW	5	3				2						3	2	

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
~~INITIAL ASSESSMENT~~ 5/16/17
~~LABEL VERIFICATION~~ JK

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
Please use RE-114D2 triple volume as a QA/QC MS/MSD sample

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	5/15/17 2100	1	5/16/17 1100	2	5/16/17 1710
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp
5		5	[x] Intact [ ] Not intact	[ ]	[x] 1.0°, 1.0°, 2.0°, 1.6°C

5.1 5

JC43449: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE114D1		
Lab Sample ID:	JC43449-1	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291064.D	1	05/25/17 17:14	JC	n/a	n/a	VL8142
Run #2	L291055.D	10	05/25/17 13:07	JC	n/a	n/a	VL8142

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	2.0	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	2.3	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	1.2	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	3.5	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.7	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	13.9	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.36	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	1.3	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	RE114D1		
Lab Sample ID:	JC43449-1	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	415	10	2.6	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	101%	76-120%
17060-07-0	1,2-Dichloroethane-D4	99%	98%	73-122%
2037-26-5	Toluene-D8	94%	96%	84-119%
460-00-4	4-Bromofluorobenzene	100%	98%	78-117%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID: RE114D1
Lab Sample ID: JC43449-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/15/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69455.D	1	05/23/17 17:33	KM	05/22/17	OP3023A	E3M3277
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	4.17	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		29-124%
321-60-8	2-Fluorobiphenyl	81%		23-122%
1718-51-0	Terphenyl-d14	96%		22-130%

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:	FB051517AD1		
Lab Sample ID:	JC43449-2	**Date Sampled:**	05/15/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291071.D	1	05/25/17 20:01	JC	n/a	n/a	VL8143
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB051517AD1		
Lab Sample ID:	JC43449-2	**Date Sampled:**	05/15/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	98%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID: FB051517AD1
Lab Sample ID: JC43449-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/15/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69456.D	1	05/23/17 18:37	KM	05/22/17	OP3023A	E3M3277
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		29-124%
321-60-8	2-Fluorobiphenyl	84%		23-122%
1718-51-0	Terphenyl-d14	113%		22-130%

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:	RE114D2		
Lab Sample ID:	JC43449-3	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291051.D	1	05/25/17 11:14	JC	n/a	n/a	VL8142
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.39	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	0.49	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.89	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	0.95	1.0	0.31	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	6.7	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	0.34	1.0	0.28	ug/l	J

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

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

Report of Analysis

Client Sample ID:	RE114D2		
Lab Sample ID:	JC43449-3	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	67.0	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	96%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	95%		78-117%

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

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

Report of Analysis

Client Sample ID: RE114D2
Lab Sample ID: JC43449-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/15/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69457.D	1	05/23/17 19:09	KM	05/22/17	OP3023A	E3M3277
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	2.34	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		29-124%
321-60-8	2-Fluorobiphenyl	74%		23-122%
1718-51-0	Terphenyl-d14	99%		22-130%

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: TB051517AD1
Lab Sample ID: JC43449-4
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/15/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291072.D	1	05/25/17 20:28	JC	n/a	n/a	VL8143
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB051517AD1		
Lab Sample ID:	JC43449-4	**Date Sampled:**	05/15/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

Report of Analysis

Client Sample ID:	REP051517AD1		
Lab Sample ID:	JC43449-5	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C149946.D	1	05/26/17 18:23	HT	n/a	n/a	V2C6656
Run #2	2C149947.D	10	05/26/17 18:52	HT	n/a	n/a	V2C6656

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	1.4	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	2.2	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	1.1	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	2.9	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.4	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	5.5	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.36	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	1.4	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	REP051517AD1		
Lab Sample ID:	JC43449-5	**Date Sampled:**	05/15/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	390 [a]	10	2.6	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	100%	100%	73-122%
2037-26-5	Toluene-D8	100%	100%	84-119%
460-00-4	4-Bromofluorobenzene	98%	97%	78-117%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID: REP051517AD1
Lab Sample ID: JC43449-5
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/15/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69458.D	1	05/23/17 19:42	KM	05/22/17	OP3023A	E3M3277
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	4.56	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	96%		29-124%
321-60-8	2-Fluorobiphenyl	88%		23-122%
1718-51-0	Terphenyl-d14	105%		22-130%

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

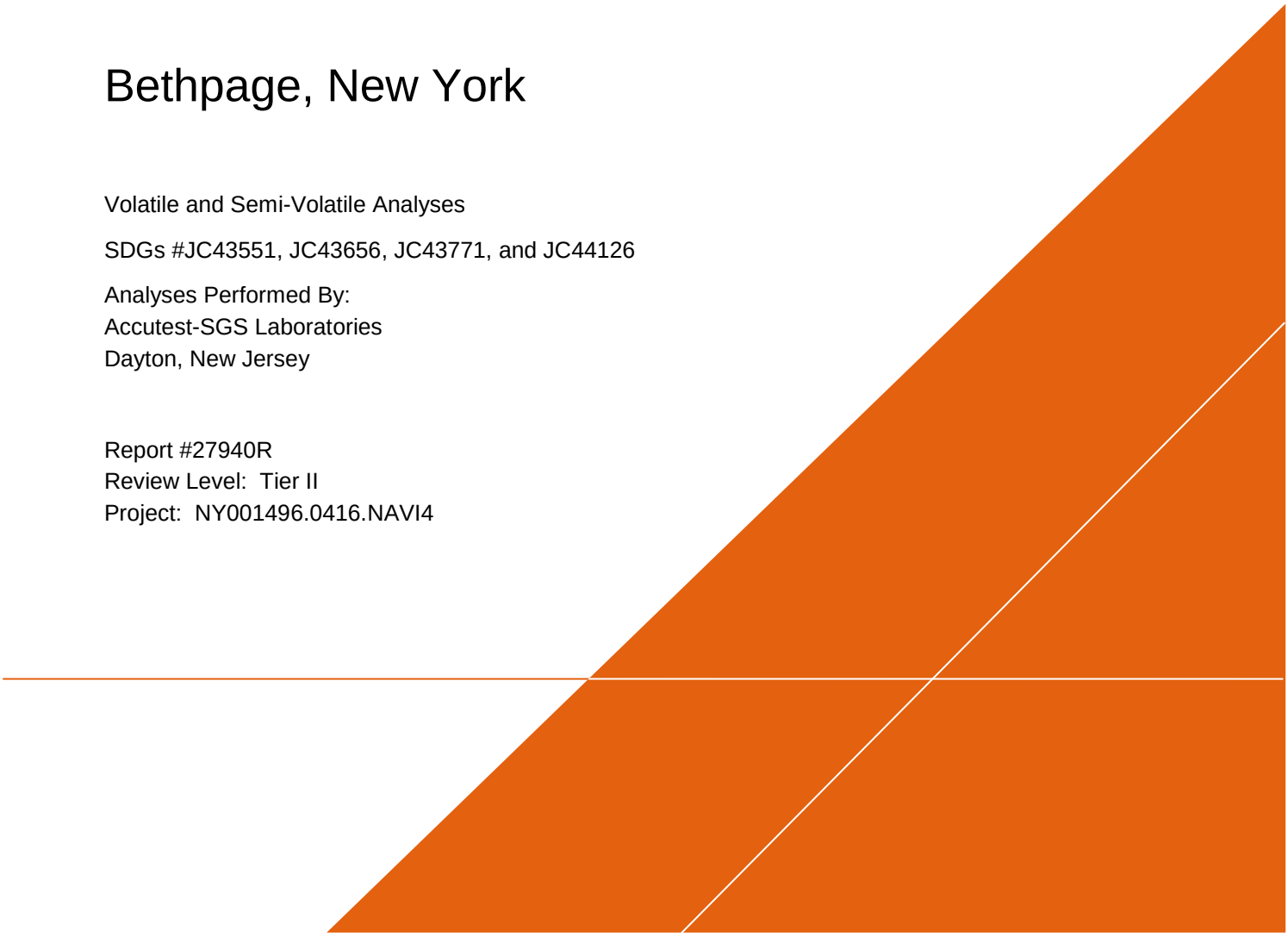
Bethpage, New York

Volatile and Semi-Volatile Analyses

SDGs #JC43551, JC43656, JC43771, and JC44126

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

Report #27940R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC43551, JC43656, JC43771, and JC44126 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
JC43551	RE114D3	JC43551-1	Water	05/16/2017		X	X			
	FB051617AD1	JC43551-2	Water	05/16/2017		X	X			
	TB051617AD1	JC43551-3	Water	05/16/2017		X				
JC43656	RE118D1	JC43656-1	Water	05/17/2017		X	X			
	TB051717AD1	JC43656-2	Water	05/17/2017		X				
	FB051717AD1	JC43656-3	Water	05/17/2017		X	X			
JC43771	TT102D	JC43771-1	Water	05/18/2017		X	X			
	TT102D2	JC43771-2	Water	05/18/2017		X	X			
	TB051817AD1	JC43771-3	Water	05/18/2017		X				
JC44126	RE133D1	JC44126-1	Water	05/24/2017		X	X			
	RE133D2	JC44126-2	Water	05/24/2017		X	X			
	FB052417AR1	JC44126-3	Water	05/24/2017		X	X			
	TB052417AR1	JC44126-4	Water	05/24/2017		X				

Notes:

1. In SDG JC43551, the laboratory inadvertently logged-in the sample IDs for FB051617AD1 and TB051617AD1 as FB05**12**17AD1 and TB05**12**17AD1, respectively.
2. In SDG JC43551, the project number referenced on the data package is incorrect. The correct project number is: NY001496.0416.NAVI3.
3. In SDG JC43656, the laboratory inadvertently logged-in the sample IDs for TB051717AD1 and FB051717AD1 as TB05**07**17AD1 and FB05**07**17AD1, respectively.

4. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location TT102D 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 8260C, 524.2 and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2 s.u.
EPA 524.2			

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 all SDGs.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

A MS/MSD was not performed on a sample location associated with any 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 in 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 validated in this report.

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 was not performed on a sample location associated any of the SDGs validated in this report.

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: SW-846 8260C and 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		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
SW-846 8270D-SIM	Water	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC43771.

A MS was not performed on a sample location associated with SDGs JC43551, JC43656, and JC44126.

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 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 SDG validated in this report.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		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: July 19, 2017

PEER REVIEW: Todd Church

DATE: July 19, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

PAGE 1 OF 1

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

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43551

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 Prezoski Phone #: 516-287-6247

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE 114D3		5/16/17	1615	AP	GW	5	3				2						3	2	
2	FB051617A01		5/16/17	1353	AP	FB	5	3				2						3	2	FL49
3	TB051617A01		5/16/17	1200	—	TB	2	2										2		V1008

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

INITIAL ASSESSMENT SAR
LABEL VERIFICATION TM

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:
	5/16/17 1830	1 Chris Land Date 5/17/17 Time 11:00	2 Chris Land	5/17/17 1645	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[x] Intact [ ] Not intact	Preserved where applicable [ ] On Ice [x] Cooler Temp. 3.8°C

JC43551: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID: RE114D3
Lab Sample ID: JC43551-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133340.D	1	05/25/17 12:38	JP	n/a	n/a	V2E5833
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.94	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	0.83	1.0	0.31	ug/l	J
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	9.7	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE114D3		
Lab Sample ID:	JC43551-1	**Date Sampled:**	05/16/17
Matrix:	AQ - Ground Water	**Date Received:**	05/16/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	42.6	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	93%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

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

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

Report of Analysis

Client Sample ID: RE114D3
Lab Sample ID: JC43551-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69509.D	1	05/25/17 15:08	KM	05/23/17	OP3058A	E3M3279
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	3.19	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	112%		29-124%
321-60-8	2-Fluorobiphenyl	81%		23-122%
1718-51-0	Terphenyl-d14	88%		22-130%

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

16

Client Sample ID: FB051217AD1
Lab Sample ID: JC43551-2
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133350.D	1	05/25/17 17:40	JP	n/a	n/a	V2E5833
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

16

Client Sample ID: FB051217AD1
Lab Sample ID: JC43551-2
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

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

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

Report of Analysis

16

Client Sample ID: FB051217AD1
Lab Sample ID: JC43551-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69510.D	1	05/25/17 15:41	KM	05/23/17	OP3058A	E3M3279
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	112%		29-124%
321-60-8	2-Fluorobiphenyl	82%		23-122%
1718-51-0	Terphenyl-d14	99%		22-130%

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

16

Client Sample ID: TB051217AD1
Lab Sample ID: JC43551-3
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133351.D	1	05/25/17 18:07	JP	n/a	n/a	V2E5833
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

16

Client Sample ID: TB051217AD1
Lab Sample ID: JC43551-3
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/16/17
Date Received: 05/16/17
Percent Solids: n/a

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	93%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC43656

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): Anna Overmyer Phone #: 724-420-6243

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	REIIRD1		5/17/17	1215	AD	GW	5	3					2					3	2	B21
2	TB051717AD1		5/17/17	0900	—	TB	2	2										2		V1030
3	FB051717AD1		5/17/17	0910	AD	FB	5	3					2					3	2	

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

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

~~INITIAL ASESSMENT~~ 23/24
~~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	Anna Overmyer	5/17/17 1600	1	2	5/18/17 1800	2
3	Relinquished by Sampler:	Date Time: 5.18.17 1120	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. 0.3.2 IP

Report of Analysis

Client Sample ID: RE118D1
Lab Sample ID: JC43656-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/17/17
Date Received: 05/18/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133354.D	1	05/25/17 19:30	JP	n/a	n/a	V2E5833
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	RE118D1		
Lab Sample ID:	JC43656-1	**Date Sampled:**	05/17/17
Matrix:	AQ - Ground Water	**Date Received:**	05/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	97%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

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

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

Report of Analysis

Client Sample ID: RE118D1
Lab Sample ID: JC43656-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/17/17
Date Received: 05/18/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71436.D	1	05/25/17 22:08	AD	05/24/17	OP3111A	E4M3314
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.054	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		29-124%
321-60-8	2-Fluorobiphenyl	78%		23-122%
1718-51-0	Terphenyl-d14	90%		22-130%

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: TB050717AD1 (17)
Lab Sample ID: JC43656-2
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/17/17
Date Received: 05/18/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133349.D	1	05/25/17 17:12	JP	n/a	n/a	V2E5833
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	TB050717AD1		
Lab Sample ID:	JC43656-2	**Date Sampled:**	05/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	95%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

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

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

Report of Analysis

Client Sample ID: FB050717AD1
Lab Sample ID: JC43656-3
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/17/17
Date Received: 05/18/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133305.D	1	05/24/17 17:10	JP	n/a	n/a	V2E5831
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

17

Client Sample ID: FB050717AD1
Lab Sample ID: JC43656-3
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/17/17
Date Received: 05/18/17
Percent Solids: n/a

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	92%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

Report of Analysis

Client Sample ID: FB050717AD1
Lab Sample ID: JC43656-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/17/17
Date Received: 05/18/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71437.D	1	05/25/17 22:39	AD	05/24/17	OP3111A	E4M3314
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		29-124%
321-60-8	2-Fluorobiphenyl	74%		23-122%
1718-51-0	Terphenyl-d14	134% [a]		22-130%

(a) High percent recoveries and no positive found in the sample.

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

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 # JC43771

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): Aaron Dvorsky Phone #: 724-46-6[illegible]

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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: Jorry Dyl

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	Preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	TT1020		5/18/17	1345	AD	GW	5	3				2				3			2	E2
2	TT102D2		5/18/17	1325	PP	GW	5	3				2				3			2	V1050
3	TB050817AD1		5/18/17	0960	—	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 Labtink

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

INITIAL ASESSMENT 38/08
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		5/17/17 16:30	Chris Law	Chris Law	5/19/17 10:35	
2					5/19/17 1520	
3	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal # 68	[x] Intact [ ] Not Intact	Preserved where applicable [ ]

On Ice [x] Cooler Temp. 3.2° CIP

Report of Analysis

Client Sample ID:	TT102D		
Lab Sample ID:	JC43771-1	**Date Sampled:**	05/18/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109695.D	1	05/26/17 06:02	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TT102D		
Lab Sample ID:	JC43771-1	**Date Sampled:**	05/18/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

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:	TT102D		
Lab Sample ID:	JC43771-1	**Date Sampled:**	05/18/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69591.D	1	06/01/17 03:06	AD	05/25/17	OP3153A	E3M3284
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.543	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	96%		29-124%
321-60-8	2-Fluorobiphenyl	102%		23-122%
1718-51-0	Terphenyl-d14	99%		22-130%

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:	TT102D2		
Lab Sample ID:	JC43771-2	**Date Sampled:**	05/18/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109696.D	1	05/26/17 06:34	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TT102D2		
Lab Sample ID:	JC43771-2	**Date Sampled:**	05/18/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

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: TT102D2
Lab Sample ID: JC43771-2
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/18/17
Date Received: 05/19/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69543.D	1	05/26/17 16:38	KM	05/25/17	OP3153A	E3M3281
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	102%		29-124%
321-60-8	2-Fluorobiphenyl	87%		23-122%
1718-51-0	Terphenyl-d14	112%		22-130%

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:	TB051817AD1		
Lab Sample ID:	JC43771-3	**Date Sampled:**	05/18/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/19/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B109697.D	1	05/26/17 07:05	BK	n/a	n/a	V1B5219
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	3.8	ug/l	
78-93-3	2-Butanone	ND	5.0	2.5	ug/l	
71-43-2	Benzene	ND	0.50	0.26	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.36	ug/l	
75-25-2	Bromoform	ND	0.50	0.40	ug/l	
74-83-9	Bromomethane	ND	0.50	0.081	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.39	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.27	ug/l	
75-00-3	Chloroethane	ND	0.50	0.071	ug/l	
67-66-3	Chloroform	ND	0.50	0.33	ug/l	
74-87-3	Chloromethane	ND	0.50	0.39	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.13	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.28	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.094	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.098	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.14	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.25	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.26	ug/l	
76-13-1	Freon 113	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	2.0	1.3	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	1.5	ug/l	
100-42-5	Styrene	ND	0.50	0.21	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.12	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.099	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.12	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.12	ug/l	
108-88-3	Toluene	ND	0.50	0.13	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:	TB051817AD1		
Lab Sample ID:	JC43771-3	**Date Sampled:**	05/18/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/19/17
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.11	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.056	ug/l	
	m,p-Xylene	ND	0.50	0.26	ug/l	
95-47-6	o-Xylene	ND	0.50	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

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

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC44126

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): Athina Retzepagic Phone #: 212-365-4651

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
1	RE133D1		5/24/2017	1300	AR	GW	5	3				2						3	2
2	RE133D2		5/24/2017	1310	JB	GW	5	3				2						3	2
3	FB052417AR1		5/24/2017	10:00	JB	EB	5	3				2						3	2
4	TB052417AR1		5/24/2017	9:00	—	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

LAB USE ONLY: E58, V1113

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro / 2 Coolers
INITIAL ASESSMENT JB
LABEL VERIFICATION JK

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	Athina Retzepagic	5/24/17 1630	1	2		2
3	Relinquished by Sampler:	Date Time: 5-25-17 1035	Received By: 3	Relinquished By: 4	Date Time: 5/25/17 1300	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable

On Ice | Cooler Temp.

037 03.9 SP

Report of Analysis

Client Sample ID: RE133D1
Lab Sample ID: JC44126-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/24/17
Date Received: 05/25/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B137921.D	1	06/03/17 07:44	VC	n/a	n/a	V3B6113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	RE133D1		
Lab Sample ID:	JC44126-1	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/25/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		76-120%
17060-07-0	1,2-Dichloroethane-D4	116%		73-122%
2037-26-5	Toluene-D8	90%		84-119%
460-00-4	4-Bromofluorobenzene	86%		78-117%

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

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

Report of Analysis

Client Sample ID: RE133D1
Lab Sample ID: JC44126-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/24/17
Date Received: 05/25/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69563.D	1	05/31/17 11:59	KM	05/30/17	OP3307A	E3M3283
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	97%		29-124%
321-60-8	2-Fluorobiphenyl	82%		23-122%
1718-51-0	Terphenyl-d14	76%		22-130%

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:	RE133D2		
Lab Sample ID:	JC44126-2	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/25/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B137922.D	1	06/03/17 08:12	VC	n/a	n/a	V3B6113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	RE133D2		
Lab Sample ID:	JC44126-2	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/25/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		76-120%
17060-07-0	1,2-Dichloroethane-D4	119%		73-122%
2037-26-5	Toluene-D8	90%		84-119%
460-00-4	4-Bromofluorobenzene	85%		78-117%

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

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

Report of Analysis

Client Sample ID:	RE133D2		
Lab Sample ID:	JC44126-2	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/25/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69564.D	1	05/31/17 12:31	KM	05/30/17	OP3307A	E3M3283
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	105%		29-124%
321-60-8	2-Fluorobiphenyl	89%		23-122%
1718-51-0	Terphenyl-d14	87%		22-130%

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: FB052417AR1
Lab Sample ID: JC44126-3
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/24/17
Date Received: 05/25/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B137909.D	1	06/03/17 02:03	VC	n/a	n/a	V3B6113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	FB052417AR1		
Lab Sample ID:	JC44126-3	**Date Sampled:**	05/24/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/25/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	109%		73-122%
2037-26-5	Toluene-D8	90%		84-119%
460-00-4	4-Bromofluorobenzene	86%		78-117%

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

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

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

Report of Analysis

Client Sample ID: FB052417AR1
Lab Sample ID: JC44126-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/24/17
Date Received: 05/25/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69797.D	1	06/14/17 20:14	AD	05/30/17	OP3307A	E3M3303
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		29-124%
321-60-8	2-Fluorobiphenyl	71%		23-122%
1718-51-0	Terphenyl-d14	74%		22-130%

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:	TB052417AR1		
Lab Sample ID:	JC44126-4	**Date Sampled:**	05/24/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B137910.D	1	06/03/17 02:32	VC	n/a	n/a	V3B6113
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB052417AR1		
Lab Sample ID:	JC44126-4	**Date Sampled:**	05/24/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	111%		73-122%
2037-26-5	Toluene-D8	90%		84-119%
460-00-4	4-Bromofluorobenzene	87%		78-117%

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

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

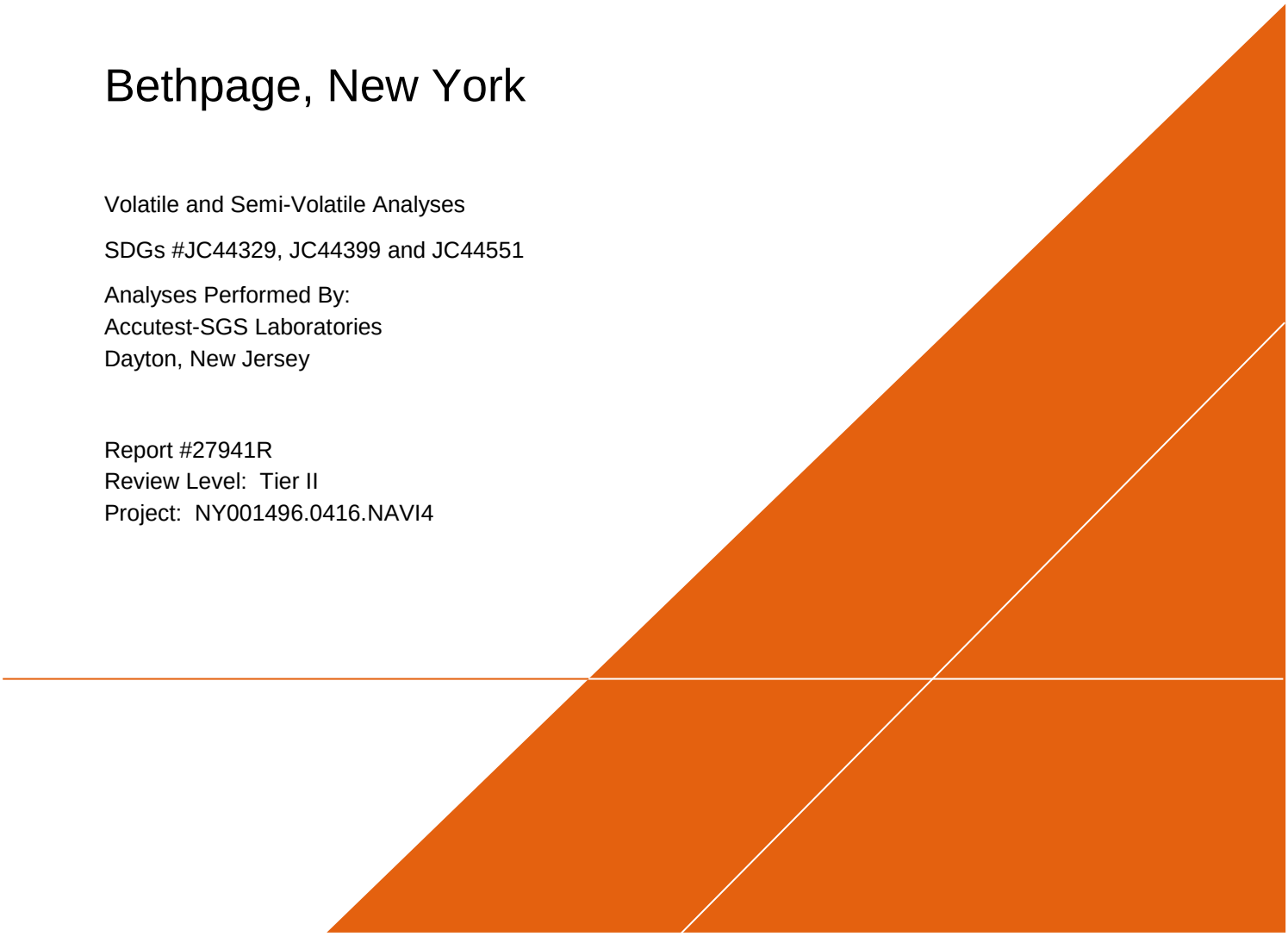
Bethpage, New York

Volatile and Semi-Volatile Analyses

SDGs #JC44329, JC44399 and JC44551

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

Report #27941R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC44329, JC44399 and JC44551 samples collected in association with the Navy Wells at the Bethpage, NY 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
JC44329	RE106D1	JC44329-1	Water	05/30/2017		X	X			
	RE106D2	JC44329-2	Water	05/30/2017		X	X			
	FB053017JB1	JC44329-3	Water	05/30/2017		X	X			
	TB053017AR1	JC44329-4	Water	05/30/2017		X				
JC44399	RE106D3	JC44399-1	Water	05/31/2017		X	X			
	FB053117AR1	JC44399-2	Water	05/31/2017		X	X			
	TB053117AR1	JC44399-3	Water	05/31/2017		X				
JC44551	RE115D2	JC44551-1	Water	06/1/2017		X	X			
	RE115D2	JC44551-2	Water	06/1/2017		X	X			
	FB060117JB1	JC44551-3	Water	06/1/2017		X	X			
	TB06017JB1	JC44551-4	Water	06/1/2017		X				

Note:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location RE106D1 for SVOC analysis; and, MS/MSD analysis was performed on sample location RE115D2 for VOC and 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 8260C and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	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 all SDGs.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

A MS/MSD was not performed on a sample location associated with SDGs JC44329 and JC44399.

The MS exhibited acceptable recoveries in SDG JC44551.

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.

SDG	Sample Locations	Compound	LCS Recovery
JC44329	FB053017JB1 TB053017AR1	Dibromochloromethane	>UL
		1,2-Dichloropropane	
		Vinyl chloride	
	RE106D2	2-Butanone	>UL

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

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

All compounds associated with the LCS analysis exhibited recoveries within the control limits in SDGs JC44399 and JC44551.

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 validated in this report.

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 was not performed on a sample location associated with any of the SDGs validated in this report.

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: SW-846 8260C	.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		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
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8270D-SIM	Water	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC44329.

A MS/MSD was not performed on a sample location associated with SDGs JC44399.

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 JC44551: RE115D1	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 in 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 SDG validated in this report.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: July 25, 2017

PEER REVIEW: Todd Church

DATE: July 26, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

GW
FB
TB

ACCUTEST LABORATORIES

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 # JC44329

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Rodriguez 212-736-4651 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM									LAB USE ONLY
1	RE106D1		5/30/17	1805	JB	GW	5	3				2						3	2									
2	RE106D2		5/30/17	1630	AR	GW	5	3				2						3	2									
3	FB053017JB1		5/30/17	1200	AR	EB	5	3				2						3	2									E57
4	TB053017AR1		5/30/17	9:00	—	TB	2	2										2										V1134

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT Am 05
LABEL VERIFICATION Am

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
2 coolers

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	Jordan Bochner	5/30/17 2000	Chris Faul 5/31/17 10:20	Chris Faul	5/31/17 16:55	
2	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3						
4	Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable
5						On Ice: X Cooler Temp: 2.3°, 1.9° CIG

Report of Analysis

Client Sample ID:	RE106D1		
Lab Sample ID:	JC44329-1	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291537.D	1	06/08/17 16:06	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	0.89	1.0	0.23	ug/l	J
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE106D1		
Lab Sample ID:	JC44329-1	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	8.5	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	109%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

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

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

Report of Analysis

Client Sample ID: RE106D1
Lab Sample ID: JC44329-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/30/17
Date Received: 05/31/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M134965.D	1	06/15/17 14:00	SB	06/02/17	OP3388A	EM5789
Run #2	4P23348.D	1	06/06/17 16:33	AD	06/02/17	OP3388A	E4P1286

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	5.41	1.0	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%	80%	29-124%
321-60-8	2-Fluorobiphenyl	81%	75%	23-122%
1718-51-0	Terphenyl-d14	76%	75%	22-130%

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:	RE106D2		
Lab Sample ID:	JC44329-2	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291524.D	1	06/08/17 08:13	JC	n/a	n/a	VL8161
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)[a]	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.1	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	10.9	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	6.6	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE106D2		
Lab Sample ID:	JC44329-2	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	45.3	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	105%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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

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

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

Report of Analysis

Client Sample ID: RE106D2
Lab Sample ID: JC44329-2
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/30/17
Date Received: 05/31/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M134966.D	1	06/15/17 14:31	SB	06/02/17	OP3388A	EM5789
Run #2	4P23349.D	1	06/06/17 17:04	AD	06/02/17	OP3388A	E4P1286

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2	970 ml	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	7.98	1.0	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%	86%	29-124%
321-60-8	2-Fluorobiphenyl	88%	84%	23-122%
1718-51-0	Terphenyl-d14	73%	74%	22-130%

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:	FB053017JB1		
Lab Sample ID:	JC44329-3	**Date Sampled:**	05/30/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A179085.D	1	06/06/17 05:59	JC	n/a	n/a	V2A7573
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane [a]	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane [a]	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	FB053017JB1		
Lab Sample ID:	JC44329-3	**Date Sampled:**	05/30/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	90%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	94%		78-117%

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

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

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

Report of Analysis

Client Sample ID: FB053017JB1
Lab Sample ID: JC44329-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/30/17
Date Received: 05/31/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P23350.D	1	06/06/17 17:36	AD	06/02/17	OP3388A	E4P1286
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		29-124%
321-60-8	2-Fluorobiphenyl	85%		23-122%
1718-51-0	Terphenyl-d14	104%		22-130%

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:	TB053017AR1		
Lab Sample ID:	JC44329-4	**Date Sampled:**	05/30/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A179086.D	1	06/06/17 06:28	JC	n/a	n/a	V2A7573
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane [a]	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane [a]	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB053017AR1		
Lab Sample ID:	JC44329-4	**Date Sampled:**	05/30/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/31/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		76-120%
17060-07-0	1,2-Dichloroethane-D4	89%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	95%		78-117%

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

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

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

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC44399

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #: 212-326-4851

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MECH	ENCORE	Unpres	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE106D3		5/31/17	1620	AR	GW	5	3								2			3	2	E17
2	FB053117AR1		5/31/17	1050	AR	FB	5	3								2			3	2	V1141
3	TB053117AR1		5/31/17	0900	—	TB	2	2											2		

Matrix Codes

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT SB Dom
LABEL VERIFICATION DO

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 COMM+

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

Comments / Special Instructions

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	Jordan Bochner	5/31/17 1810	1	2	6-1-17 1640	2
3		6-1-17 1105	3	4		4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable	On Ice	Cooler Temp. 0.2

5.1.5

JC44399: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE106D3		
Lab Sample ID:	JC44399-1	**Date Sampled:**	05/31/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C150283.D	1	06/08/17 04:15	HT	n/a	n/a	V2C6672
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.28	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	0.46	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	1.7	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.5	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	1.4	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	99.5	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	56.4	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.24	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	RE106D3		
Lab Sample ID:	JC44399-1	**Date Sampled:**	05/31/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	93.8	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		76-120%
17060-07-0	1,2-Dichloroethane-D4	116%		73-122%
2037-26-5	Toluene-D8	97%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID: RE106D3
Lab Sample ID: JC44399-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/31/17
Date Received: 06/01/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P70936.D	1	06/15/17 19:06	FW	06/05/17 13:00	OP3445A	E2P3118
Run #2	3P60271.D	1	06/14/17 21:31	KM	06/05/17 13:00	OP3445A	E3P2830

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	8.26	1.0	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%	68%	29-124%
321-60-8	2-Fluorobiphenyl	77%	58%	23-122%
1718-51-0	Terphenyl-d14	73%	57%	22-130%

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:	FB053117AR1		
Lab Sample ID:	JC44399-2	**Date Sampled:**	05/31/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C150284.D	1	06/08/17 04:44	HT	n/a	n/a	V2C6672
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	FB053117AR1		
Lab Sample ID:	JC44399-2	**Date Sampled:**	05/31/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	118%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

Report of Analysis

Client Sample ID: FB053117AR1
Lab Sample ID: JC44399-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/31/17
Date Received: 06/01/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60272.D	1	06/14/17 22:02	KM	06/05/17 13:00	OP3445A	E3P2830
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		29-124%
321-60-8	2-Fluorobiphenyl	65%		23-122%
1718-51-0	Terphenyl-d14	75%		22-130%

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: TB053117AR1
Lab Sample ID: JC44399-3
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/31/17
Date Received: 06/01/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2C150285.D	1	06/08/17 05:12	HT	n/a	n/a	V2C6672
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB053117AR1		
Lab Sample ID:	JC44399-3	**Date Sampled:**	05/31/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	117%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

GW
FB
WTB

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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 # JC44551

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): Abiva Rectoyazo 4251 Phone #: 212-365

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
1	RE 115 D1		6/1/2017	1410	JB	GW	5	3				2						3	2
2	RE 115 D2		6/1/2017	1450	AR	GW	5	3				2						3	2
3	FB060117 JB1		6/1/2017	11:30	JB	FB	5	3				2						3	2
4	TB060117 JB1		6/1/2017	9:00	-	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

LAB USE ONLY: E64, V1158

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT 1/DS
LABEL VERIFICATION DK

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro

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

Relinquished by Sampler: 1	Date Time: 6/1/17 18:20	Received By: 1 Chris Faul	6/2/17 9:50	Relinquished By: 2 Chris Faul	Date Time: 6/2/17 1905	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 #	Intact / Not intact	Preserved where applicable	On Ice	Cooler Temp. 2.1, 3.6 °C IR

5.1.5

JC44551: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE115D1		
Lab Sample ID:	JC44551-1	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291563.D	1	06/09/17 03:42	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	1.4	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	1.3	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	1.9	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.3	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	4.8	5.0	1.2	ug/l	J
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.26	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	0.59	1.0	0.28	ug/l	J

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

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

Report of Analysis

Client Sample ID:	RE115D1		
Lab Sample ID:	JC44551-1	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	62.2	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

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

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

Report of Analysis

Client Sample ID: RE115D1
Lab Sample ID: JC44551-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60201.D	1	06/13/17 01:09	KM	06/05/17 13:00	OP3445A	E3P2826
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	1.80	0.10	0.049	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		29-124%
321-60-8	2-Fluorobiphenyl	60%		23-122%
1718-51-0	Terphenyl-d14	59%		22-130%

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:	RE115D2		
Lab Sample ID:	JC44551-2	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291567.D	1	06/09/17 05:29	JC	n/a	n/a	VL8162
Run #2	L291566.D	10	06/09/17 05:02	JC	n/a	n/a	VL8162

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	1.3	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	0.90	1.0	0.23	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	0.86	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	5.5	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.7	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	11.6	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	0.57	1.0	0.22	ug/l	J
79-00-5	1,1,2-Trichloroethane	0.59	1.0	0.28	ug/l	J

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

Report of Analysis

Client Sample ID:	RE115D2		
Lab Sample ID:	JC44551-2	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	230 [a]	10	2.6	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	105%	76-120%
17060-07-0	1,2-Dichloroethane-D4	108%	106%	73-122%
2037-26-5	Toluene-D8	96%	98%	84-119%
460-00-4	4-Bromofluorobenzene	101%	103%	78-117%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID: RE115D2
Lab Sample ID: JC44551-2
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60266.D	1	06/14/17 18:57	KM	06/05/17 13:00	OP3445A	E3P2830
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	1.70	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		29-124%
321-60-8	2-Fluorobiphenyl	56%		23-122%
1718-51-0	Terphenyl-d14	54%		22-130%

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:	FB060117JB1		
Lab Sample ID:	JC44551-3	**Date Sampled:**	06/01/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291559.D	1	06/09/17 01:56	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB060117JB1		
Lab Sample ID:	JC44551-3	**Date Sampled:**	06/01/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	97%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060117JB1
Lab Sample ID: JC44551-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60267.D	1	06/14/17 19:28	KM	06/05/17 13:00	OP3445A	E3P2830
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		29-124%
321-60-8	2-Fluorobiphenyl	67%		23-122%
1718-51-0	Terphenyl-d14	75%		22-130%

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:	TB060117JB1		
Lab Sample ID:	JC44551-4	**Date Sampled:**	06/01/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291560.D	1	06/09/17 02:22	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB060117JB1		
Lab Sample ID:	JC44551-4	**Date Sampled:**	06/01/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	97%		84-119%
460-00-4	4-Bromofluorobenzene	106%		78-117%

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

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

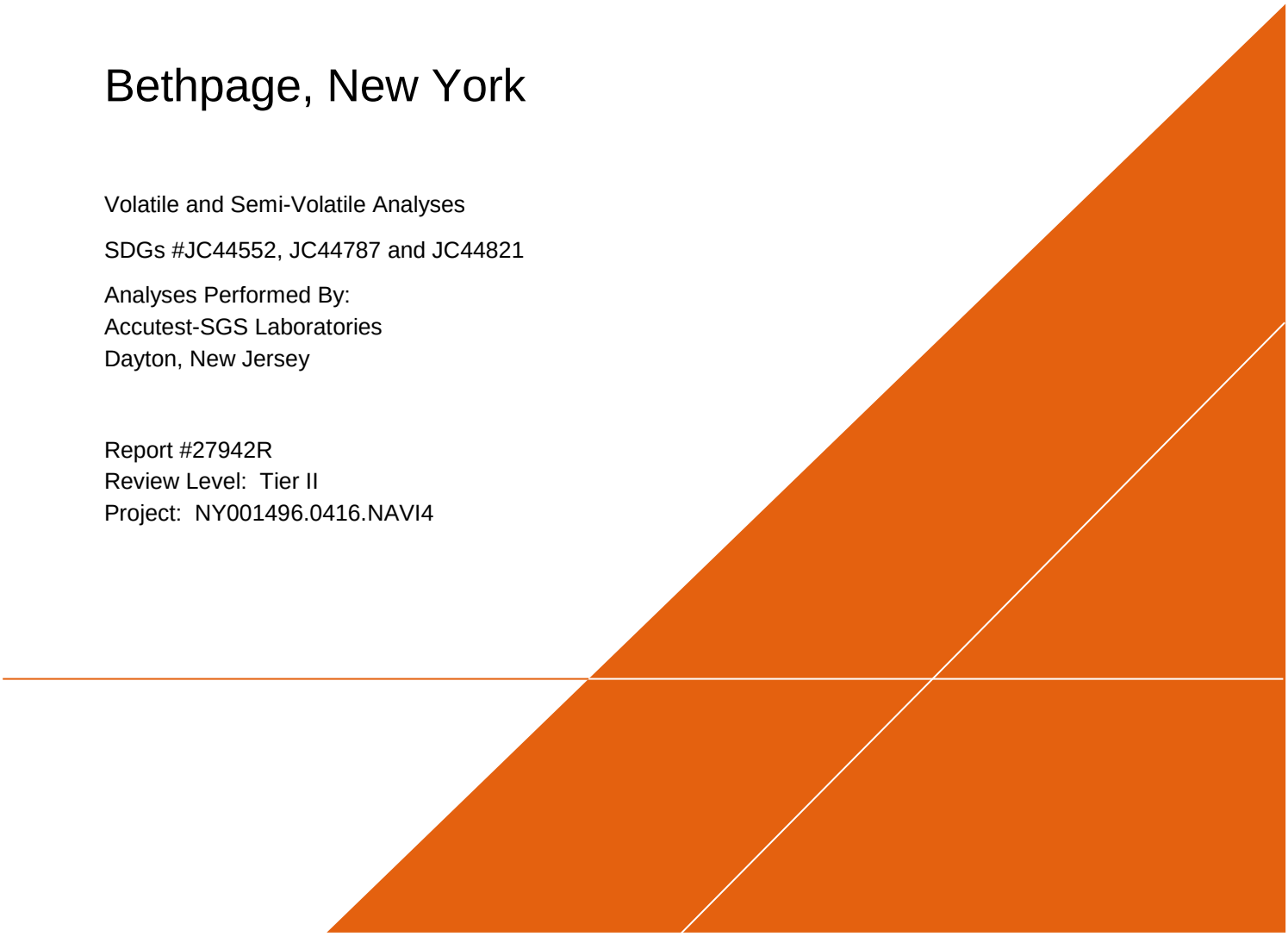
Bethpage, New York

Volatile and Semi-Volatile Analyses

SDGs #JC44552, JC44787 and JC44821

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

Report #27942R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC44552, JC44787 and JC44821 samples collected in association with the Navy Wells at the Bethpage, NY 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
JC44552	RE124D1	JC44552-1	Water	06/01/2017		X	X			
	TB060117AD1	JC44552-2	Water	06/01/2017		X				
	FB060117AD1	JC44552-3	Water	06/01/2017		X	X			
	RE124D2	JC44552-4	Water	06/01/2017		X	X			
JC44787	RE130D2	JC44787-1	Water	06/06/2017		X	X			
	RE130D1	JC44787-2	Water	06/06/2017		X	X			
	FB060617JB1	JC44787-3	Water	06/06/2017		X	X			
	TB060617AR1	JC44787-4	Water	06/06/2017		X				
JC44821	RE127D2	JC44821-1	Water	06/06/2017		X	X			
	RE127D1	JC44821-2	Water	06/06/2017		X	X			
	TB060617AD1	JC44821-3	Water	06/06/2017		X				
	FB060617AD1	JC44821-4	Water	06/06/2017		X	X			

Note:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location RE127D2 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 8260C and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	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 all SDGs.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

A MS/MSD was not performed on a sample location associated with any of the SDGs validated in this report.

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 in 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 validated in this report.

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 was performed on sample location RE124D1 (in SDG JC44552); the laboratory duplicate exhibited acceptable RPD.

A laboratory duplicate was not performed on a sample location associated with SDGs JC44787 and JC44821.

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: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8270D-SIM	Water	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC44821.

A MS/MSD was not performed on a sample location associated with SDGs JC44552 and JC44787.

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 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 SDG validated in this report.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

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

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: July 27, 2017

PEER REVIEW: Todd Church

DATE: July 28, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
MTB

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 # JC44552

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) Phone #

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #
Work Authorization #: NY001496_2015.10.30
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	Other	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
1	RE1240I		06/01/17	1440	AD	GW	5	3								2			3	2
2	TB060117AD1		06/01/17	0900	—	TB	2	2											2	
3	FB060117AD1		06/01/17	1030	AD	FB	5	3								2			3	2
4	RE1240Z		06/01/17	1518	PP	GW	5	3								2			3	2

Matrix Codes

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

LAB USE ONLY

E64
V1163

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASSESSMENT 1B/DB
LABEL VERIFICATION DE

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/1/17 18:20	1 Chris Land 6/2/17 9:50	2 Chris Land	6/2/17 1905	2
3		3	4		4
5		5	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp. 1.8°C COP

JC44552: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID: RE124D1
Lab Sample ID: JC44552-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291564.D	1	06/09/17 04:09	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	0.74	1.0	0.20	ug/l	J
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	52.3	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	0.30	1.0	0.23	ug/l	J
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE124D1		
Lab Sample ID:	JC44552-1	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	3.1	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

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

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

Report of Analysis

Client Sample ID: RE124D1
Lab Sample ID: JC44552-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60268.D	1	06/14/17 19:59	KM	06/05/17 13:00	OP3445A	E3P2830
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	1.11	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		29-124%
321-60-8	2-Fluorobiphenyl	58%		23-122%
1718-51-0	Terphenyl-d14	59%		22-130%

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:	TB060117AD1		
Lab Sample ID:	JC44552-2	**Date Sampled:**	06/01/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291561.D	1	06/09/17 02:49	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB060117AD1		
Lab Sample ID:	JC44552-2	**Date Sampled:**	06/01/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060117AD1
Lab Sample ID: JC44552-3
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291562.D	1	06/09/17 03:16	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB060117AD1		
Lab Sample ID:	JC44552-3	**Date Sampled:**	06/01/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060117AD1
Lab Sample ID: JC44552-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/01/17
Date Received: 06/02/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60269.D	1	06/14/17 20:30	KM	06/05/17 13:00	OP3445A	E3P2830
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		29-124%
321-60-8	2-Fluorobiphenyl	62%		23-122%
1718-51-0	Terphenyl-d14	71%		22-130%

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:	RE124D2		
Lab Sample ID:	JC44552-4	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L291565.D	1	06/09/17 04:36	JC	n/a	n/a	VL8162
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE124D2		
Lab Sample ID:	JC44552-4	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	107%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

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

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

Report of Analysis

Client Sample ID:	RE124D2		
Lab Sample ID:	JC44552-4	**Date Sampled:**	06/01/17
Matrix:	AQ - Ground Water	**Date Received:**	06/02/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3P60270.D	1	06/14/17 21:01	KM	06/05/17 13:00	OP3445A	E3P2830
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		29-124%
321-60-8	2-Fluorobiphenyl	67%		23-122%
1718-51-0	Terphenyl-d14	67%		22-130%

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

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC44787

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): Alvina Redzepagic Phone #: 212-765-4651

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

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

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM								LAB USE ONLY
1	RE130D2		6/6/2017	1410	JB	GW	5	3				2						3	2									E4
2	RE130D1		6/6/2017	1325	AR	GW	5	3				2						3	2									V1194
3	FB060617JB1		6/6/2017	1000	JB	EB	5	3				2						3	2									
4	TB060617AR1		6/6/2017	900	—	TB	2	2										2										

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

INITIAL ASESSMENT: AB

LABEL VERIFICATION: JK

Data Deliverable Information

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

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

Comments / Special Instructions: OU2 Hydro

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	Anna Drenizer	6/6/17 1406	Chris Law	6/7/17 11:15	Chris Law	6/7/17 1730
2						
3						
4						
5						

Custody Seal # | Intact | Not intact | Preserved where applicable | On Ice | Cooler Temp. 1.8°C IP

5.1 5

JC44787: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE130D2		
Lab Sample ID:	JC44787-1	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129615.D	1	06/13/17 05:20	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	0.89	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	RE130D2		
Lab Sample ID:	JC44787-1	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	93%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID: RE130D2
Lab Sample ID: JC44787-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71813.D	1	06/16/17 22:10	AD	06/09/17 16:45	OP3599A	E4M3340
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		29-124%
321-60-8	2-Fluorobiphenyl	75%		23-122%
1718-51-0	Terphenyl-d14	54%		22-130%

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: RE130D1
Lab Sample ID: JC44787-2
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129616.D	1	06/13/17 05:48	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	0.82	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	RE130D1		
Lab Sample ID:	JC44787-2	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	94%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID:	RE130D1		
Lab Sample ID:	JC44787-2	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71814.D	1	06/16/17 22:41	AD	06/09/17 16:45	OP3599A	E4M3340
Run #2							

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

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		29-124%
321-60-8	2-Fluorobiphenyl	85%		23-122%
1718-51-0	Terphenyl-d14	63%		22-130%

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:	FB060617JB1		
Lab Sample ID:	JC44787-3	**Date Sampled:**	06/06/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129606.D	1	06/13/17 01:05	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB060617JB1		
Lab Sample ID:	JC44787-3	**Date Sampled:**	06/06/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060617JB1
Lab Sample ID: JC44787-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71864.D	1	06/20/17 09:46	AD	06/09/17 16:45	OP3599A	E4M3343
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		29-124%
321-60-8	2-Fluorobiphenyl	66%		23-122%
1718-51-0	Terphenyl-d14	83%		22-130%

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:	TB060617AR1		
Lab Sample ID:	JC44787-4	**Date Sampled:**	06/06/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129607.D	1	06/13/17 01:33	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB060617AR1		
Lab Sample ID:	JC44787-4	**Date Sampled:**	06/06/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

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

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

GW
WTB
FB

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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 # JC44821

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): Anna Avenigar 724-9206243 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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: Jonna Ogi

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	MECH	ENCORE	5035	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	REI27D2		6/6/17	1155	PP	GW	5	3							2				3	2	E26
2	REI27D1		6/6/17	1230	AD	GW	5	3							2				3	2	V1199
3	TB-60617AD1		6/6/17	0900	—	TB	2	2											2		
4	FB060617AD1		6/6/17	1110	AD	FB	5	3							2				3	2	

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASESSMENT JS/18
LABEL VERIFICATION JK

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

Relinquished by Sampler: 1	Date Time: 1706 6/6/17	Received By: 1 Chris Laul	6/7/17 11:15	Relinquished By: 2 Chris Laul	Date Time: 6/7/17 1730	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 #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp. 1.8°, 2.1° CDP

Report of Analysis

Client Sample ID: RE127D2
Lab Sample ID: JC44821-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129613.D	1	06/13/17 04:23	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

Report of Analysis

Client Sample ID:	RE127D2		
Lab Sample ID:	JC44821-1	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	94%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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

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

Report of Analysis

Client Sample ID: RE127D2
Lab Sample ID: JC44821-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71866.D	1	06/20/17 10:48	AD	06/09/17 16:45	OP3600A	E4M3343
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		29-124%
321-60-8	2-Fluorobiphenyl	74%		23-122%
1718-51-0	Terphenyl-d14	77%		22-130%

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:	RE127D1		
Lab Sample ID:	JC44821-2	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129614.D	1	06/13/17 04:51	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	RE127D1		
Lab Sample ID:	JC44821-2	**Date Sampled:**	06/06/17
Matrix:	AQ - Ground Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		73-122%
2037-26-5	Toluene-D8	94%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

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

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

Report of Analysis

Client Sample ID: RE127D1
Lab Sample ID: JC44821-2
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71867.D	1	06/20/17 11:20	AD	06/09/17 16:45	OP3600A	E4M3343
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	91%		29-124%
321-60-8	2-Fluorobiphenyl	75%		23-122%
1718-51-0	Terphenyl-d14	77%		22-130%

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: TB060617AD1
Lab Sample ID: JC44821-3
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129609.D	1	06/13/17 02:30	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB060617AD1		
Lab Sample ID:	JC44821-3	**Date Sampled:**	06/06/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	97%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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

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

Report of Analysis

Client Sample ID:	FB060617AD1		
Lab Sample ID:	JC44821-4	**Date Sampled:**	06/06/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3D129608.D	1	06/13/17 02:02	XC	n/a	n/a	V3D5494
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB060617AD1		
Lab Sample ID:	JC44821-4	**Date Sampled:**	06/06/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/07/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		76-120%
17060-07-0	1,2-Dichloroethane-D4	99%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060617AD1
Lab Sample ID: JC44821-4
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/06/17
Date Received: 06/07/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71868.D	1	06/20/17 11:51	AD	06/09/17 16:45	OP3600A	E4M3343
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		29-124%
321-60-8	2-Fluorobiphenyl	74%		23-122%
1718-51-0	Terphenyl-d14	89%		22-130%

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

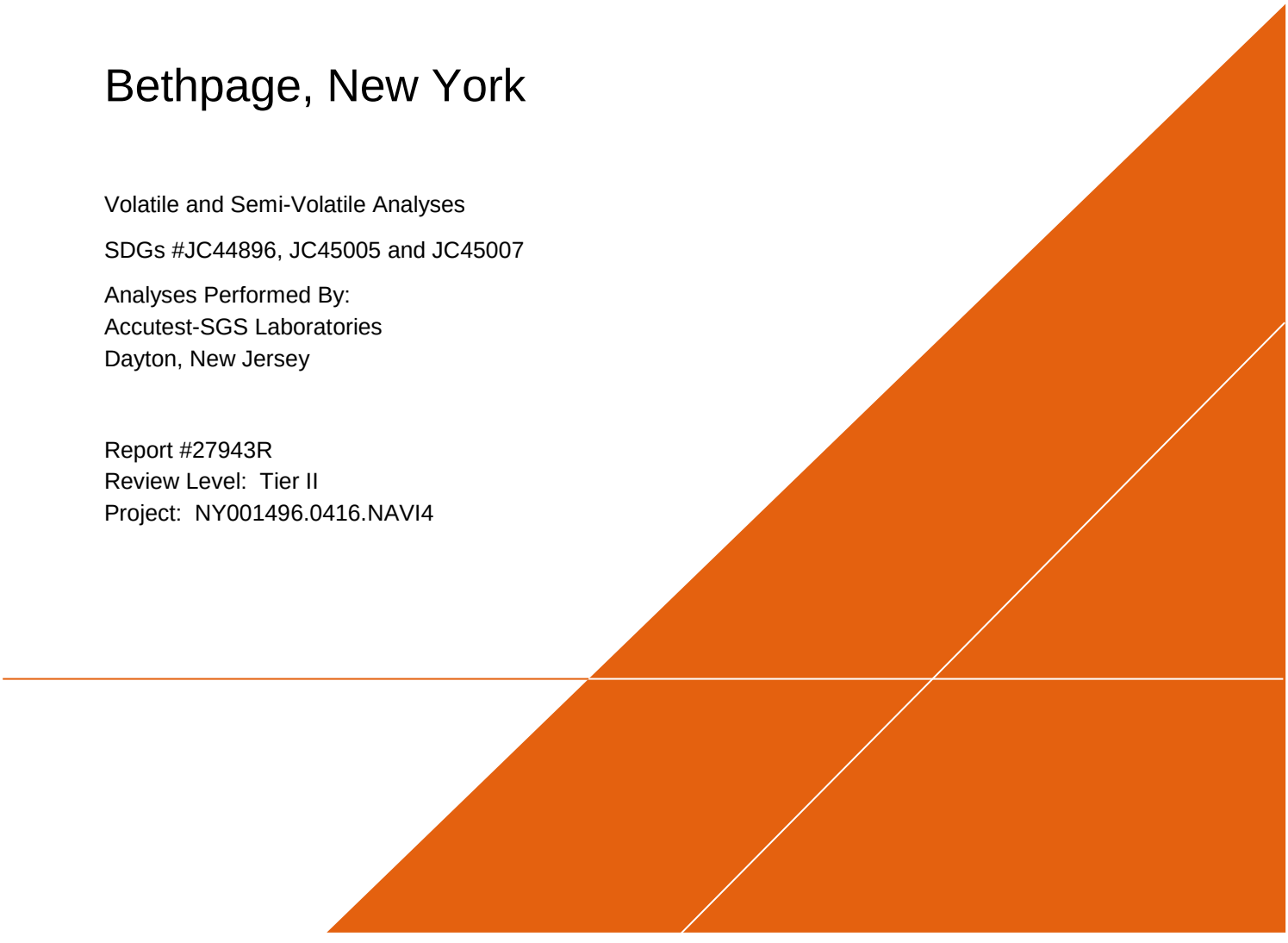
Bethpage, New York

Volatile and Semi-Volatile Analyses

SDGs #JC44896, JC45005 and JC45007

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

Report #27943R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC44896, JC45005 and JC45007 samples collected in association with the Navy Wells at the Bethpage, NY 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
JC44896	RE128D1	JC44896-1	Water	06/07/2017		X	X			
	RE128D2	JC44896-2	Water	06/07/2017		X	X			
	FB060717JB1	JC44896-3	Water	06/07/2017		X	X			
	TB060717JB1	JC44896-4	Water	06/07/2017		X				
JC45005	RE129D1	JC45005-1	Water	06/08/2017		X	X			
	FB060817JB1	JC45005-2	Water	06/08/2017		X	X			
	TB060817JB1	JC45005-3	Water	06/08/2017		X				
	RE129D2	JC45005-4	Water	06/08/2017		X	X			
JC45007	RE121D1	JC45007-1	Water	06/09/2017		X	X			
	RE121D2	JC45007-2	Water	06/09/2017		X	X			
	REP060917AD1	JC45007-3	Water	06/09/2017	RE121D2	X	X			
	FB060917JB1	JC45007-4	Water	06/09/2017		X	X			
	TB060917AR1	JC45007-5	Water	06/09/2017		X				

Note:

1. Matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location RE121D1 for VOC and 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 8260C and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	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 all SDGs.

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

A MS/MSD was not performed on a sample location associated with SDGs JC44896 and JC45005.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries in SDG JC45007.

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 in all SDGs.

6. Field Duplicate Analysis

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

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC45007: RE121D2/ REO060917AD1	Carbon tetrachloride	4.3	4.2	AC
	Chloroform	1.7	1.6	
	1,1-Dichloroethane	0.72 J	0.68 J	
	1,1-Dichloroethene	3.6	3.6	
	cis-1,2-Dichloroethene	2.1	2.2	
	Freon 113	14.4	14.1	
	Tetrachloroethene	0.56 J	0.53 J	
	1,1,1-Trichloroethane	0.49 J	0.48 J	
	1,1,2-Trichloroethane	0.64 J	0.61 J	
	Trichloroethene	789	728	8.0%

Notes:

AC Acceptable

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

A field duplicate was not collected with a sample location associated with SDGs JC44896 or JC45005.

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 was not performed on a sample location associated with any of the SDGs validated in this report.

8. System Performance and Overall Assessment

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

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
SDG JC45007:				
RE121D2	Trichloroethene	--	789 D	789 D
REP060917AD1		--	728 D	728 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

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

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8270D-SIM	Water	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits in all SDGs.

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

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

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

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 JC45007: RE121D1	1,4-Dioxane	>UL	>UL

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	

A MS/MSD was not performed on a sample location associated with SDGs JC44896 or JC45005.

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 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.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
SDG JC45007: RE121D2/ REO060917AD1	1,4-Dioxane	2.64	3.93	40%

Notes:

AC Acceptable

The compound 1,4-Dioxane associated with sample locations RE121D2 and REP060917AD1 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analyte were qualified as estimated.

A field duplicate was not collected with a sample location associated with SDGs JC44896 or JC45005.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	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: July 31, 2017

PEER REVIEW: Todd Church

DATE: August 1, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

GW
FB
w TB

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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 # JC44896

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): Alvina Radzepagic 212-365-4651 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE 128D1		6/7/2017	1410	AR	GW	5	3				2						3	2	E39
2	RE 128D2		6/7/2017	1425	TB	GW	5	3				2						3	2	V1208
3	FB060717TB1		6/7/2017	1100	TB	EB	5	3				2						3	2	
4	TB060717TB1		6/7/2017	900	—	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*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Labiink 6/8/17 1105

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
INITIAL ASESSMENT JS/1B
LABEL VERIFICATION DO

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6/7/17 1630	1	2	6/8/17 1705	2
3			3	4		4
5			5			

Custody Seal # — Intact / Not Intact — Preserved where applicable — On Ice — Cooler Temp. 03.6 C

Report of Analysis

Client Sample ID:	RE128D1		
Lab Sample ID:	JC44896-1	**Date Sampled:**	06/07/17
Matrix:	AQ - Ground Water	**Date Received:**	06/08/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B138490.D	1	06/19/17 10:06	VC	n/a	n/a	V3B6135
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	0.80	1.0	0.25	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	RE128D1		
Lab Sample ID:	JC44896-1	**Date Sampled:**	06/07/17
Matrix:	AQ - Ground Water	**Date Received:**	06/08/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	92%		78-117%

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

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

Report of Analysis

Client Sample ID: RE128D1
Lab Sample ID: JC44896-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/07/17
Date Received: 06/08/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71911.D	1	06/21/17 12:57	AD	06/12/17 18:25	OP3655A	E4M3345
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.11	0.054	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		29-124%
321-60-8	2-Fluorobiphenyl	75%		23-122%
1718-51-0	Terphenyl-d14	50%		22-130%

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: RE128D2
Lab Sample ID: JC44896-2
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/07/17
Date Received: 06/08/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B138476.D	1	06/17/17 21:24	VC	n/a	n/a	V3B6134
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	0.48	1.0	0.25	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	RE128D2		
Lab Sample ID:	JC44896-2	**Date Sampled:**	06/07/17
Matrix:	AQ - Ground Water	**Date Received:**	06/08/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	92%		78-117%

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

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

Report of Analysis

Client Sample ID: RE128D2
Lab Sample ID: JC44896-2
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/07/17
Date Received: 06/08/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71912.D	1	06/21/17 13:28	AD	06/12/17 18:25	OP3655A	E4M3345
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		29-124%
321-60-8	2-Fluorobiphenyl	89%		23-122%
1718-51-0	Terphenyl-d14	68%		22-130%

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: FB060717JB1
Lab Sample ID: JC44896-3
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/07/17
Date Received: 06/08/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B138439.D	1	06/17/17 02:23	VC	n/a	n/a	V3B6133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	FB060717JB1		
Lab Sample ID:	JC44896-3	**Date Sampled:**	06/07/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/08/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	95%		84-119%
460-00-4	4-Bromofluorobenzene	90%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060717JB1
Lab Sample ID: JC44896-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/07/17
Date Received: 06/08/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71913.D	1	06/21/17 13:59	AD	06/12/17 18:25	OP3655A	E4M3345
Run #2							

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

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		29-124%
321-60-8	2-Fluorobiphenyl	81%		23-122%
1718-51-0	Terphenyl-d14	75%		22-130%

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:	TB060717JB1		
Lab Sample ID:	JC44896-4	**Date Sampled:**	06/07/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/08/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3B138440.D	1	06/17/17 02:52	VC	n/a	n/a	V3B6133
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	TB060717JB1		
Lab Sample ID:	JC44896-4	**Date Sampled:**	06/07/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/08/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		76-120%
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	96%		84-119%
460-00-4	4-Bromofluorobenzene	88%		78-117%

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

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

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

GW
WTB
FB

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 # JC45005

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): Jordan Bochner 516-623-3289 Phone #:

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE1Z9D1		6/8/17	1220	AO	GW	5	3							2			3	2	EJ
2	FB060817FB1		6/8/17	940	JB	FB	5	3							2			3	2	VJ
3	TB060817TB1		6/8/17	940	—	TB	2	2										2		
4	RE1Z9D2		6/8/17	1215	JB	GW	5	3							2			3	2	

Matrix Codes

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

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT 2A/DS
LABEL VERIFICATION

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
2 Coolers

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6/8/17 1540	1	6/9/17 1210	6/9/17 1750	2
3			3	4		4
5			5	Custody Seal #	Intact / Not intact	Preserved where applicable

On Ice: X Cooler Temp: 2.6°, 2.4° CIP

Report of Analysis

Client Sample ID:	RE129D1		
Lab Sample ID:	JC45005-1	**Date Sampled:**	06/08/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80228.D	1	06/16/17 04:21	BK	n/a	n/a	V4D3464
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	1.0	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	RE129D1		
Lab Sample ID:	JC45005-1	**Date Sampled:**	06/08/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		76-120%
17060-07-0	1,2-Dichloroethane-D4	115%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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

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

Report of Analysis

Client Sample ID: RE129D1
Lab Sample ID: JC45005-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/08/17
Date Received: 06/09/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71892.D	1	06/21/17 03:13	JJ	06/14/17 08:50	OP3702A	E4M3344
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		29-124%
321-60-8	2-Fluorobiphenyl	76%		23-122%
1718-51-0	Terphenyl-d14	69%		22-130%

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: FB060817JB1
Lab Sample ID: JC45005-2
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/08/17
Date Received: 06/09/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80246.D	1	06/16/17 13:29	BK	n/a	n/a	V4D3465
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	FB060817JB1		
Lab Sample ID:	JC45005-2	**Date Sampled:**	06/08/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		76-120%
17060-07-0	1,2-Dichloroethane-D4	112%		73-122%
2037-26-5	Toluene-D8	103%		84-119%
460-00-4	4-Bromofluorobenzene	103%		78-117%

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

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

Report of Analysis

Client Sample ID: FB060817JB1
Lab Sample ID: JC45005-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/08/17
Date Received: 06/09/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71893.D	1	06/21/17 02:10	JJ	06/14/17 08:50	OP3702A	E4M3344
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		29-124%
321-60-8	2-Fluorobiphenyl	85%		23-122%
1718-51-0	Terphenyl-d14	79%		22-130%

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: TB060817JB1
Lab Sample ID: JC45005-3
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/08/17
Date Received: 06/09/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80227.D	1	06/16/17 03:53	BK	n/a	n/a	V4D3464
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	TB060817JB1		
Lab Sample ID:	JC45005-3	**Date Sampled:**	06/08/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		76-120%
17060-07-0	1,2-Dichloroethane-D4	114%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

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

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

Report of Analysis

Client Sample ID:	RE129D2		
Lab Sample ID:	JC45005-4	**Date Sampled:**	06/08/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80229.D	1	06/16/17 04:48	BK	n/a	n/a	V4D3464
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	1.1	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	RE129D2		
Lab Sample ID:	JC45005-4	**Date Sampled:**	06/08/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		76-120%
17060-07-0	1,2-Dichloroethane-D4	115%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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

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

Report of Analysis

Client Sample ID: RE129D2
Lab Sample ID: JC45005-4
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 06/08/17
Date Received: 06/09/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71894.D	1	06/21/17 03:45	JJ	06/14/17 08:50	OP3702A	E4M3344
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.051	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		29-124%
321-60-8	2-Fluorobiphenyl	71%		23-122%
1718-51-0	Terphenyl-d14	75%		22-130%

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

ACCUTEST LABORATORIES

GW
WTB
FB

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 # JC45007

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-249-7600 Fax #: 631-249-7610
Sampler(s) Name(s): Albina Redzepagic Phone #: 212-365-4657

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MECH	ENCORE	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM
1	RE 121 D1		6/9/17	1130	JB	GW	15	9				6						9	6
2	RE 121 D2		6/9/17	1230	AD	GW	5	3				2						3	2
3	REP060917AD1		6/9/17	—	AR	GW	5	3				2						3	2
4	FB060917JB1		6/9/17	9:00	JB	FB	5	3				2						3	2
5	TB060917AR1		6/9/17	8:00	—	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

LAB USE ONLY: F17 V11

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

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

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro
RE 121 D1 is MS/MSD

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 Albina Redzepagic	6/9/17 14:10	1 Chris Law @ Lab 14:10	2 Chris Law	6/9/17 1750	2
3		3	4		4
5		5	Custody Seal #	[x] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [x] Cooler Temp. 2.1°, 3.4°, 2.6°, 3.0° CIP

5.1.5

JC45007: Chain of Custody
Page 1 of 2

Report of Analysis

Client Sample ID:	RE121D1		
Lab Sample ID:	JC45007-1	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80221.D	1	06/16/17 01:07	BK	n/a	n/a	V4D3464
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	0.37	1.0	0.34	ug/l	J
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	0.36	1.0	0.29	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	1.7	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.0	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	6.6	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.36	1.0	0.25	ug/l	J
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	RE121D1		
Lab Sample ID:	JC45007-1	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	31.3	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	112%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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

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

Report of Analysis

Client Sample ID:	RE121D1		
Lab Sample ID:	JC45007-1	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69935.D	1	06/20/17 22:24	KM	06/14/17 12:30	OP3712A	E3M3310
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	4.76	0.10	0.050	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		29-124%
321-60-8	2-Fluorobiphenyl	70%		23-122%
1718-51-0	Terphenyl-d14	77%		22-130%

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:	RE121D2		
Lab Sample ID:	JC45007-2	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80248.D	1	06/16/17 14:25	BK	n/a	n/a	V4D3465
Run #2	4D80223.D	10	06/16/17 02:02	BK	n/a	n/a	V4D3464

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	4.3	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	1.7	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	0.72	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	3.6	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.1	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	14.4	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	0.56	1.0	0.50	ug/l	J
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.49	1.0	0.25	ug/l	J
79-00-5	1,1,2-Trichloroethane	0.64	1.0	0.24	ug/l	J

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

Report of Analysis

Client Sample ID:	RE121D2		
Lab Sample ID:	JC45007-2	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	789 [a]	10	2.7	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	107%	76-120%
17060-07-0	1,2-Dichloroethane-D4	117%	113%	73-122%
2037-26-5	Toluene-D8	101%	100%	84-119%
460-00-4	4-Bromofluorobenzene	102%	97%	78-117%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	RE121D2		
Lab Sample ID:	JC45007-2	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69945.D	1	06/21/17 00:02	KM	06/14/17 12:30	OP3712A	E3M3310
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	2.64	0.10	0.050	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		29-124%
321-60-8	2-Fluorobiphenyl	64%		23-122%
1718-51-0	Terphenyl-d14	37%		22-130%

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:	REP060917AD1		
Lab Sample ID:	JC45007-3	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80247.D	1	06/16/17 13:57	BK	n/a	n/a	V4D3465
Run #2	4D80225.D	10	06/16/17 02:58	BK	n/a	n/a	V4D3464

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	4.2	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	1.6	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	0.68	1.0	0.21	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	3.6	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.2	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	14.1	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	0.53	1.0	0.50	ug/l	J
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.48	1.0	0.25	ug/l	J
79-00-5	1,1,2-Trichloroethane	0.61	1.0	0.24	ug/l	J

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

Report of Analysis

Client Sample ID:	REP060917AD1		
Lab Sample ID:	JC45007-3	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	728	10	2.7	ug/l	D
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	107%	76-120%
17060-07-0	1,2-Dichloroethane-D4	115%	114%	73-122%
2037-26-5	Toluene-D8	101%	100%	84-119%
460-00-4	4-Bromofluorobenzene	102%	95%	78-117%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	REP060917AD1		
Lab Sample ID:	JC45007-3	**Date Sampled:**	06/09/17
Matrix:	AQ - Ground Water	**Date Received:**	06/09/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69946.D	1	06/21/17 00:34	KM	06/14/17 12:30	OP3712A	E3M3310
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	3.93	0.10	0.050	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		29-124%
321-60-8	2-Fluorobiphenyl	77%		23-122%
1718-51-0	Terphenyl-d14	65%		22-130%

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:	FB060917JB1		
Lab Sample ID:	JC45007-4	**Date Sampled:**	06/09/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80219.D	1	06/16/17 00:11	BK	n/a	n/a	V4D3464
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	FB060917JB1		
Lab Sample ID:	JC45007-4	**Date Sampled:**	06/09/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	109%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

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

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

Report of Analysis

Client Sample ID:	FB060917JB1		
Lab Sample ID:	JC45007-4	**Date Sampled:**	06/09/17
Matrix:	AQ - Field Blank Water	**Date Received:**	06/09/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3M69974.D	1	06/23/17 10:50	KM	06/14/17 12:30	OP3712A	E3M3314
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		29-124%
321-60-8	2-Fluorobiphenyl	61%		23-122%
1718-51-0	Terphenyl-d14	77%		22-130%

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:	TB060917AR1		
Lab Sample ID:	JC45007-5	**Date Sampled:**	06/09/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D80220.D	1	06/16/17 00:39	BK	n/a	n/a	V4D3464
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.17	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	4.8	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	1.0	0.59	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	1.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.16	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.24	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.3	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	3.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.17	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	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:	TB060917AR1		
Lab Sample ID:	JC45007-5	**Date Sampled:**	06/09/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	
	m,p-Xylene	ND	1.0	0.43	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	112%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

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

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

ARCADIS Design & Consultancy for natural and built assets

Navy Wells-

Operable Unit 2

Data Review

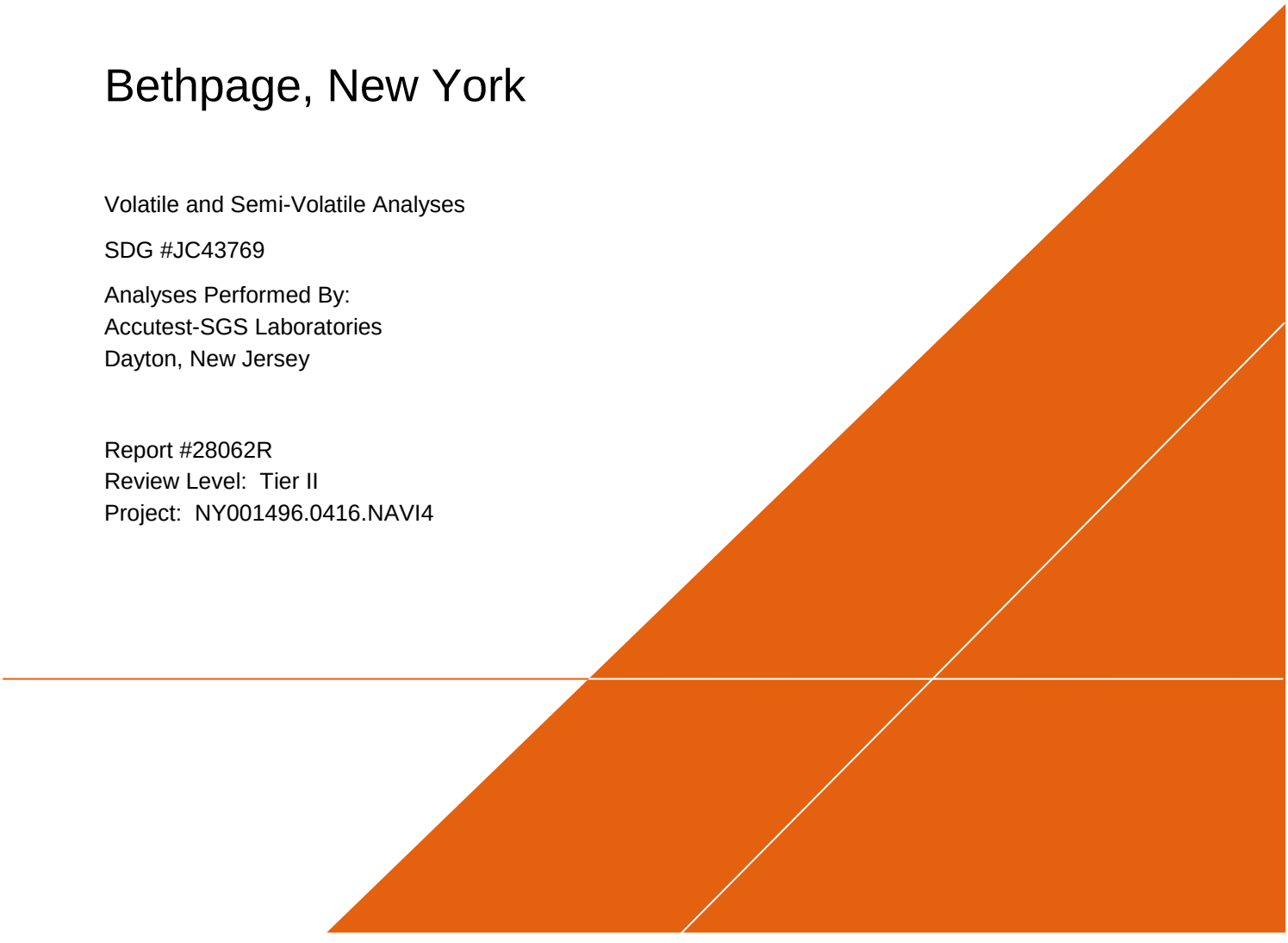
Bethpage, New York

Volatile and Semi-Volatile Analyses

SDG #JC43769

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

Report #28062R
Review Level: Tier II
Project: NY001496.0416.NAVI4



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #JC43769 for samples collected in association with the Navy Wells located at the Bethpage, New York 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
JC43769	RE119D1	JC43769-1	Water	05/19/2017		X	X			
	TB051917AD1	JC43769-2	Water	05/19/2017		X				
	FB051917AD1	JC43769-3	Water	05/19/2017		X	X			

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 8260C and 8270D-Selected Ion Monitoring (SIM). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and

provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUNDS (VOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	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 (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 duplicated was not collected with the 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.

The laboratory duplicate was performed on sample location RE119D1; the laboratory duplicate exhibited acceptable RPD.

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: SW-846 8260C	.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		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

RPD Relative percent difference

%R Percent recovery

SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC) ANALYSES

1. Holding Times

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

Method	Matrix	Holding Time	Preservation
SW-846 8270D-SIM	Water	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD was not performed on a sample location associated with 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.

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 the 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: SW-846 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

Notes:

%R Percent recovery

RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: July 25, 2017

PEER REVIEW: Todd Church

DATE: July 25, 2017

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

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 # JC43769

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): Ann Overmyer Phone #: 724-420-6243

Project Information

Project Name: AGMNYM72080 // OU2 Navy Outpost Wells
Navy Wells OU2 -Bethpage, New York
Street:
City: Bethpage State: NY
Project #: NY001496.0416.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015.10.30
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	Other	V5242NG36OW+40	SB522SIM14DIOX (GEL Lab)	VC82602NG36GW+40	1,4-Dioxane USEPA Method 8270D SIM	LAB USE ONLY
1	RE119D1		5/19/17	1235	AD	GW	5	3								2			3	2	E2
2	TB05191 7AD1		5/19/17	0900	—	TB	2	2											2		V1049
3	FB05191 7AD1		5/19/17	1000	AD	FB	5	3								2			3	2	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:
INITIAL ASESSMENT 5/19/17
LABEL VERIFICATION JK

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	Ann Overmyer 1400	5/19/17 1400	1 Chris Land	2 Chris Land	5/19/17 1824	
3			3	4		4
5			5			

Custody Seal # 56 Intact / Not intact | Preserved where applicable | On Ice | Cooler Temp. 3.6°C IR

Report of Analysis

Client Sample ID:	RE119D1		
Lab Sample ID:	JC43769-1	**Date Sampled:**	05/19/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133498.D	1	05/31/17 13:04	JP	n/a	n/a	V2E5840
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RE119D1		
Lab Sample ID:	JC43769-1	**Date Sampled:**	05/19/17
Matrix:	AQ - Ground Water	**Date Received:**	05/19/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		76-120%
17060-07-0	1,2-Dichloroethane-D4	88%		73-122%
2037-26-5	Toluene-D8	93%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: RE119D1
Lab Sample ID: JC43769-1
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/19/17
Date Received: 05/19/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71489.D	1	05/30/17 13:42	AD	05/26/17	OP3181A	E4M3317
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	91%		29-124%
321-60-8	2-Fluorobiphenyl	86%		23-122%
1718-51-0	Terphenyl-d14	64%		22-130%

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: TB051917AD1
Lab Sample ID: JC43769-2
Matrix: AQ - Trip Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/19/17
Date Received: 05/19/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133511.D	1	05/31/17 19:14	JP	n/a	n/a	V2E5840
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB051917AD1		
Lab Sample ID:	JC43769-2	**Date Sampled:**	05/19/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/19/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		76-120%
17060-07-0	1,2-Dichloroethane-D4	87%		73-122%
2037-26-5	Toluene-D8	94%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FB051917AD1
Lab Sample ID: JC43769-3
Matrix: AQ - Field Blank Water
Method: SW846 8260C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/19/17
Date Received: 05/19/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E133497.D	1	05/31/17 12:36	JP	n/a	n/a	V2E5840
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.55	ug/l	
75-25-2	Bromoform	ND	1.0	0.34	ug/l	
74-83-9	Bromomethane	ND	2.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
75-00-3	Chloroethane	ND	1.0	0.44	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.96	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.5	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.27	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.39	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB051917AD1		
Lab Sample ID:	JC43769-3	**Date Sampled:**	05/19/17
Matrix:	AQ - Field Blank Water	**Date Received:**	05/19/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Navy Wells, OU2, Bethpage, NY		

VOA OU2 GW List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		76-120%
17060-07-0	1,2-Dichloroethane-D4	87%		73-122%
2037-26-5	Toluene-D8	93%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FB051917AD1
Lab Sample ID: JC43769-3
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Navy Wells, OU2, Bethpage, NY

Date Sampled: 05/19/17
Date Received: 05/19/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M71490.D	1	05/30/17 16:17	AD	05/26/17	OP3181A	E4M3317
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		29-124%
321-60-8	2-Fluorobiphenyl	75%		23-122%
1718-51-0	Terphenyl-d14	129%		22-130%

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

Appendix D

ARCADIS Separate and Ongoing OU2 Monitoring of Navy Wells

Appendix D. Schedule of ARCADIS Separate and 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	524.2
BPOW4-2R	Navy		X		X	524.2
Semi-annual and annual						
TT102D	Navy		X		X	8260C
TT102D2	Navy		X		X	8260C
FW-03	Navy		X			8260C
GM-15D	Navy		X		X	8260C
GM-15D2	Navy		X		X	8260C
GM-17D	Navy		X		X	8260C
GM-17I	Navy		X		X	8260C
GM-18D	Navy		X		X	8260C
GM-21D	Navy		X			8260C
GM-39DA	Navy		X		X	8260C
GM-39DB	Navy		X		X	8260C
GM-73D	Navy		X		X	8260C
GM-73D2	Navy		X		X	8260C
GM-74D	Navy		X		X	8260C
GM-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

Above Navy owned wells sampled by ARCADIS and reported by ARCADIS under separate cover.
Q: Quarter
VOC: volatile organic compound