SEPTEMBER 2015 GROUNDWATER SAMPLING DATA SUMMARY REPORT

NAVAL WEAPONS INDUSTRIAL RESERVE PLAN (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

February 2016

SEPTEMBER 2015 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

February 2016

Brian Caldwell

Brian Caldwell
Contract Task Order Manager

Table of Contents

List of Acronyms and Abbreviations iii

1.0 PROJECT BACKGROUND 1

2.0 FIELD PROGRAM 2

2.1 Sampling 2
2.2 Investigation Derived Waste 2

3.0 SUMMARY 4

4.0 REFERENCES 5

Tables

Table 1 Monitoring Well Construction Summary

Table 2 Analytical Data Summary for Wells Sampled by Resolution Consultants

Table 3 Stabilized Field Parameters for Wells Sampled by Resolution Consultants

Table 4 Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells BPOW5-1, BPOW5-2, BPOW5-3, BPOW5-4, BPOW5-5, and BPOW5-6, Third Quarter 2015

Table 5 Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells BPOW6-1, BPOW6-2, BPOW6-3, BPOW6-4, BPOW6-5 and BPOW6-6, Third Quarter 2015

Figures

Figure 1 General Location Map

Figure 2 Monitoring Well Sample Locations September 2015 Groundwater Sampling

Appendices

Appendix A Groundwater Sampling Forms – Resolution Consultants

Appendix B Analytical Data Validation – Resolution Consultants

Appendix C Analytical Data Validation - ARCADIS

Appendix D ARCADIS Report: *Results of Third Quarter 2015 Groundwater Monitoring* (ARCADIS, 2015)

List of Acronyms and Abbreviations

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

1.0 PROJECT BACKGROUND

Resolution Consultants has prepared this Groundwater Sampling Data Summary Report for the Naval Facilities Engineering Command, Mid-Atlantic under contract task order WE15 Contract N62470-11-D-8013. The report describes quarterly sampling activities in September 2015, 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 34 monitoring wells by Resolution Consultants (for the Navy) and ARCADIS (for Northrop Grumman). 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. The locations of monitoring wells sampled as part of this effort are shown in Figure 2 and listed in Table 1.

Per an agreement between the Navy and Northrop Grumman (letter May 6, 2015), Northrop Grumman takes over the quarterly sampling of selected monitoring wells after the initial sampling (post well installation) by Resolution Consultants. A total of 12 monitoring wells were transitioned to Northrop Grumman for the September 2015 quarterly sampling.

Documentation of these activities is included in the appendices of this report. Groundwater sampling forms, and analytical data validation for wells sampled by Resolution Consultants are included in Appendix A and B, respectively. Appendix C contains analytical data validation for wells sampled by ARCADIS.

Additional Navy-owned wells were sampled by ARCADIS in the third quarter of 2015 as part of ongoing OU2 monitoring programs. These activities are documented in their report, *Results of Third Quarter 2015 Groundwater Monitoring* (ARCADIS, 2015), included in Appendix D to this report.

2.0 FIELD PROGRAM

Field tasks were conducted in September of 2015 in accordance with the Uniform Federal Policy (UFP) Sampling and Analysis Plan (SAP) Addendum: *Groundwater Sampling Using Low Stress (Low Flow) Purging and Sampling Protocol* (Resolution Consultants, 2013). The field investigation included purging and sampling of monitoring wells in the quarterly groundwater sampling network.

The September 2015 quarterly sampling round consisted of a total of 34 wells (Table 1). Of these, 22 groundwater wells were sampled by Resolution Consultants and 12 were sampled by ARCADIS, Northrop Grumman's consultant. ARCADIS sampled the following wells after initial sampling by Resolution Consultants in June 2015 (Resolution Consultants, 2015): BPOW5-5, BPOW5-6, BPOW6-5, and BPOW6-6. These wells were transitioned to ARCADIS for the September sampling event.

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 8270C 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 and data validation packages for ARCADIS-sampled wells are provided in Table 4, Table 5 and Appendix C of this report.

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 liquinox and water wash, a potable water rinse followed by a distilled water rinse. Purge water was collected in 5-gallon pails or 55-gallon drums.

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

3.0 SUMMARY

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

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

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

Documentation of other ongoing OU2 groundwater sampling activities by ARCADIS in the third quarter 2015 can be found in their report, *Results of Third Quarter 2015 Groundwater Monitoring* (ARCADIS, 2015). This ARCADIS report is included as Appendix D to this report.

4.0 REFERENCES

ARCADIS, 2015. *Results of Third Quarter 2015 Groundwater Monitoring, Operable Unit 2, Northrop Grumman Systems Corporation and Naval Weapons Industrial Reserve Plant (NWIRP) Sites, Bethpage, New York*. November.

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

Resolution Consultants, 2015. *June 2015 Groundwater Sampling Data Summary Report, Bethpage, NY*. October.

Tables

TABLE 1
MONITORING WELL CONSTRUCTION SUMMARY
2015 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

Well	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Mid-screen (ft bgs)	Sump Length (ft)	VPB affiliation	Sampled by
RE103D1	645	625	640	630	5	VPB137	Resolution
RE103D2	673	653	673	663	0	VPB137	Resolution
RE103D3	735	715	730	720	5	VPB137	Resolution
RE104D1	375	350	370	360	5	VPB138	Resolution
RE104D2	735	710	730	720	5	VPB138	Resolution
RE104D3	785	760	780	770	5	VPB138	Resolution
RE105D1	555	530	550	540	5	VPB139	Resolution
RE105D2	755	730	750	740	5	VPB139	Resolution
RE108D1	555	530	550	540	5	VPB142	Resolution
RE108D2	655	630	650	640	5	VPB142	Resolution
RE120D1	655	630	650	640	5	VPB154	Resolution
RE120D2	713	690	710	700	3	VPB154	Resolution
RE120D3	765	740	760	750	5	VPB154	Resolution
RE122D1	545	520	540	530	5	VPB156	Resolution
RE122D2	615	590	610	600	5	VPB156	Resolution
RE122D3	740	715	735	725	5	VPB156	Resolution
RE123D1	505	480	500	490	5	VPB157	Resolution
RE123D2	660	635	655	645	5	VPB157	Resolution
RE123D3	840	815	835	825	5	VPB157	Resolution
TT101D	350	325	345	335	5	VPB129	Resolution
TT101D1	595	570	590	580	5	VPB129	Resolution
TT101D2	765	740	760	750	5	VPB129	Resolution
BPOW5-1	515	480	510	495	5	VPB132	ARCADIS
BPOW5-2	585	540	580	560	5	VPB132	ARCADIS
BPOW5-3	665	620	660	640	5	VPB132	ARCADIS
BPOW5-4	575	545	570	557.5	5	VPB151	ARCADIS
BPOW5-5	545	515	540	527.5	5	VPB152	ARCADIS
BPOW5-6	615	585	610	597.5	5	VPB152	ARCADIS
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 2015 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE104D1	RE104D2	RE104D3	RE105D1
Sample Date		9/25/2015	9/25/2015	9/25/2015	9/28/2015
Sample ID		RE104D1-GW-092515	RE104D2-GW-092515	RE104D3-GW-092515	RE105D1-GW-092815
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	**4.6**	< 0.50 U	< 0.50 U	**11**
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-DICHLOROETHENE	5	**0.87 J**	< 0.50 U	< 0.50 U	**1.6**
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	**1.2 J**	**2.0**	< 1.0 U	**1.6 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	**12**	**0.13 J**	< 0.17 U	**14**
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CHLOROFORM	7	< 0.50 U	**0.53 J**	< 0.50 U	**0.34 J**
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	**1.2**	**2.0**	< 0.50 U	**1.6**
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	**0.49 J**	< 1.0 UJ	< 1.0 UJ	**0.74 J**
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	**2.3 J**	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 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	**110**	**4.2**	< 0.50 U	**94**
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
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 2015 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE105D2	RE108D1	RE108D2	RE123D1
Sample Date		9/28/2015	9/28/2015	9/28/2015	9/29/2015
Sample ID		RE105D2-GW-092815	RE108D1-GW-092815	RE108D2-GW-092815	RE123D1-GW-092915
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	**30**	**1.2**	**8.3**	< 0.50 U
1,1,2-TRICHLOROETHANE	1	**1.1**	< 0.50 U	**1.5**	< 0.50 U
1,1-DICHLOROETHANE	5	**1.7**	< 0.50 U	**5.3**	< 0.50 U
1,1-DICHLOROETHENE	5	**6.8**	< 0.50 U	**7.6**	**0.42 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	**3.6**	**0.39 J**	**8.6**	**0.50 J**
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-DIOXANE (Method 8270D_SIM)	NL	**8.7**	**7.9**	**7.5**	**6.6**
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 UJ	**6.9 J**	< 2.5 UJ	**5.4 J**
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 U
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	**3.7**	< 0.50 U	**1.6**	< 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 U
CHLOROFORM	7	**2.2**	< 0.50 U	**3.7**	< 0.50 U
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	**3.6**	**0.39 J**	**8.6**	**0.50 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	**0.40 J**	< 1.0 UJ	< 1.0 UJ	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 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 UJ
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	**1.4 J**	**1.3 J**	**2.5 J**	**3.8 J**
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
TRICHLOROETHENE	5	**1900**	**98**	**3400**	**12**
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 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 2015 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE123D2	RE123D3	RE120D1	RE120D2
Sample Date		9/29/2015	9/29/2015	9/29/2015	9/29/2015
Sample ID		RE123D2-GW-092915	RE123D3-GW-092915	RE120D1-GW-092915	RE120D2-GW-092915
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	**1.4**	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	< 0.50 U	< 0.50 U	**36**	**21**
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	**1.6**	**0.45 J**
1,1-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	**2.9**	< 0.50 U
1,1-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	**20**	**4.9**
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 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	< 1.0 U	**2.7**	**2.7**
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	**0.93**	< 0.17 U	**25**	**16**
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U
ACETONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
BROMOMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 U
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	**0.77 J**	**0.72 J**
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	**2.7**	**2.7**
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
DICHLORODIFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 UJ	**0.31 J**
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 U	< 0.50 U
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	**3.7 J**	< 0.50 UJ	**1.9**	**3.1**
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***
TRICHLOROETHENE	5	**1.4**	< 0.50 U	**1300 J**	**760 J**
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	**0.44 J**	< 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 2015 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE120D3	TT101D	TT101D	TT101D1
Sample Date		9/29/2015	9/29/2015	9/29/2015	9/29/2015
Sample ID		RE120D3-GW-092915	TT101D-GW-092915	DUPLICATE-GW-092915	TT101D1-GW-092915
Sample type code		N	N	FD	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**2.9**	**14**	**15**	**13 J**
1,1,2-TRICHLOROETHANE	1	< 0.50 U	< 0.50 U	< 0.50 U	**0.49 J**
1,1-DICHLOROETHANE	5	< 0.50 U	**0.43 J**	**0.61 J**	< 0.50 UJ
1,1-DICHLOROETHENE	5	< 0.50 U	**3.1**	**3.3**	**4.0 J**
1,2,4-TRICHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	< 1.0 U	**1.9 J**	**1.8 J**	**0.92 J**
1,2-DICHLOROPROPANE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**1.2**	**13**	**14**	**11 J**
2-BUTANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ
2-HEXANONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ
ACETONE	50	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ
BENZENE	1	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
BROMOFORM	50	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
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 UJ
CARBON TETRACHLORIDE	5	< 0.50 U	< 0.50 U	< 0.50 U	**1.6 J**
CHLOROBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
CHLOROETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
CHLOROFORM	7	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	< 0.50 U	**1.9**	**1.8**	**0.92 J**
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	**2.0 J**	**2.3 J**	**1.9 J**
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ
O-XYLENE	NL	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
TETRACHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
TOLUENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 U***	***< 0.50 U***	***< 0.50 U***	***< 0.50 UJ***
TRICHLOROETHENE	5	**120**	**67**	**67 J**	**170 J**
TRICHLOROFLUOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 UJ

TABLE 2. ANALYTICAL DATA SUMMARY FOR WELLS SAMPLED BY RESOLUTION CONSULTANTS 2015 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	TT101D2	RE122D1	RE122D2	RE122D3
Sample Date		9/29/2015	9/30/2015	9/30/2015	9/30/2015
Sample ID		TT101D2-GW-092915	RE122D1-GW-093015	RE122D2-GW-093015	RE122D3-GW-093015
Sample type code		N	N	N	N
VOC 8260C (ug/L)					
1,1,1-TRICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**19 J**	**4.4 J**	**20 J**	< 0.50 UJ
1,1,2-TRICHLOROETHANE	1	**0.60 J**	< 0.50 UJ	**2.4 J**	< 0.50 UJ
1,1-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,1-DICHLOROETHENE	5	**4.7 J**	**0.45 J**	**8.9 J**	< 0.50 UJ
1,2,4-TRICHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.04	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***	***< 0.75 UJ***
1,2-DIBROMOETHANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,2-DICHLOROETHENE, TOTAL	5	**1.0 J**	**1.0 J**	**4.9 J**	< 1.0 UJ
1,2-DICHLOROPROPANE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,3-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,4-DICHLOROBENZENE	3	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
1,4-DIOXANE (Method 8270D_SIM)	NL	**3.8**	**13**	**17**	< 0.17 U
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
BENZENE	1	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMODICHLOROMETHANE	50	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMOFORM	50	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
BROMOMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	**1.4 J**	< 0.50 UJ	**2.0 J**	< 0.50 UJ
CHLOROBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CHLOROETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CHLOROFORM	7	< 0.50 UJ	< 0.50 UJ	**1.6 J**	< 0.50 UJ
CHLOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
CIS-1,2-DICHLOROETHENE	5	**1.0 J**	**1.0 J**	**4.9 J**	< 0.50 UJ
CIS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***
CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
DIBROMOCHLOROMETHANE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
DICHLORODIFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	**0.36 J**	< 1.0 UJ
ETHYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
ISOPROPYLBENZENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
M- AND P-XYLENE	NL	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
METHYL ACETATE	NL	< 0.75 UJ	< 0.75 UJ	< 0.75 UJ	< 0.75 UJ
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
METHYL TERT-BUTYL ETHER	10	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
METHYLENE CHLORIDE	5	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
O-XYLENE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
STYRENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TETRACHLOROETHENE	5	**0.84 J**	**1.0 J**	**2.6 J**	< 0.50 UJ
TOLUENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TRANS-1,2-DICHLOROETHENE	5	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
TRANS-1,3-DICHLOROPROPENE	0.4	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***	***< 0.50 UJ***
TRICHLOROETHENE	5	**640 J**	**600 J**	**5200 J**	**10 J**
TRICHLOROFLUOROMETHANE	5	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
VINYL CHLORIDE	2	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ	< 1.0 UJ
XYLENES, TOTAL	5	< 1.5 UJ	< 1.5 UJ	< 1.5 UJ	< 1.5 UJ

TABLE 2. ANALYTICAL DATA SUMMARY FOR WELLS SAMPLED BY RESOLUTION CONSULTANTS 2015 OU2 GROUNDWATER INVESTIGATION

Location	NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE103D1	RE103D2	RE103D3
Sample Date		9/30/2015	9/30/2015	9/30/2015
Sample ID		RE103D1-GW-093015	RE103D2-GW-093015	RE103D3-GW-093015
Sample type code		N	N	N
VOC 8260C (ug/L)				
1,1,1-TRICHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2,2-TETRACHLOROETHANE	5	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5	**12**	**4.9**	**2.3 J**
1,1,2-TRICHLOROETHANE	1	**0.52 J**	**0.54 J**	< 0.50 U
1,1-DICHLOROETHANE	5	**1.0**	**0.72 J**	**0.50 J**
1,1-DICHLOROETHENE	5	**8.4**	**1.3**	**0.64 J**
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	**3.6**	**1.5 J**	**0.96 J**
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	**24**	**2.1**	**1.0**
2-BUTANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
2-HEXANONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
4-METHYL-2-PENTANONE	NL	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
ACETONE	50	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ
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 U	< 1.0 U	< 1.0 U
CARBON DISULFIDE	60	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
CARBON TETRACHLORIDE	5	**0.31 J**	**0.46 J**	< 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	**0.61 J**	**1.0**	**0.74 J**
CHLOROMETHANE	5	< 1.0 U	< 1.0 U	< 1.0 U
CIS-1,2-DICHLOROETHENE	5	**3.6**	**1.5**	**0.96 J**
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	**0.26 J**	< 1.0 U	< 1.0 U
ETHYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U
ISOPROPYLBENZENE	5	< 0.50 U	< 0.50 U	< 0.50 U
M- AND P-XYLENE	NL	< 1.0 U	< 1.0 U	< 1.0 U
METHYL ACETATE	NL	< 0.75 U	< 0.75 U	< 0.75 U
METHYL CYCLOHEXANE	NL	< 0.50 UJ	< 0.50 UJ	< 0.50 UJ
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 UJ	< 0.50 UJ	< 0.50 UJ
STYRENE	5	< 0.50 U	< 0.50 U	< 0.50 U
TETRACHLOROETHENE	5	**6.7**	**4.0**	**3.6 J**
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	**860**	**830**	**470**
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
2015 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
2015 OU2 GROUNDWATER INVESTIGATION

Well	Date	Temperature (°C)	pH	Specific Conductance (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Depth to water (ft bgs)	Flow rate (ml/min)
TT101D	9/29/2015	15.38	4.50	0.077	0.17	270.4	0.00	33.81	900
TT101D1	9/29/2015	14.83	4.21	0.078	0.60	366.0	0.00	35.38	750
TT101D2	9/29/2015	16.54	4.23	0.037	6.15	447.3	0.00	36.12	900
RE103D1	9/30/2015	15.52	4.41	0.082	4.42	344.6	0.01	40.26	700
RE103D2	9/30/2015	16.80	4.26	0.030	7.17	392.9	0.00	39.62	750
RE103D3	9/30/2015	16.00	4.42	0.026	4.15	312.1	0.00	40.62	500
RE104D1	9/25/2015	14.52	4.21	0.067	4.58	384.5	0.48	36.18	450
RE104D2	9/25/2015	14.73	5.16	0.019	6.65	279.7	1.39	40.56	500
RE104D3	9/25/2015	15.44	3.26	17.00	6.00	450.1	8.7	41.50	500
RE105D1	9/28/2015	14.86	4.48	0.099	2.07	364.4	0.59	38.68	500
RE105D2	9/28/2015	15.68	4.74	0.055	4.71	266.7	0.19	41.31	500
RE108D1	9/28/2015	15.32	4.41	0.086	6.76	374.8	0.32	41.01	750
RE108D2	9/28/2015	15.90	4.98	0.069	4.76	256.5	0.34	41.43	475
RE120D1	9/29/2015	16.22	4.19	0.096	1.41	354.4	0.15	37.55	500
RE120D2	9/29/2015	16.94	4.26	0.063	5.04	383.3	1.21	37.48	500
RE120D3	9/29/2015	16.40	4.58	0.025	3.28	271.7	10.6	37.28	600
RE122D1	9/30/2015	18.27	5.62	0.092	2.62	244.6	1.37	45.60	500
RE122D2	9/30/2015	18.01	4.40	0.087	4.47	364.2	1.64	42.38	500
RE122D3	9/30/2015	17.40	3.65	0.020	2.93	379.1	14.67	43.48	600
RE123D1	9/29/2015	19.82	5.01	0.097	7.64	261.9	5.26	46.62	500
RE123D2	9/29/2015	21.41	4.34	0.025	6.52	324.1	13.2	49.02	500
RE123D3	9/29/2015	19.54	5.12	0.041	0.46	-119.0	9.87	49.31	500

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

Table 4. Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells BPOW5-1, BPOW5-2, BPOW5-3, BPOW5-4, BPOW5-5,and BPOW5-6, Third Quarter 2015, Operable Unit 2 (Groundwater), Bethpage, New York.

CONSTITUENT (Units in µg/L)	Well: / Sample ID: / Date:	BPOW5-1 / BPOW5-1 / 8/31/2015	BPOW5-2 / BPOW5-2 / 9/1/2015	BPOW5-3 / BPOW5-3 / 9/2/2015	BPOW5-4 / BPOW5-4 / 9/14/2015	BPOW5-5 / BPOW5-5 / 9/15/2015	BPOW5-6 / BPOW5-6 / 9/16/2015
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 J	< 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 B	< 5.0 B	< 5.0 B
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 J	< 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 J	< 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)		< 0.21	< 0.21	**0.39**	**0.28**	**0.39**	< 0.23

Notes and Abbreviations:

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

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

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

Table 5. Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Monitoring Wells BPOW6-1, BPOW6-2, BPOW6-3, BPOW6-4, BPOW6-5 and BPOW6-6, Third Quarter 2015, Operable Unit 2 (Groundwater), Bethpage, New York.

CONSTITUENT (Units in µg/L)	Well: / Sample ID: / Date:	BPOW6-1 BPOW6-1 9/3/2015	BPOW6-2 BPOW6-2 9/4/2015	BPOW6-3 BPOW6-3 9/8/2015	BPOW6-4 BPOW6-4 9/9/2015	BPOW6-4 BPOW6-4R[1] 9/9/2015	BPOW6-5 BPOW6-5 9/10/2015	BPOW6-6 BPOW6-6 9/11/2015
Volatile Organic Compounds (VOCs)[2]								
1,1,1-Trichloroethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-trichloro-1,2,2-trifluroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Butanone (MEK)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4-methyl-2-pentanone (MIK)		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbon Disulfide		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	**0.24 J**	< 0.50
Carbon tetrachloride		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chlorobenzene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,2-dichloroethene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-dichloropropene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibromochloromethane		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ethylbenzene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene Chloride		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Styrene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toluene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,2-dichloroethene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-dichloropropene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethylene		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Vinyl Chloride		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylene-o		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylenes - m,p		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total VOCs[3]		0	0	0	0	0	**0.24**	**0**
1,4-Dioxane[4]		< 0.21	< 0.29	< 0.22	< 0.22	< 0.23	< 0.22	< 0.22

Notes and Abbreviations:

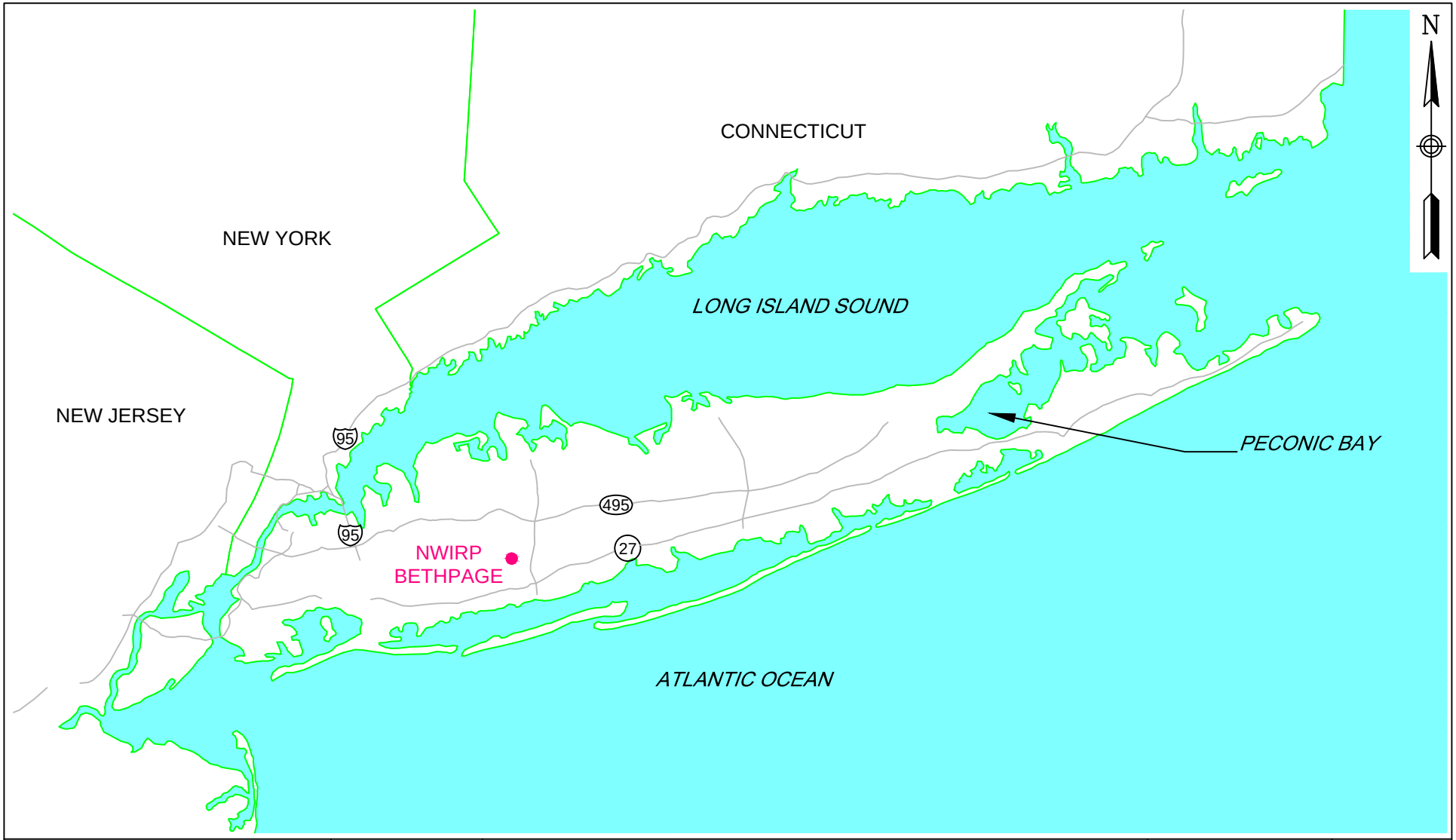
(1) BPOW 6-4R is a blind duplicate sample.
(2) Samples were analyzed for the TCL VOCs using USEPA Method 524.2.
(3) Total VOCs are rounded to two significant figures.
(4) Samples were analyzed for 1,4-Dioxane using USEPA Method 8270D SIM.

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

Bold Constituent detected
TCL Target Compound List
VOC Volatile Organic Compound
USEPA United States Environmental Protection Agency
SIM Selected Ion Monitoring
µg/L Micrograms per liter
B Compound detected in associated blank sample
<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 WXE0817.0 Deliverables\7.2 CADD\GIS_files\Bethpage\MAP DOCS\MXD\MISC\2014 03 Wells Sampled\F2 GW Samples 2016 01 05.mxd

N

Former Northrop Grumman Site

RE123D1 RE123D2 RE123D3
RE122D1 RE122D2 RE122D3
RE108D1 RE108D2
RE104D1 RE104D2 RE104D3
RE103D1 RE103D2 RE103D3
RE105D1 RE105D2
RE120D1 RE120D2 RE120D3
TT-101D TT-101D1 TT-101D2
BPOW5-1 BPOW5-2 BPOW5-3
BPOW5-5 BPOW5-6
BPOW5-4
BPOW6-3 BPOW6-4
BPOW6-5 BPOW6-6
BPOW6-1 BPOW6-2

MW-2GF, MW-5, MW-6, MW-4, MW-2, MW-3, MW-111-4, MW-3R, MW-116-5, MW-117-5, MW-118-5
GM-18S, GM-18I, GM-18D, GM-19S, GM-19I, GM-15S, GM-15I, GM-15D, GM-33D2, GM-39D, GM-39D2, GM-74I, GM-74D, GM-74D2, GM-74D3, GM-73D, GM-73D2, GM-73D3, GM-78S, GM-78I, GM-20I, GM-20D, GM-21S, GM-21I, GM-21D, GM-79I, GM-79D, GM-75D2, GM-70D2, GM-71D2, GM-37D, GM-37D2, GM-36D2, GM-36D, GM-34D, GM-34D2, GM-38D, GM-38D2
N-10631, N-10600, N-9921, N-10633, N-10628, N-10624, N-10627, N-10634, N-10821
WELL 17, WELL 18, WELL 19
VPB144, VPB39, VPB157, VPB73, VPB140, VPB141, VPB156, VPB121, VPB142, VPB137, VPB117, VPB138, VPB123, VPB122, VPB159, VPB154, VPB139, VPB110R, VPB110, VPB104, VPB158, VPB148, VPB46, VPB149, VPB44, VPB150, VPB45, VPB131, VPB130, VPB50, VPB128, VPB126, VPB125, VPB132, VPB153, VPB124, VPB40, VPB119, VPB77, VPB127, VPB43, VPB48, VPB38, VPB118, VPB47, VPB133, VPB167, VPB146, VPB147, VPB145, VPB151, VPB152
RE107D1 RE107D2 RE107D3
RE114D3
RE118D1
RE119D1
RE117D1 RE117D2
BPOW4-2R, BPOW4-1R
BPOW3-3 BPOW3-4
BPOW3-1 BPOW3-2
BPOW2-1 BPOW2-2 BPOW2-3
BPOW1-4 BPOW1-5 BPOW1-6
BPOW1-1 BPOW1-2 BPOW1-3
RW3-MW3 RW3-MW4
RW3-MW1 RW3-MW2
RW1-MW3
RW2-MW1
RW1-MW1 RW1-MW2
RW-3
RW-1
BWD-6915
BWD-6916
BWD-8941 BWD-3876
BWD-8004
SFWD-6150
SFWD-8664
SFWD-8665
SFWD-
ANY-8480
ANY-9338
LWD
LWD-5303

Old Bethpage
Plainedge
Levittown
North Wantagh
North Massapequa

Hempstead Tpke
Powell Ave
Broadway
Plainview Rd
Access Rd
General Ave
Hicksville Rd
Wantagh Ave
N Wantagh Ave
Stewart Ave
Bethpage State Pkwy
Union Ave
Miller Pl
Boundary Ave
Seamans Neck Rd
State Hwy 135
Southern State Pkwy
N Jerusalem Rd
Aikens Ave

0 750 1,500 3,000 Feet

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

MONITORING WELL SAMPLE LOCATIONS
SEPTEMBER 2015 GROUNDWATER SAMPLING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: EV	DATE: 1/8/2016
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendices

Appendix A

Groundwater Sampling Forms – Resolution Consultants

RESOLUTION CONSULTANTS

Well ID: RE10401

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 25 / 15 | Time: Start 1315 am/pm | Finish 1545 am/pm
Project No: 60266526
Site Location: Hilltop
Weather Conds: Sunny 80° | Collector(s): Paul Kenefick

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

a. Total Well Length 375 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 360.76 d. Calculated System Volume (see back) 49.6L / 13.1 gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RF4220118
	Hanna	98703	64518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
13:51		14.76	3.69	0.068	9.85	390.5		450		OX
13:56		14.49	3.56	0.068	5.79	398.6		450		clear NO
14:01		14.39	3.59	0.070	4.68	396.4				
14:06		14.29	3.65	0.069	5.60	399.2	1.64	450		
14:12		14.34	3.75	0.067	5.25	398.2			36.22	
1422	5g	14.23	3.80	0.067	4.96	399.8				
1430		14.30	3.84	0.067	4.88	400.8			36.19	

(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.

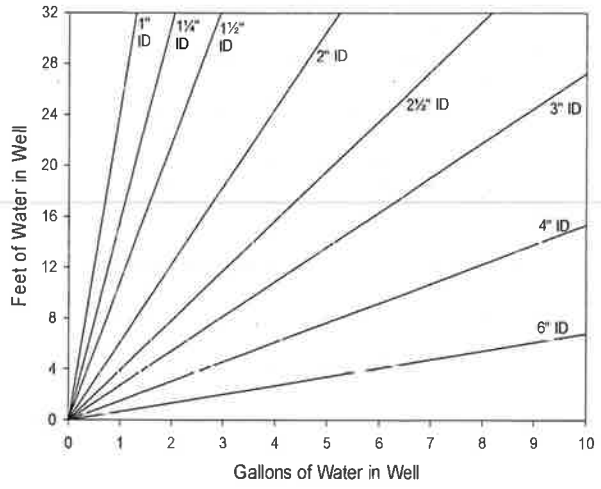
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10401GW-092515	40-mL vial	3	HCl	VOCs	1530
	1-L amber	2	none	1,4-Dioxane	

Comments: loggers Robinson for NYS DEC

Signature: _____ Date: 9/25/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
14:36	6.5 g	14.37	3.96	0.069	4.84	395.6	0.95	450	36.20	Clear NO
14:43		14.60	4.14	0.067	4.78	387.9				
14:48		14:35	4.00	0.067	4.78	396.4				
14.53	7 g	14.46	3.96	0.067	4.71	399.7	0.46		36.22	
14.58		14.48	4.22	0.067	4.72	3.87.5				
15:03		14:48	3.95	0.067	4.70	401			36.18	
15:08	10.5 g	14.24	3.97	0.066	4.71	400.9	0.43			
15.17		14.35	4.19	0.068	4.58	387.5				
15.22	13 g	14.52	4.21	0.067	4.58	384.5	0.48			

RESOLUTION CONSULTANTS

Well ID: RE10402

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / / 15 | Time: Start 1315 am/pm
Project No: 60266526 | Finish 1515 am/pm
Site Location: Hilltop
Weather Conds: Sunny 80° | Collector(s): Paul Karuth

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

a. Total Well Length 73.5 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 40.78 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RFW 22120
	Hanna	HI 98702	64515X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1340										
1350		15.05	5.06	0.022	7.52	265.2		475		
1355		15.00	5.06	0.021	6.47	267.7		500		
1400		14.95	5.07	0.021	6.02	269.4			40.74	
1405		14.94	5.07	0.022	5.93	272.1				
1410		14.90	5.07	0.021	5.98	273.3	3.33			
1415	5 gal	14.89	5.04	0.020	6.24	274.9	3.34			

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

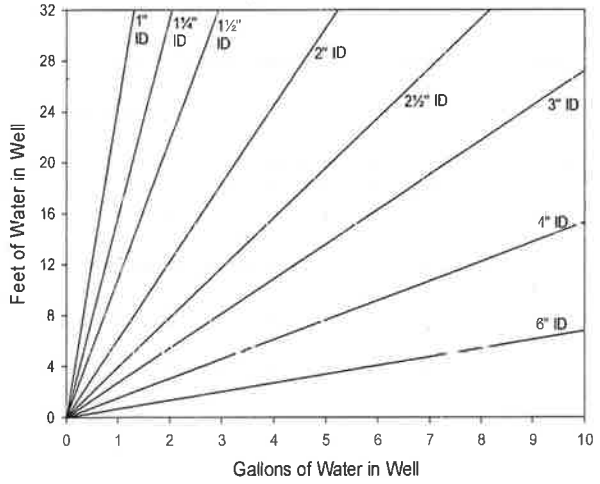
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10402-GW-092515	40-mL vial	3	HCl	VOCs	1520
RE10402-GW-092515	1-L amber	2	none	1,4-Dioxane	1520

Radium for DEC (3-1L plastic

Comments _____

Signature Paul Karuth Date 9/25/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE104D2 1340

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1420		14.84	5.11	0.019	6.42	276.3	3.47	500	40.62	
1425		14.83	5.12	0.019	6.47	276.8				
1430		14.81	5.14	0.019	6.52	277.4	3.11			
1435		14.84	5.13	0.019	6.55	277.7			40.63	
1440		14.82	5.15	0.019	6.56	277.7				
1445		14.83	5.15	0.019	6.62	278.3	2.73			
1450	10(2)	14.79	5.14	0.018	6.73	278.9		500		
1455		14.82	5.14	0.019	6.68	279.2			40.58	
1500		14.82	5.15	0.018	6.70	279.3				
1505		14.77	5.16	0.019	6.71	279.2				
1510		14.75	5.17	0.018	6.68	279.4	1.39			
1515		14.73	5.16	0.019	6.65	279.7		500	40.56	
1520										Sample

RESOLUTION CONSULTANTS

Well ID: RE104D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/25/15 Time: Start 1300 am/pm
Project No: 60266526 Finish 1545 am/pm
Site Location:
Weather Conds: Collector(s): Leslie Baechler

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

a. Total Well Length 795 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 41.87 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	24698
	Hanna	98703	64518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1335	6	15.95	4.32	20	5.66	351.2	4.26	500	41.75	Clear/none
1340		15.88	4.17	19	4.65	365.1		500		"
1350	10	15.83	4.00	18	5.20	386.6		500		"
1355		15.79	3.99	18	5.46	389.4		500		"
1400	16	15.75	3.98	17	5.72	393.1	4.75	560	41.64	"
1405		15.61	3.92	17	5.80	401.7		500		"
1410	20	15.59	3.86	17	5.85	407.5		500		"

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

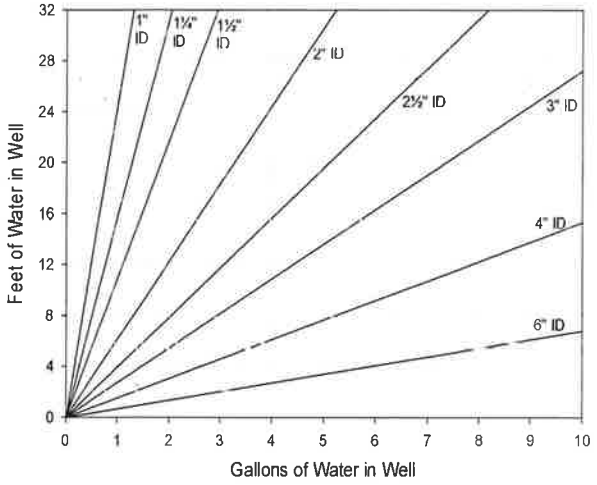
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE104D3-GW-092515	40-mL vial	3	HCl	VOCs	1455
	1-L amber	2	none	1,4-Dioxane	

Comments Radium for NYSDEC

Signature Leslie Baechler Date 9/25/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1415	1	15.59	3.81	17	5.85	411.8	5.21	500		clear | none
1420	26	15.47	3.67	17	5.90	421.3		500	41.50	"
1425		15.54	3.61	17	5.96	425.8		500		"
1430	30	15.50	3.64	17	5.97	424.8		500		"
1435		15.58	3.50	17	5.93	426.0	8.89	500	41.50	"
1440	36	15.56	3.43	17	5.94	442.3	8.33	500		"
1445		15.43	3.39	17	5.99	450.6	8.52	500		"
1450	40	15.44	3.26	17	6.00	450.1	8.71	500	41.50	"
1455					SAMPLE TIME					

RESOLUTION CONSULTANTS

Well ID: RE105D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/28/15 | Time: Start 910 am/pm | Finish 1120 am/pm
Project No: 60266526
Site Location: RE105 @ Roosevelt + Franklin
Weather Conds: 80°F overcast | Collector(s): JC

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

a. Total Well Length 535 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 39.82 d. Calculated System Volume (see back) 13.1 gal purge

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	22118
	Hanna	HI 98703	U 645 18X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
920	-	15.15	3.69	0.103	8.26	394.4	1.56	500	38.34	clear/none
925	-	14.69	3.77	0.103	5.15	401.6	0.79	500	38.92	"
930	-	14.67	3.81	0.101	3.72	398.0	0.91	500	39.10	"
935	-	14.66	4.00	0.099	2.38	397.0	0.72	500	39.10	"
940	-	14.61	4.02	0.098	2.21	396.1	0.69	500	39.11	"
945	-	14.57	4.05	0.098	1.93	395.2	0.71	500	39.12	"
950	-	14.65	4.11	0.099	2.28	391.8	0.64	500	39.14	"

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)

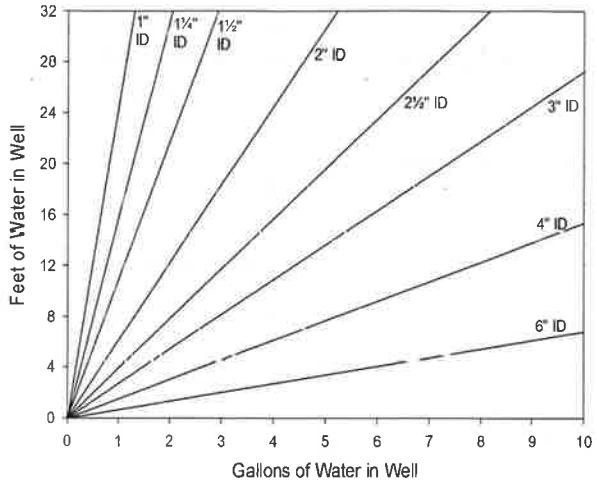
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D1-GW-092815	40-mL vial	3	HCl	VOCs	1100
RE105D1-GW-092815	1-L amber	2	none	1,4-Dioxane	1100

Comments: Transducer present.

Signature _____ Date 9/28/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE105D1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
955	5 gal	14.67	4.18	0.098	2.21	391.0	0.68	500	39.14	clear / none
1000	–	14.65	4.20	0.098	2.34	390.1	0.67	500	39.14	"
1005	–	14.64	4.23	0.098	2.41	389.2	0.71	500	39.15	"
1010	–	14.82	4.32	0.098	2.62	383.1	0.85	500	39.15	"
1015	–	14.83	4.32	0.098	2.39	383.4	0.83	500	39.15	"
1020	–	14.82	4.34	0.099	2.04	380.1	0.84	500	38.87	"
1025	–	14.62	4.26	0.098	1.87	387.2	0.65	500	38.72	"
1030	10 gal	14.68	4.30	0.098	1.79	382.6	0.71	500	38.65	"
1038	–	14.74	4.35	0.098	2.07	382.5	0.61	500	38.68	"
1040	–	14.75	4.37	0.098	2.23	378.9	0.59	500	38.68	"
1045	–	14.76	4.43	0.098	2.05	374.8	0.60	500	38.64	"
1050	–	14.77	4.43	0.098	2.11	369.1	0.59	500	38.69	"
1055	15	14.86	4.48	0.099	2.07	364.4	0.59	500	38.68	"

RESOLUTION CONSULTANTS

Well ID: RE105D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/28/15 | Time: Start 830 am/pm
Project No: 60266526 | Finish 1130 am/pm
Site Location: Lincoln
Weather Conds: Sunny 65° | Collector(s): Paul Kaveth

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

a. Total Well Length 75.5 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 42.73 d. Calculated System Volume (see back) 49.6 L / 13.1 gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RF22120
	Hanna	HI 98703	U645 18X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
900										start
910		15.42	4.14	0.052	6.19	323.0		475	43.15	
915		15.45	4.42	0.051	4.61	310.4		500	43.13	
920		15.35	4.49	0.052	3.79	305.8				
925		15.51	4.53	0.052	3.50	302.5				
930		15.62	4.54	0.052	4.07	300.5	0.91	500	43.18	
935	5 gal	15.75	4.55	0.056	11.53	299.2				

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)

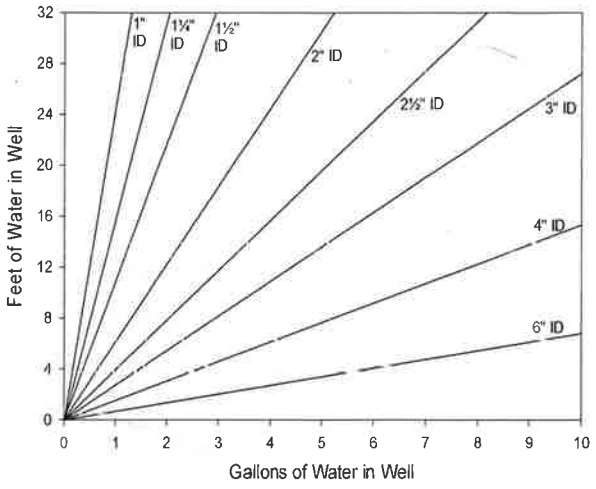
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE105D2-GW-092815	40-mL vial	3	HCl	VOCs	1040
RE105D2-GW-092815	1-L amber	2	none	1,4-Dioxane	1040

Comments: transducer

Signature: Paul Kaveth Date: 9/28/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RS105 D2 0450

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
940		15.79	4.61	0.056	4.63	294.1				
945		15.81	4.64	0.057	4.80	292.8	0.26		43.11	
950		15.67	4.67	0.056	4.80	287.3				
955		15.72	4.70	0.056	4.77	280.6				
1100		15.64	4.71	0.056	4.84	277.8			42.15	
1005		15.57	4.71	0.056	4.81	276.5	0.19	500		
1010	13gal	15.63	4.72	0.056	4.72	275.4				
1015		15.75	4.72	0.055	4.74	274.9			41.75	
1020		15.82	4.73	0.056	4.73	272.7				
1025		15.60	4.74	0.055	4.74	270.5			41.48	
1030		15.60	4.73	0.055	4.75	268.1			41.38	
1035	13gal	15.68	4.74	0.055	4.71	266.7			41.31	
1040										Sample

RESOLUTION CONSULTANTS

Well ID: RE108D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 28 / 15 | Time: Start 1310 am/pm
Project No: 60266526 | Finish 1500 am/pm
Site Location: RE108 @ Corona + Cecil
Weather Conds: | Collector(s): JC

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

a. Total Well Length 535 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 41.00 d. Calculated System Volume (see back) 13.1 gal purge

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	22118
	Hanna	HI 98703	U645181

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1320	–	17.04	4.11	0.093	9.86	357.6	5.14	750	41.02	clear/none
1325	–	15.62	4.06	0.088	6.03	366.0	8.16	750	41.02	"
1330	–	15.34	4.07	0.087	6.14	368.4	3.89	750	41.02	"
1335	–	15.17	4.06	0.087	6.74	377.9	1.84	750	41.02	"
1340	–	15.15	4.09	0.086	6.86	379.6	0.79	750	41.02	"
1345	Sgal	15.16	4.10	0.086	6.89	380.4	0.55	750	41.02	"
1350	–	15.09	4.14	0.085	6.78	381.2	0.44	750	41.02	"

(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.

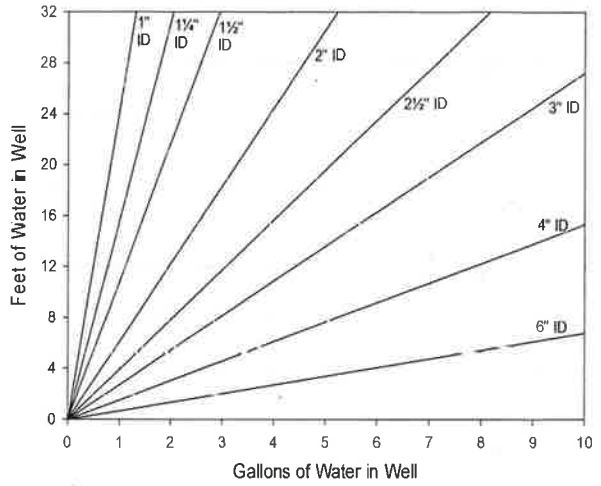
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE108D1-GW-092815	40-mL vial	3	HCl	VOCs	1435
RE108D1-GW-092815	1-L amber	2	none	1,4-Dioxane	1435
~~RE108D1-GW-092815 SE~~	~~1L plastic~~ EE		~~HNO3~~ EE		

Comments Liquinox
Radium sample for NYSDEC

Signature _____ Date 9/28/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE108D1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1355	–	15.15	4.19	0.086	6.76	380.5	0.55	750	41.01	clear / none
1400	–	15.16	4.25	0.086	6.81	380.6	0.63	750	41.01	"
1405	–	15.16	4.26	0.086	6.82	381.4	0.47	750	41.00	"
1410	10.99	15.17	4.26	0.086	6.79	382.6	0.41	750	41.01	"
1415	–	15.15	4.32	0.086	6.74	378.3	0.49	750	40.99	"
1420	–	15.30	4.34	0.086	6.75	377.1	0.55	750	40.99	"
1425	–	15.25	4.37	0.086	6.82	375.9	0.53	750	40.99	"
1430	13.19 gal	15.32	4.41	0.086	6.76	374.8	0.32	750	41.01	"

RESOLUTION CONSULTANTS

Well ID: RE10802

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9 / 29 / 15 Time: Start 1245 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Corona, CA
Weather Conds: 80° partly sunny, nice train Collector(s): _____

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

a. Total Well Length 655 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 41.40 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RFW22120
	Hanna	HI98703	64518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
655										start
1315		16.70	4.54	0.072	5.46	272.4		475	40.65	
1325		16.75	4.95	0.071	5.57	256.6	2.38	475	40.61	
1330		16.55	4.97	0.071	5.77	249.8	2.61		40.57	
1335		16.20	4.91	0.070	5.82	252.6			40.61	
1340	5 gal	16.23	4.94	0.069	5.81	252.0				
1345		16.13	4.95	0.069	5.78	252.3	0.53		40.45	

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

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

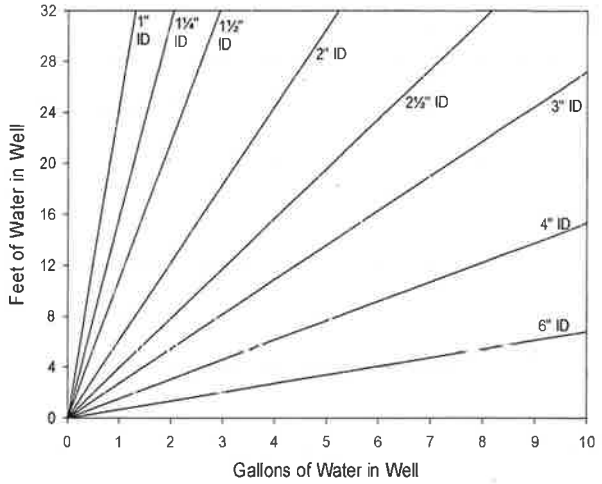
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10802-GW-092815	40-mL vial	3	HCl	VOCs	1450
"	1-L amber	2	none	1,4-Dioxane	1450

Comments: DEC arrived at 1345 collected radium samples

transducer - liquinox decon

Signature: Paul Kauth Date: 9/29/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE108D2

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1350		16.14	4.96	0.069	5.71	253.0		475	41.08	
1355		16.15	4.97	0.070	5.88	253.1				
1400		16.20	4.98	0070	5.61	253.1	0.36		41.11	
1405		16.20	4.97	0.070	5.56	254.9		475	41.17	
1410		16.27	4.98	0.069	4.63	255.6	0.29		41.12	
1415	1gal	16.15	4.98	0.069	4.80	256.2			41.51	
1420		16.04	4.98	0.069	4.73	256.3		475	41.50	
1425		16.07	4.99	0.069	4.73	256.2	0.32		41.43	
1430		16.12	4.98	0.070	4.74	256.2			41.41	
1435		16.04	4.98	0.069	4.75	256.2			41.42	
1440	13gal	15.90	4.98	0.069	4.76	256.5	0.34		41.43	
1450										sample

RESOLUTION CONSULTANTS

Well ID: RE123 D1

Low Flow Ground Water Sample Collection Record

955

Client: Navy NWIRP Bethpage Date: 9/29/15 Time: Start ~~840~~ am/pm
Project No: 60266526 Finish 1210 am/pm
Site Location: MW Lot
Weather Conds: foggy 70° Collector(s): Paul Kureth

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

a. Total Well Length 54.5 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 45.43 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 mps	22120
	Hanna	HI 98703	U64518X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
830										OH
955									46.62	RESET
1005		20.13	5.97	0.110	10.72	223.8	32.2	500	46.62	
1010		19.91	5.97	0.101	8.67	233.7	—	500	46.62	very cloudy
1015		19.88	5.90	0.097	7.38	233.5	1.78	500	46.62	cloudy
1020		19.82	5.89	0.096	7.74	242.0	—	500	46.62	"
1025		20.00	5.91	0.096	7.79	251.9	58.6	500	46.62	"

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)

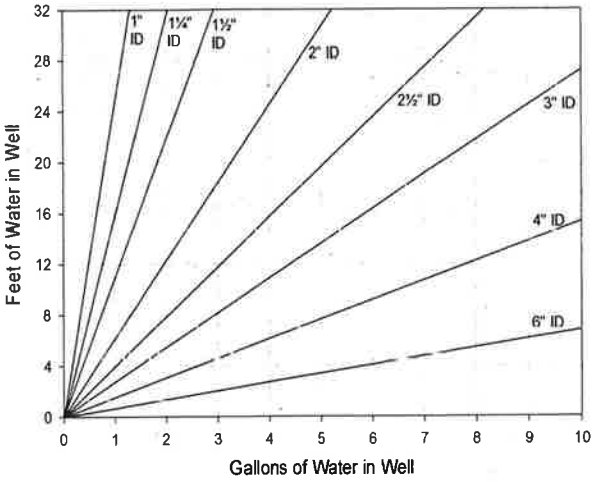
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D1-GW-092915	40-mL vial	3	HCl	VOCs	1140
RE123D1-GW-092915	1-L amber	2	none	1,4-Dioxane	1140

Comments Drop tube in Sump, reset pump @ 955
Equipment

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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE123D1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1030		19.87	5.08	0.096	7.76	256.2	—	500	46.62	clearing
1035	5 gal	19.84	5.07	0.096	7.68	257.7	13.4	500	46.62	"
1040		19.77	5.06	0.096	7.63	259.4	—	500	46.62	"
1045		19.98	5.04	0.097	7.63	262.4	9.11	500	46.62	clear
1050		19.90	5.05	0.096	7.64	261.7	—	500	46.62	"
1055		19.83	5.04	0.097	7.67	261.6	10.08	500	46.62	"
1100		19.77	5.03	0.096	7.60	262.5	—	500	46.62	"
1105	10 gal	19.77	5.03	0.096	7.66	262.6	9.61	500	46.62	"
1110		20.00	5.03	0.097	7.61	262.6	—	500	46.62	"
1115		20.10	5.03	0.097	7.62	262.8	7.24	500	46.62	"
1120		19.84	5.03	0.096	7.64	261.2	—	500	46.62	"
1125		19.94	5.02	0.097	7.65	262.5	5.26	500	46.62	"
1130	13 gal	20.04	5.02	0.097	7.68	261.5	—	500	46.62	"
1135		19.82	5.01	0.097	7.64	261.9	—	500	46.62	"

RESOLUTION CONSULTANTS

Well ID: RE12302

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/29/15 | Time: Start 810 am/pm | Finish ____ am/pm
Project No: 60266526
Site Location: MRA Lab
Weather Conds: foggy, overcast 75° | Collector(s): ____

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

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

b. Water Table Depth 49.01 d. Calculated System Volume (see back) 49.6L / 13.1gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RRW 24698
	HANNA	HI9828-03	64518X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
910										
950	12L/3g	21.02	5.08	0.030	5.83	265.6		500	49.03	cloudy
1000		21.08	4.73	0.026	6.67	291.0			49.02	/
1005	5gal	21.18	4.49	0.025	7.10	298.7	169			
1010		21.31	4.51	0.025	6.83	302.1				
1015		21.33	4.46	0.025	6.38	305.9	20.2		49.01	
1020		21.38	4.42	0.025	6.16	311.1	27.8		49.03	

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)

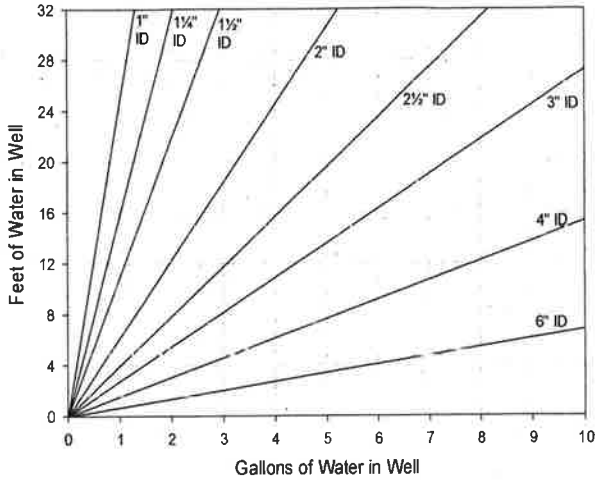
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE12302-GW-092915	40-mL vial	3	HCl	VOCs	1110
RE12302-GW-092915	1-L amber	2	none	1,4-Dioxane	1110

Comments: lift bottom with new tubing, lift 15 ft
Liquinox decon

Signature: Paul Kastl Date: 9/29/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1025		21.35	4.45	0.025	6.01	311.2	14.5	5000	49.02	
1030		21.34	4.44	0.025	6.02	313.6	13.1		49.04	
1035	10 gal	21.81	4.41	0.025	6.05	315.2	12.2		49.03	
1040		21.55	4.36	0.025	6.52	317.8	11.8		49.03	
1045		21.42	4.40	0.025	6.82	317.9	15.0		49.02	
1050		21.41	4.38	0.025	6.61	320.4			49.02	
1055		21.41	4.33	0.025	6.40	324.7	13.2		49.03	
1100		21.41	4.34	0.025	6.52	324.1			49.02	
1110										Sample

RESOLUTION CONSULTANTS

Well ID: RE123D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/29/15 | Time: Start 810 am/pm | Finish 1125 am/pm
Project No: 60266526
Site Location: MW Lot
Weather Conds: 80°F, muggy | Collector(s): JC

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

a. Total Well Length 8.40 | c. Length of Water Column _____ (a-b) | Casing Diameter/Material 4-inch PVC

b. Water Table Depth 4.09 | d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	22118
	Hanna	HI 98703	U645184

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
910		19.26	4.56	0.031	7.35	291.7			49.20	ON
950	5 gal	18.97	4.70	0.044	6.44	105.5		500		
955		18.95	4.69	0.044	6.11	48.4	30.3	500	49.28	cloudy/more
1000		18.98	4.86	0.044	5.77	-25.6			49.29	
1005		19.11	4.94	0.044	2.49	-51.3			49.30	
1010		19.08	5.05	0.044	0.67	-90.1	31.8		49.30	
1015		19.66	5.20	0.044	0.61	-99.7			49.28	

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

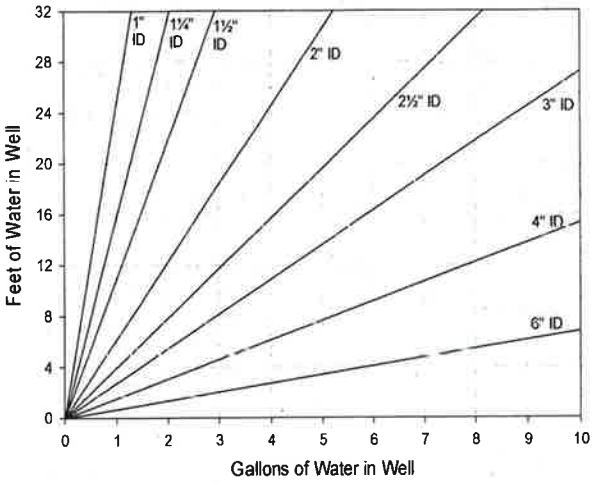
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE123D3-GW-092915	40-mL vial	3	HCl	VOCs	1100
RE123D3-GW-092915	1-L amber	2	none	1,4-Dioxane	1100

Comments: Kit bottom with new tubing
Liquinox decon

Signature _____ Date 9/29/2015

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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1020		19.42	5.18	0.043	0.57	-108.0	15.1		49.31	
1025	10 gal	19.31	5.05	0.043	0.54	-107.7				
1030		19.27	4.99	0.042	0.53	-104.1	11.8		49.32	
1035		19.20	5.07	0.042	0.50	-96.7			49.33	
1040		19.57	5.31	0.042	0.49	-117.1	9.87	500	49.32	
1045		19.46	5.11	0.041	0.48	-114.5			49.31	
1050		19.54	5.12	0.041	0.46	-119.0		500	49.31	

RESOLUTION CONSULTANTS

Well ID: RE120D

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 29 / 15 | Time: Start 1315 am/pm
Project No: 60266526 | Finish 1545 am/pm
Site Location: The Hog
Weather Conds: sunny 90° | Collector(s):

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

a. Total Well Length 655 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 37.74 d. Calculated System Volume (see back) 20ft screen, 49.6L / 13.1 ga

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	22118
	Hanna	98703	645 18

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
14:15	—	18.85	4.65	0.105	10.95	294.4	1.85	400	37.69	Clear
14:20	—	17.49	4.63	0.101	3.90	289.6	3.72	375	37.68	Clear
14:25	—	17.31	4.52	.099	2.20	295.4	—	425	37.68	Clear
14:30	—	17.16	4.50	0.097	1.82	313.5	—	450	37.68	Clear
14:35	—	17.20	4.42	0.098	1.88	326.5	—	400	37.65	Clear
14:40	—	17.05	4.03	0.098	1.88	336.0	—	375	37.65	clear
14:45	—	17.03	4.06	0.098	1.87	337.4	0.93	—	37.64	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.

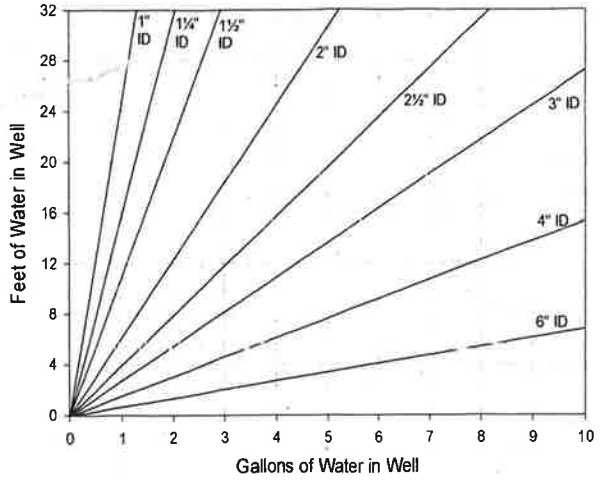
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D1-GW-092915	40-mL vial	3	HCl	VOCs	1600
RE120D1-GW-092915	1-L amber	2	none	1,4-Dioxane	

Comments Alconox

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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
14:50	5 Gal	16.97	4.07	0.098	1.86	338.1	—	450	37.62	Clear.
14:55	—	16.92	4.10	0.098	1.80	358.4	—	450	37.64	Clear
15:00	—	16.82	4.12	0.098	1.78	339.1	—	475	37.60	Clear
15:05	—	16.78	4.10	0.098	1.74	339.9	—	475	37.60	Clear
15:10	—	16.66	4.10	0.097	1.72	345.3	0.87	500	37.60	Clear
15:15	—	16.56	4.11	0.097	1.67	347.7	—	—	—	Clear
15:20	—	16.49	4.11	0.097	1.62	349.8	.65	500	37.60	Clear.
15:30	10 Gal	16.38	4.10	0.097	1.57	352.3	.58	500	37.60	Clear
15:35	—	16.46	4.10	0.097	1.52	346.3	1>	500	37.59	Clear
15:40	—	16.32	4.11	0.096	1.47	354.8	1>	475	37.6	Clear
15:45	—	16.30	4.16	0.097	1.46	353.1	0.65	475	37.6	Clear
15:50	—	16.20	4.19	0.096	1.42	353.5	1>	475	37.59	Clear
15:55	18.5	16.22	4.19	0.096	1.41	354.4	0.15	500	37.55	Clear

RESOLUTION CONSULTANTS

Well ID: RE120D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Shelley & Hahn
Weather Conds: Sunny 80°
Date: 9/29/15
Time: Start 1315 am/pm
Finish 1545 am/pm
Collector(s):

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

a. Total Well Length 715 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 37.58 d. Calculated System Volume (see back) 49.6L/13.1gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	RFW 24698
Hanna	HI 98703	U 64518 X

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1355										OW
1400		18.43	4.94	0.061	5.64	299.4		450	37.56	
1410		18.08	4.65	0.060	4.12	318.8	5.60	500		
1415		17.86	4.57	0.061	4.22	327.4			37.57	
1420		17.70	4.45	0.062	4.60	339.2	3.16		37.58	
1425		17.62	4.34	0.063	4.86	352.4				
1430	5gal	17.47	4.25	0.063	5.26	364.2		500	37.56	

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

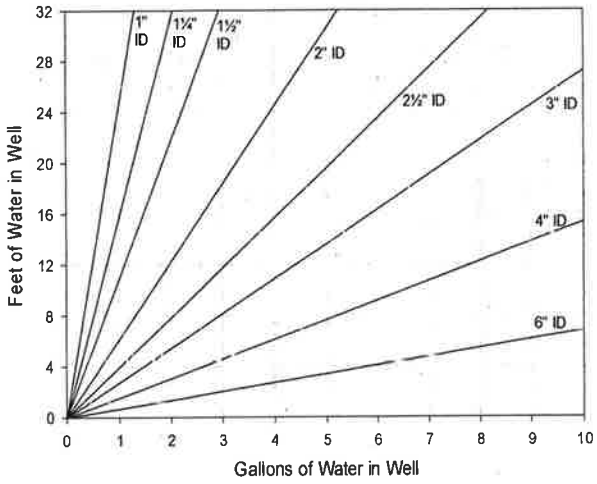
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D2-GW-092915	40-mL vial	3	HCl	VOCs	1525
RE120D2-GW-092915	1-L amber	2	none	1,4-Dioxane	1525

Comments: Alconox

Signature: Paul Kroth Date: 9/29/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: ~~MW~~ RE-120 D2 @ 1355

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1435		17.43	4.25	0.063	5.31	366.4			37.56	
1440		17.36	4.36	0.063	5.21	363.4	1.39		37.53	
1445		17.31	4.33	0.063	5.17	368.5		500		
1450		17.27	4.31	0.063	5.00	372.0	1.34		37.52	
1455		17.27	4.33	0.063	4.93	373.8			37.52	
1500	10 gal	17.19	4.31	0.063	4.98	377.5	1.20	500	37.51	
1505		17.16	4.27	0.064	5.20	379.6				
1510		17.07	4.34	0.064	5.29	369.6			37.49	
1515		17.03	4.29	0.063	5.22	376.1	1.21		37.50	
1520		16.94	4.26	0.063	5.04	383.3			37.48	
1525										Sample

RESOLUTION CONSULTANTS

Well ID: RE120 D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 29 / 15 | Time: Start 1315 am/pm | Finish 1545 am/pm
Project No: 60266526
Site Location: Shelley @ Hahn.
Weather Conds: sunny 90° | Collector(s): JC

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

a. Total Well Length 765 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 38.46 d. Calculated System Volume (see back) 13.1 gal purge

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	22120
	Hanna	HI 98703	U654184

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1400								400		OK
1410	–							600		
1420	–	17.15	4.08	0.021	3.70	289.2	14.0	600	37.54	clear
1440	5 gal	16.75	4.34	0.027	3.58	269.9	17.1	600	37.54	"
1445	–	16.73	4.48	0.026	3.53	267.2	16.9	600	37.54	"
1450	–	16.68	4.53	0.027	3.52	265.9	13.6	600	37.44	"
1455	–	16.65	4.56	0.027	3.52	265.8	12.3	600	37.44	"

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

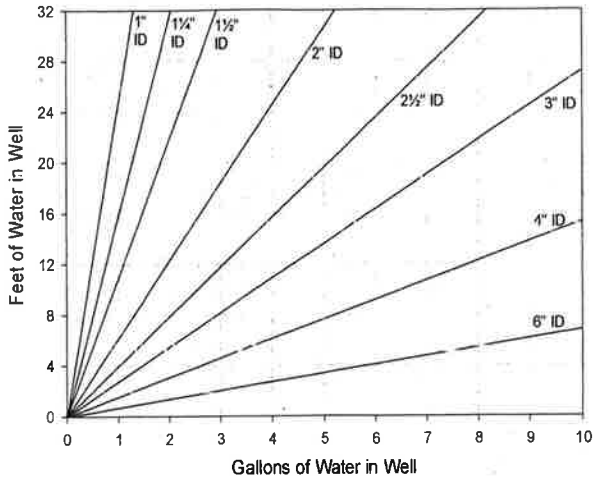
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE120D3-GW-092915	40-mL vial	3	HCl	VOCs	1530
RE120D3-GW-092915	1-L amber	2	none	1,4-Dioxane	1530

Comments Alconox

Signature _____ Date 9/29/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE120D3

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1500	—	16.63	4.58	0.026	3.27	266.5	—	600	37.28	clear
1505	10 gal	16.59	4.59	0.026	3.31	266.4	12.3	600	37.28	"
1510	—	16.50	4.60	0.025	3.28	267.9	12.9	600	37.28	"
1515	—	16.50	4.59	0.026	3.51	269.0	12.1	600	37.28	"
1520	—	16.42	4.59	0.025	3.51	270.7	10.0	600	37.28	"
1525	13.1 gal	16.40	4.58	0.025	3.28	271.7	10.6	600	37.28	"

RESOLUTION CONSULTANTS

Well ID: TT1010

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 29 / 15 | Time: Start 1645 am/pm | Finish 1900 am/pm
Project No: 60266526
Site Location: West Trench
Weather Conds: light rain 75° | Collector(s):

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

a. Total Well Length 350 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 33.89 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	24698
	Hanna	98703	C45/8

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1710										
1715								900		
1720		15.56	3.80	0.078	0.24	301.6	0.00		33.42	
1725		15.47	4.11	0.076	0.15	280.0			33.41	
1730	5 gal	15.49	4.37	0.078	0.21	271.5	0.0	910	33.42	
1735		15.46	4.42	0.078	0.21	269.4				
1740		15.42	4.47	0.076	0.19	268.9				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

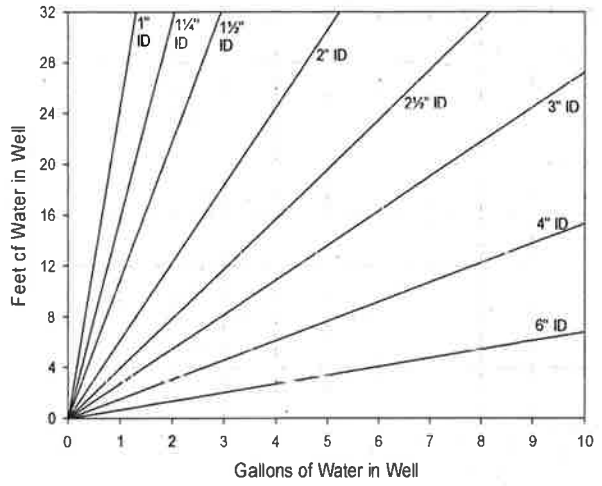
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT1010-GW-092915	40-mL vial	3	HCl	VOCs	1815
	1-L amber	2	none	1,4-Dioxane	
DUPLICATE-GW-092915					1530

Comments

Signature Paul Hacette Date 9/29/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: TP01D

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1745		15.10	4.49	1.076	0.17	268.6			33.89	
1750		15.14	4.50	0.076	0.17	268.1				
1755	13gal	15.34	4.56	0.077	0.18	267.4			33.88	
1800		15.36	4.50	0.077	0.17	270.4		900	33.81	

RESOLUTION CONSULTANTS

Well ID: TT10101

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 29 / 15 | Time: Start 1645 am/pm | Finish 1900 am/pm
Project No: 60266526
Site Location: West parcel
Weather Conds: light Rain 75° | Collector(s): James Christopher

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

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

b. Water Table Depth 36.41 d. Calculated System Volume (see back) 13.1 gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	22118
	Hanna	HI 98703	U645181

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1715		16.41	3.87	0.081	4.41	379.1	-	600	35.40	clear
1720		15.35	3.72	0.079	0.53	383.0	-	600	35.40	"
1730		14.92	3.86	0.078	0.27	377.4	-	650	35.40	"
1745		14.86	4.05	0.078	0.60	371.8	-	750	35.40	"
1750		14.86	4.11	0.078	0.60	369.4	-	750	35.40	"
1755	10gal	14.86	4.13	0.078	0.61	368.8	-	750	35.40	"
1800		14.83	4.17	0.078	0.61	367.6	0.00	750	35.40	"

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)

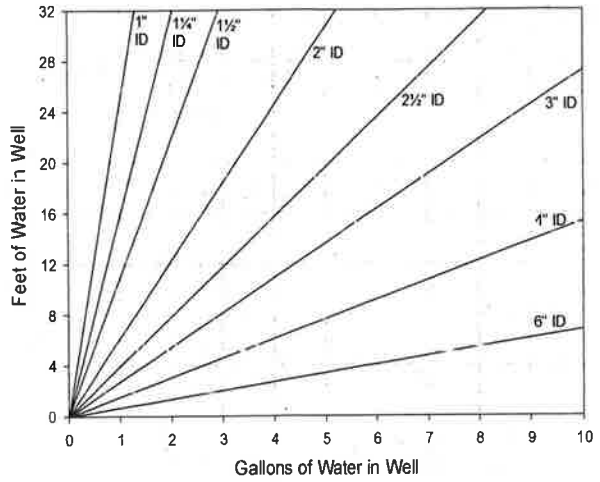
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT10101-GW-092915	40-mL vial	3	HCl	VOCs	1840
	1-L amber	2	none	1,4-Dioxane	1840

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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: TT10iD1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1805	–	14.80	4.18	0.078	0.61	366.9	–	758	35.38	clear
1810	15 gal	14.83	4.21	0.078	0.60	366.0	–	758	35.38	"

LowFlow-GWa - Sept 2015.xls

RESOLUTION CONSULTANTS

Well ID: TT10102

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/29/15 Time: Start 1645 am/pm
Project No: 60266526 Finish 1900 am/pm
Site Location: Wentworth
Weather Conds: light rain 75° Collector(s):

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

a. Total Well Length 765 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 36.01 d. Calculated System Volume (see back) 13.1gal

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	12120
	Hanna	HI 703	611518

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1705								900		
1710		15.91	4.18	0.037	2.14	356.6				
1715		15.90	4.17	0.037	2.40	358.6	6.0			
1720		15.86	4.17	0.037	3.35	364.0			36.12	
1725		15.83	4.15	0.036	3.86	371.8			36.14	
1730	5 gal	15.83	4.15	0.037	5.39	384.2	4.6	900	36.15	
1735		15.83	4.13	0.037	6.42	391.5				

(continued on back)

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

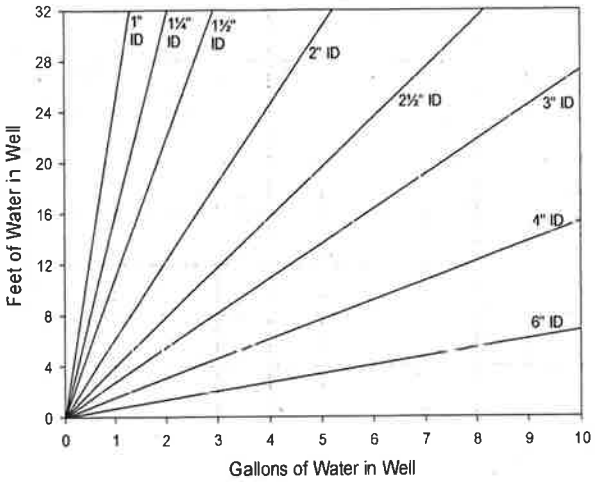
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
TT10102-GW-092915	40-mL vial	3	HCl	VOCs	1830
	1-L amber	2	none	1,4-Dioxane	
					MS, MSD

Comments

Signature Paul Kruth Date 9/29/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: TT 101 D2

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1740		15.76	4.08	1.037	6.61	401.0			36.11	
1745		15.76	4.09	0.037	6.70	405.6				
1750		15.79	4.10	0.037	6.70	410.3				
1755	13 gal	15.75	4.11	0.036	6.67	430.4			36.10	
1800		16.54	4.23	0.037	6.65	447.3		900	36.12	
1830										Sample

RESOLUTION CONSULTANTS

Well ID: RE122D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9/30/15 Time: Start 835 am/pm
Project No: 60266526 Finish 1025 am/pm
Site Location: Curtis
Weather Conds: rain 75° Collector(s): JC

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

a. Total Well Length 57.45 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 42.95 d. Calculated System Volume (see back) 13.1 gal purge

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	22120
~~Horiba~~ JC	~~Horiba~~	~~HI 9-7803~~	~~U645-18X~~
	Scientific	Micro TPW	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
~~8145~~ JC								500		
~~8450~~										
845		17.93	4.91	0.089	4.19	280.7	1134		42.98	humidity
850		18.9	5.06	0.088	3.81	274.5				
855		18.26	5.26	0.091	3.77	268.0		500	42.87	
900		18.14	5.40	0.091	3.60	259.2	—	500	—	clear
905		18.28	5.42	0.091	3.52	257.9	3.06	500	42.82	"

(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.

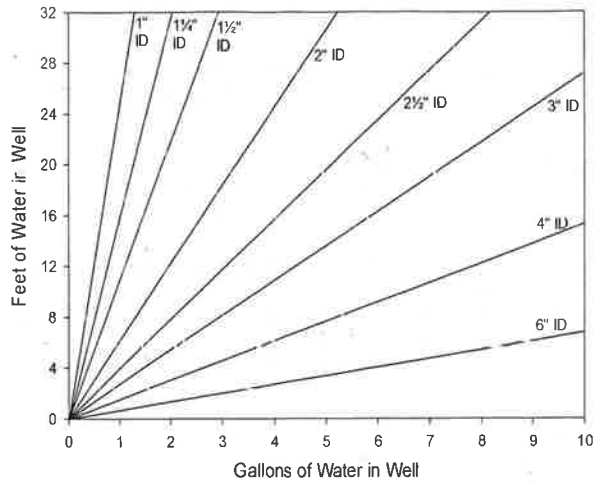
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE122D1-GW-092015	40-mL vial	3	HCl	VOCs	1015
RE122D1-GW-093015	1-L amber	2	none	1,4-Dioxane	1015

Comments: humidity is giving poor turbidity (Luminox)

Signature _____ Date 9/30/2015

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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: REIZZ D\

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
910	5 gal	18.28	5.47	0.092	3.47	255.8	–	500	42.82	clear / none
915	–	18.06	5.48	0.091	3.35	253.8	–	500	42.77	"
920	–	18.14	5.52	0.091	3.25	253.2	4.27	500	42.68	"
925	–	18.13	5.52	0.092	3.18	252.7	–	500	42.68	"
930	–	18.07	5.55	0.091	3.11	251.1	–	500	42.68	"
935	–	18.03	5.55	0.091	3.10	251.8	–	500	42.68	"
940	–	18.07	5.55	0.092	3.01	250.4	–	500	42.68	"
945	10 gal	18.12	5.57	0.092	2.89	250.0	3.21	500	42.68	"
950	–	18.20	5.60	0.092	2.84	247.4	3.01	500	42.68	"
955	–	18:27	5.59	0.092	2.76	247.0	3.41	500	42.61	"
1000	–	18.32	5.61	0.092	2.68	245.7	–	500	42.59	"
1005	13.5 gal	18:27	5.62	0.092	2.62	244.6	1.37	500	45.60	"

RESOLUTION CONSULTANTS

Well ID: RGI22D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9 / 30 / 15 | Time: Start 1115 am/pm
Project No: 60266526 | Finish 1160 am/pm
Site Location: Custis
Weather Conds: rain 75 | Collector(s):

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

a. Total Well Length 615 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 43.18 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	24698
	Micro	20000	20120505051

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
7:28										
8:33		18.41	4.72	0.090	7.09	355				
8147		17.92	4.64	0.086	3.68	359.7			43.12	
900		18.46	4.68	0.087	3.63	352.2		500		gen water stopped
905		20.92	4.60	0.087	3.73	348.7	0.98			
910		19.28	4.61	0.087	4.24	351.4			42.92	
915		18.00	4.58	0.087	4.31	352.0				

d. Acceptance criteria pass/fail

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

If no or N/A - Explain below.

(continued on back)

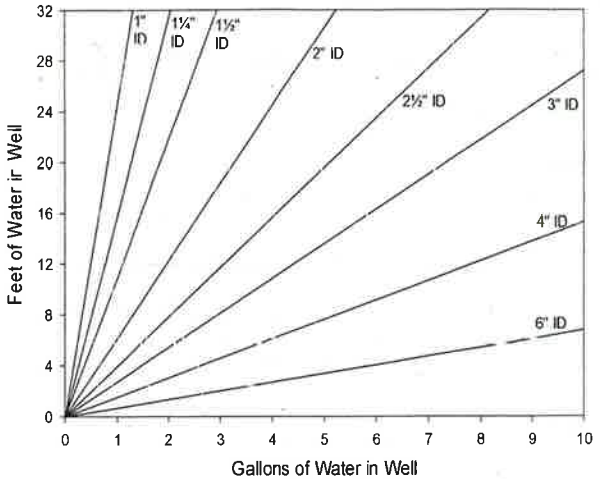
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

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

Comments Cumulative decon

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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RE12207

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH 4.57	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
930	5gal	18.24	~~4.55~~	0.087	4.30	350.6	~~500~~	500	42.82	
935		18.09	4.56	0.087	4.23	349.9	5.04			
940		18.08	4.53	0.087	4.30	353.0				
945		18.06	4.50	0.087	4.33	353.8				
950		18.07	4.49	0.087	4.38	354.2		500	42.62	
955		18.09	4.48	0.087	4.35	354.9	1.74			
1000	10gal	17.98	4.47	0.087	4.38	355.4			42.58	
1005		18.07	4.42	0.087	4.37	357.8		500		
1010		17.95	4.41	0.087	4.46	359.4			42.48	
1015		17.99	4.41	0.087	4.44	360.4	2.02	500	42.42	
1020		18.02	4.40	0.087	4.51	362.9			42.41	
		18.01	4.40	0.087	4.47	364.2	1.64		42.38	
1020										Sample

RESOLUTION CONSULTANTS

Well ID: RFW203

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/30/15 | Time: Start 800 am/pm
Project No: 60266526 | Finish 1100 am/pm
Site Location: Shop 15
Weather Conds: rain 75° | Collector(s):

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

a. Total Well Length 74.0 c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 44.24 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	RFW22118
	Micro TPW	20000	20120505/

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
820										CN
8:28		19.81	4.50	0.028	6.52	367.0	92.94	400	44.28	
8:47			4.05	0.025	3.10	347.5		300		
8:55			4.22	0.025	2.86	338.6	34.86	350	44.18	
9:00		20.22	4.15	0.025	2.81	333.5				
9:06	4g	20.39	4.22	0.023	2.82	338.0			44.18	Clear NO
9:11		20.45	4.26	0.022	2.86	338.4	11.74	275		

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)

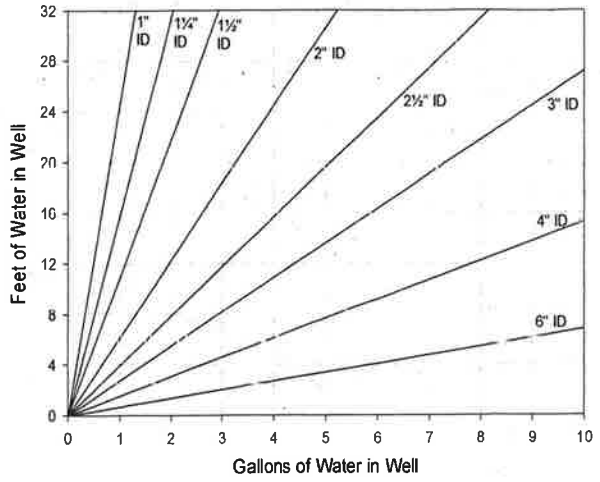
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	40-mL vial	3	HCl	VOCs	1036
	1-L amber	2	none	1,4-Dioxane	

Comments: Cummins decon

Signature: _____ Date: 9/30/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed ~~(Liters)~~	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
9:17		20.94	4.35	6.022	3.05	336.4			44.18	
9:22		20.85	4.33	0.022	3.06	337.4	8.15			
			Pull	Pump + Replace Bladder						
9:43		15.65	4.13	0.020	5.12	330.3		600	43.28	
9:48	6.5 g	17.59	3.18	0.020	3.91	404.4	13.42			
9:53	7.5 g	17.76	3.42	0.021	3.20	393.1	12.95	640		
10:01	9.0 g	17.55	3.41	0.020	3.06	394.9				
10:06	10 5	17.46	3.52	0.020	2.89	386.8	13.17			
10:11		17.48	3.57	0.020	2.84	387.5			43.46	
10:16	11.5 g	17.42	3.57	0.020	2.96	387.4	13.51			
10:21		17.57	3.61	0.020	2.96	382.9				
10:26	13	17.41	3.60	0.020	2.96	383.7	15.13	600	43.48	
10:31	14.5	17.40	3.65	0.020	2.93	378.1	14.67			OK
										Sample 10:36

RESOLUTION CONSULTANTS

Well ID: RE 10301

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9 / 30 / 15 Time: Start 1200 am/pm
Project No: 60266526 Finish 1330 am/pm
Site Location: Avoca
Weather Conds: overcast, drizzle 75 Collector(s):

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

a. Total Well Length 645 c. Length of Water Column _____ (a-b) Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 40.19 d. Calculated System Volume (see back) 158 - 9.8 gal / 37.1 L

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	RFW22118
	Micro	20000	20/25051

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1215										OX
1225		15.74	4.29	0.076	1.30	326.0		700		
1230		15.69	4.37	0.076	0.94	323.0	7.59		40.27	
1235		15.47	4.28	0.079	3.11	335.5		700		
1240	5 gal	15.67	4.16	0.080	4.16	347.6	2.23		40.25	
1245		15.53	4.16	0.080	4.20	350.2				
1250	7 gal	15.30	4.12	0.080	4.27	353.7		700	40.24	

(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.

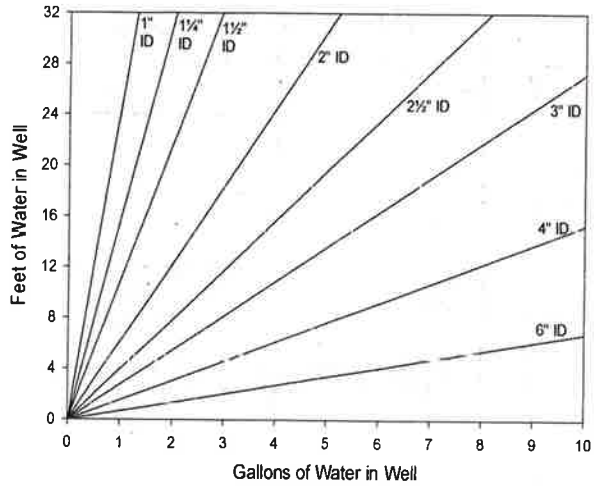
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE10301-GW-093015	40-mL vial	3	HCl	VOCs	1315
	1-L amber	2	none	1,4-Dioxane	1315

Comments: micro 90 decon transducer

Signature: Paul Kauffman Date: 9/30/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID: RB103D1

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
0955		15.44	4.22	0.081	4.23	350.7	0.20	200	40.25	
1000	8 Gal	15.39	4.25	0.080	4.35	351.4				
1005		15.58	4.32	0.082	4.33	348.4	0.01		40.26	
1010		15.52	4.41	0.082	4.42	344.6				
1315										Sample

RESOLUTION CONSULTANTS

Well ID: RE103D2

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 9 / 30 / 15 Time: Start 1200 am/pm
Project No: 60266526 Finish 1405 am/pm
Site Location: Avoca
Weather Conds: 75°F overcast - showers Collector(s): JC

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

a. Total Well Length 67.3 c. Length of Water Column _____ (a-b) Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 39.98 d. Calculated System Volume (see back) 13.5 gal purge

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556 MPS	24698
	Scientific	MicroTPW	20120505I

+2 hrs!

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1030	–	17.84	5.21	0.036	11.62	342.9	–	500	39.61	clear/none
1035	–	17.76	4.86	0.037	12.08	358.2	1.30	500	39.61	"
1040	–	17.10	4.51	0.035	4.85	367.2	–	750	39.60	"
1045	–	17.09	4.47	0.034	5.33	367.9	0.07	750	39.61	"
1050	–	16.94	4.44	0.031	5.97	371.3	–	750	39.61	"
1100	5 gal	16.88	4.31	0.030	6.95	381.6	0.00	750	39.62	"
1105	–	16.90	4.29	0.030	7.01	384.5	–	750	39.62	"

(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.

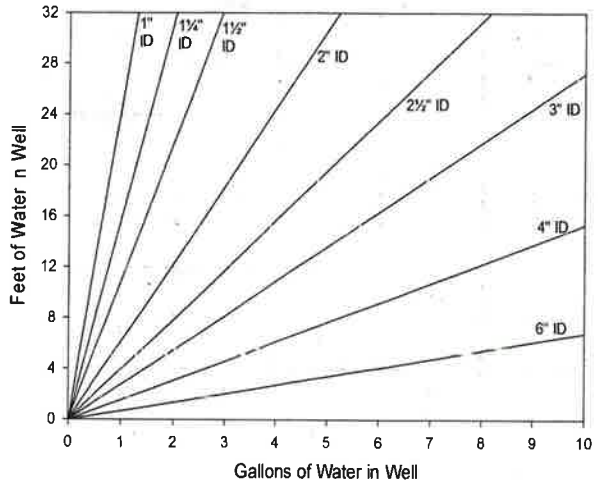
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D2-GW-093015	40-mL vial	3	HCl	VOCs	1345
RE103D2-GW-093015	1-L amber	2	none	1,4-Dioxane	1345

Comments: Micro 90 decom

Signature _____ Date 9/30/15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 l / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
1110	—	16.84	4.24	0.030	6.83	388.4	0.00	750	39.62	clear
1115	—	16.84	4.19	0.029	6.78	392.6	0.00	750	39.62	"
1120	10gal	16.86	4.21	0.029	6.74	390.9	0.00	750	39.62	"
1130	—	16.89	4.25	0.030	6.64	390.2	0.00	750	39.62	"
1135	—	16.79	4.22	0.030	7.12	394.7	0.00	750	39.62	"
1140	13.5 gal	16.80	4.26	0.030	7.17	392.9	0.00	750	39.62	"

RESOLUTION CONSULTANTS

Well ID: RE103D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 9/30/15 | Time: Start 1200 am/pm | Finish 1400 am/pm
Project No: 60266526
Site Location: Avoca
Weather Conds: Overcast drizzle 75° | Collector(s):

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

a. Total Well Length 735 c. Length of Water Column 15 (a-b)

Casing Diameter/Material: 4-inch PVC

b. Water Table Depth 40.82 d. Calculated System Volume (see back) 9.8 g

2. WELL PURGE DATA

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

b. Acceptance Criteria defined (see workplan)

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

c. Field Testing Equipment used: Make YSI Model 556 MPS Serial Number RFW22120

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
12:20										
12:25		16.81	4.92	0.027	11.69	281.0				
12:30		16.24	3.89	0.026	8.03	336.0	2.85	450	40.78	clear NO
12:35	1.5g	16.15	4.17	0.026	5.09	320.0				
12:40	2 g	16.19	4.35	0.025	3.916	311.4				
12:45	2.5g	16.09	4.45	0.025	3.61	305.9				
12:50	3 g	16.03	4.37	0.025	3.80	307.2	0.0			

(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.

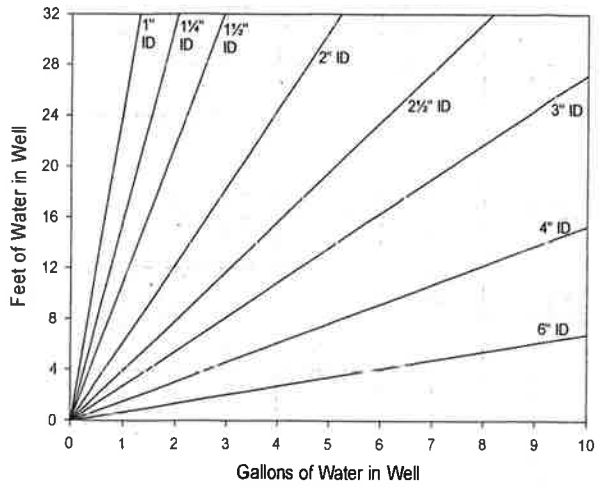
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE103D3-GW-093015	40-mL vial	3	HCl	VOCs	1335
	1-L amber	2	none	1,4-Dioxane	

Comments: micro 90 decon

Signature: [signature] Date: 9-30-15

Purge Volume Calculation



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

1 screen volume

15 ft = 37.1 L / 9.8 G
20 ft = 49.6 L / 13.1 G
25 ft = 61.7 L / 16.3 G

Well ID:

(continued from front)

Time (24 hr)	Volume Removed ~~(Liters)~~	Temp (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Depth to water (ft)	Color/Odor
12:55		16.05	4.36	0.025	3.98	307.9	0.0	500		
13:00	5g	15.98	4.37	0.025	4.01	308.6			40.78'	
13:05	6g	16.14	4.39	0.025	4.13	310.4				
13:10	7g	16.12	4.41	0.025	4.10	310.9	0.0			
13:18	8g	16.05	4.41	0.025	4.09	311.6		500	40.62	
13:24	9g	16.03	4.41	0.026	4.13	311.9				
13:30	10g	16.00	4.42	0.026	4.15	312.1				

Appendix B

Analytical Data Validation – Resolution Consultants

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage
Laboratory:	Katahdin Analytical
Sample Delivery Group:	BETHPAGE-2
Analyses/Method:	Volatile Organic Compounds by U.S. EPA SW-846 Method 8260C 1,4-Dioxane by U.S. EPA SW-846 Method 8270D via Selective Ion Monitoring (SIM)
Validation Level:	3
Project Number:	0888812477.SA.DV
Prepared by:	Dana Miller/Resolution Consultants Completed on: 11/30/2015
Reviewed by:	Tina Clemmey/Resolution Consultants File Name: BETHPAGE2_8260C_8270D

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — NWIRP Bethpage Site on 25 and 30 September 2015 in accordance with the following Sampling and Analysis Plans:

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

Sample ID	Lab ID	Matrix/Sample Type	Analysis
RE104D1-GW-092515	SI7583-1	Groundwater	8260C/8270D_SIM
RE108D2-GW-092815	SI7583-10	Groundwater	8260C/8270D_SIM
TB01-092815	SI7583-11	Trip Blank	8260C
TB02-092815	SI7583-18RA	Trip Blank	8260C
RE104D2-GW-092515	SI7583-2	Groundwater	8260C/8270D_SIM
RE104D3-GW-092515	SI7583-3	Groundwater	8260C/8270D_SIM
TT309S-GW-092515	SI7583-4	Groundwater	8260C/8270D_SIM
TT309I-GW-092515	SI7583-5	Groundwater	8260C/8270D_SIM
TT309D-GW-092515	SI7583-6	Groundwater	8260C/8270D_SIM
RE105D1-GW-092815	SI7583-7	Groundwater	8260C/8270D_SIM

Sample ID	Lab ID	Matrix/Sample Type	Analysis
RE105D2-GW-092815	SI7583-8	Groundwater	8260C/8270D_SIM
RE108D1-GW-092815	SI7583-9	Groundwater	8260C/8270D_SIM
DUPLICATE-GW-092915	SI7681-10	Duplicate of TT101D-GW-092915	8260C/8270D_SIM
RE122D1-GW-093015	SI7681-11	Groundwater	8260C/8270D_SIM
RE122D2-GW-093015	SI7681-12	Groundwater	8260C/8270D_SIM
RE122D3-GW-093015	SI7681-13	Groundwater	8260C/8270D_SIM
RE103D1-GW-093015	SI7681-14	Groundwater	8260C/8270D_SIM
RE103D2-GW-093015	SI7681-15	Groundwater	8260C/8270D_SIM
RE103D3-GW-093015	SI7681-16	Groundwater	8260C/8270D_SIM
TB01-093015	SI7681-17	Trip Blank	8260C
RE123D1-GW-092915	SI7681-1RA	Groundwater	8260C/8270D_SIM
RE123D2-GW-092915	SI7681-2RA	Groundwater	8260C/8270D_SIM
RE123D3-GW-092915	SI7681-3RA	Groundwater	8260C/8270D_SIM
RE120D1-GW-092915	SI7681-4	Groundwater	8260C/8270D_SIM
RE120D2-GW-092915	SI7681-5	Groundwater	8260C/8270D_SIM
RE120D3-GW-092915	SI7681-6	Groundwater	8260C/8270D_SIM
TT101D-GW-092915	SI7681-7	Groundwater	8260C/8270D_SIM
TT101D1-GW-092915	SI7681-8	Groundwater	8260C/8270D_SIM
TT101D2-GW-092915	SI7681-9	Groundwater	8260C/8270D_SIM

Data validation activities were conducted using the following guidance documents: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically Method 8260C, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (United States Environmental Protection Agency [U.S. EPA] 2006), *SW-846 Method 8270D, Semivolatile Organic Compounds by Gas Chromatograph/Mass Spectrometry* (U.S. EPA 2007), *U.S. Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (U.S. EPA, June 2008), and *Department of Defense Quality Systems Manual for Environmental Laboratories*, Version 4.2 (October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements, and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody)/sample integrity
- ✓ Holding times and sample preservation

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

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

RESULTS

Initial Calibration/Continuing Calibration Verification

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

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

Data qualification to the analytes associated with the specific initial calibration (ICAL) was as follows:

ICAL Linearity Non-conformance:

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

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

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

ICV Recovery Non-conformance:

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

Notes:
J = Estimated
UJ = Undetected and estimated

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

CCV Linearity Non-conformance:

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

Notes:
J = Estimated
UJ = Undetected and estimated

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

Laboratory Blanks/Equipment Blanks/ Field Blanks/Trip Blanks

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

Blank Non-conformance Charts:

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

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

Notes:

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

Lab blank and trip blank non-conformances are summarized in Attachment A in Table's A-4, and A-5.

Surrogate Spike Recoveries

Surrogates provide information needed to assess the accuracy of analyses. Known amounts of surrogate compounds, or compounds which are not likely to be found in the actual samples, are added to each organic sample to check for accuracy. If surrogate percent recoveries (%Rs) are close

to the known concentrations, the reported target compound concentrations are assumed to be accurate. Data qualification on the basis of surrogate recovery was as follows:

Surrogate Recovery Non-conformance Chart:

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

Notes:

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

Surrogate recovery non-conformance is summarized in Attachment A in Table A-6.

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

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

MS/MSD Non-conformances Chart:

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

Notes:

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

MS/MSD non-conformances are summarized in Attachment A in Table A-7.

Qualifications Actions

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

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

ATTACHMENTS

Attachment A: Non-Conformance Summary Tables
Attachment B: Qualifier Codes and Explanations
Attachment C: Reason Codes and Explanations
Attachment D: Final Results after Data Review

Attachment A
Non-Conformance Summary Table

Table A-1 Initial Calibration Non-Conformance					
Method	**Analyte**	**%RSD**	**Limit**	**Associated Samples**	**Qualifier**
8260C	Chloromethane	15.21596	<15%	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Bromomethane	15.30744	<15%	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Chloroethane	22.54919	<15%	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Acetone	16.25899	<15%	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Methyl cyclohexane	15.66496	<15%	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	15.46497	<15%	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	O-Xylene	15.32272	<15%	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	1,2-Dibromo-3-chloropropane	29.69098	<15%	SI7681-4 through S17681-13, SI7681-14DL through SI7681-16DL	Detects: J Non-detects: UJ

Notes:

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

Table A-2
Initial Calibration Verification Non-Conformance

Method	Analyte	ICV ID	%R	Limit	Associated Samples	Qualifier
8260C	Dichlorodifluoromethane	WG171044-7	67.47	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Trichlorofluoromethane	WG171044-7	79.95	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	WG171044-7	79.65	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Acetone	WG171044-7	138.88	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	2-Butanone	WG171044-7	159.36	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	4-methyl-2-pentanone	WG171044-7	146.19	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	2-Hexanone	WG171044-7	153.44	80-120	SI7583-1 through S17583-11, S17583-18RA, S17583-10DL, SI7583-8DL	Detects: J Non-detects: UJ
8260C	Carbon Disulfide	WG171658-7	79.48	80-120	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	Acetone	WG171658-7	134.34	80-120	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	2-Butanone	WG171658-7	143.56	80-120	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	4-methyl-2-pentanone	WG171658-7	150.32	80-120	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	2-Hexanone	WG171658-7	156.23	80-120	S17681-14 through S17681-17, S17681-1RA through S17681-3RA, S17681-9DL, S17681-11DL, S17681-12DL,	Detects: J Non-detects: UJ
8260C	Dichlorodifluoromethane	WG171660-7	123.49	80-120	SI7681-4 through S17681-13, SI7681-14DL through SI7681-16DL	Detects: J Non-detects: UJ

Notes:

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

Table A-3
Continuing Calibration Verification Non-Conformance

Lab ID /Calibration ID	Analyte	%D	%D Limit	Associated Samples	Qualifier
WG171352-4 / C4922.D	Tetrachloroethene	34.59924	+/- 20	SI7583-1, SI7583-2, SI7583-3, SI7583-4, SI7583-5, SI7583-6, SI7583-7, SI7583-8, SI7583-9, SI7583-10, and SI7583-11	Detects: J Non-detects: UJ
WG171374-4 / C4942.D	Methyl cyclohexane	21.55731	+/- 20	SI7583-18RA, SI7583-10DL, SI7583-8DL, SI7681-17, SI7681-14, SI7681-15, and SI7681-16	Detects: J Non-detects: UJ
WG171659-4 / C5030.D	Tetrachloroethene	-29.10536	+/- 20	SI7681-1RA, SI7681-2RA, SI7681-3RA, SI7681-4DL, SI7681-5DL, SI7681-8RA, SI7681-9DL, SI7681-11DL, SI7681-12DL	Detects: J Non-detects: UJ
WG171660-4 / P3089.D	Dichlorodifluoromethane	41.50045	+/- 20	SI7681-4, SI7681-5, SI7681-6, SI7681-7, SI7681-8, SI7681-9, SI7681-10, SI7681-11, SI7681-12, SI7681-13	Detects: J Non-detects: UJ
WG171601-4 / P3113.D	Dichlorodifluoromethane	40.79053	+/- 20	SI7681-14DL, SI7681-15DL, SI7681-16DL	Detects: J Non-detects: UJ
WG171601-4 / P3113.D	Chloromethane	22.86899	+/- 20	SI7681-14DL, SI7681-15DL, SI7681-16DL	Detects: J Non-detects: UJ
WG171601-4 / P3113.D	Tetrachloroethene	-30.50148	+/- 20	SI7681-14DL, SI7681-15DL, SI7681-16DL	Detects: J Non-detects: UJ

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

Table A-4
Lab Blank Non-Conformance
(Micrograms per liter)

Blank ID	Analyte	Blank Result	LOQ	Associated Sample	Qualifier
WG171658-9	Carbon Disulfide	0.41	1	TB01-093015	U

Notes:
ID = Identification
LOQ = Limit of quantitation
U = Detected analyte qualified as non-detect due to sample result being less than 2 times the LOQ.

Table A-5
Field Blank Non-Conformance
(Micrograms per liter)

Blank ID	Analyte	Blank Result	LOQ	Associated Sample	Qualifier
TB01-092815	Chloromethane	0.46	2	TT309S-GW-092515	U
TB01-093015	Chloromethane	0.82	2	RE123D2-GW-092915	U
TB01-093015	Chloromethane	0.82	2	RE123D3-GW-092915	U

Notes:
ID = Identification
LOQ = Limit of quantitation
U = Detected analyte qualified as non-detect due to sample result being less than 2 times the LOQ.

Table A-6
Surrogate Non-Conformance

Method	Surrogate	%R	Limits	Associated Sample	Qualifier
8260C	1,2-Dichloroethane-d4	121	70-120	RE103D3-GW-093015	Detects: J
8260C	1,2-Dichloroethane-d4	122	70-120	RE120D1-GW-092915	Detects: J
8260C	1,2-Dichloroethane-d4	124	70-120	RE120D2-GW-092915	Detects: J
8260C	Dibromofluoromethane	81.3	85-115	RE122D1-GW-093015	Detects: J and Non-detects: UJ
8260C	1,2-Dichloroethane-d4	124	70-120	RE122D1-GW-093015	Detects: J
8260C	Dibromofluoromethane	83.4	85-115	RE122D2-GW-093015	Detects: J and Non-detects: UJ
8260C	1,2-Dichloroethane-d4	122	70-120	RE122D2-GW-093015	Detects: J
8260C	Dibromofluoromethane	84.7	85-115	RE122D3-GW-093015	Detects: J and Non-detects: UJ
8260C	Dibromofluoromethane	80.4	85-115	TT101D1-GW-092915	Detects: J and Non-detects: UJ
8260C	1,2-Dichloroethane-d4	122	70-120	TT101D1-GW-092915	Detects: J
8260C	Dibromofluoromethane	84.5	85-115	TT101D2-GW-092915	Detects: J and Non-detects: UJ
8260C	1,2-Dichloroethane-d4	121	70-120	TT101D2-GW-092915	Detects: J

Notes:
%R = Percent recovery
UJ = Non-detect estimated value
J = Detected estimated value

Table A-7
Matrix Spike / Matrix Spike Duplicate Non-Conformance
(Micrograms per liter)

Spiked Sample	Analyte	Sample Result	Spike Added	MS %R	MSD %R	%R Limits	Qualifier
TT101D2-GW-092915	Trichloroethene	640	50.0	**154***	**252***	70-125	J

Notes:
MS = Matrix spike
MSD = Matrix spike duplicate
%R = Percent recovery
Bold* = Percent recovery less than lower control limit
J = Detected analyte in associated sample qualified estimated "J" because %R is greater than control limit in associated sample.

Attachment B
Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual quantitation limit necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Attachment C
Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bt	Trip blank contamination
c	Calibration issue
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate relative percent difference
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration
l	Laboratory control sample
lc	Labeled compound recovery
ld	Laboratory duplicate relative percent difference
lp	Laboratory control sample/laboratory control sample duplicate relative percent difference
m	Matrix spike recovery
mc	Method compliance non-conformance
md	Matrix spike/matrix spike duplicate relative percent difference
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column relative percent difference
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	Interference check sample results (metals)

Attachment D
Final Results after Data Review

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-1		
		Sample ID		RE104D1-GW-092515		
		Sample Date		9/25/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	4.6		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.87	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.2	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.49	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	2.3	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	110		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	12		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7583-10 RE108D2-GW-092815 9/28/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	8.3		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.5		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	5.3		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	7.6		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	8.6		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.6		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	3.7		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	8.6		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	2.5	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	3400		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	7.5		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-11		
		Sample ID		TB01-092815		
		Sample Date		9/28/2015		
		Sample Type		Trip Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	0.46	J	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	1.8	J	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-18RA		
		Sample ID		TB02-092815		
		Sample Date		9/28/2015		
		Sample Type		Trip Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	0.39	J	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2	J	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-2		
		Sample ID		RE104D2-GW-092515		
		Sample Date		9/25/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.53	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	4.2		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.13	J	

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-3		
		Sample ID		RE104D3-GW-092515		
		Sample Date		9/25/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7583-4 TT309S-GW-092515 9/25/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	bt,c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.89	J	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.35		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-5		
		Sample ID		TT309I-GW-092515		
		Sample Date		9/25/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.61		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7583-6 TT309D-GW-092515 9/25/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.97	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.7	J	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.1	J	

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-7		
		Sample ID		RE105D1-GW-092815		
		Sample Date		9/28/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	11		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.6		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.6	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.34	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.6		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.74	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	94		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	14		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7583-8 RE105D2-GW-092815 9/28/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	30		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.1		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.7		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	6.8		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	3.6		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	3.7		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	2.2		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.6		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.4	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1.4	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	1900		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	8.7		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7583-9		
		Sample ID		RE108D1-GW-092815		
		Sample Date		9/28/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	1.2		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.39	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	6.9	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	c
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	c
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.39	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1.3	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	98		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	c
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	7.9		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-10 DUPLICATE-GW-092915 9/29/2015 Field Duplicate		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	15		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.61	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	3.3		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.8	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.8		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2.3	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	67		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	14		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-11 RE122D1-GW-093015 9/30/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	UJ	s
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	UJ	s
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	4.4	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.45	J	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	UJ	s
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	s,c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	UJ	s
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	s
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	UJ	s
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	s
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	s
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	s
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	s
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	s
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	UJ	s
8260C	BROMOFORM	75-25-2	UG_L	0.5	UJ	s
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	s
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	s
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	UJ	s
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	UJ	s
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	s
8260C	CHLOROFORM	67-66-3	UG_L	0.5	UJ	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	s
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	s
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	s
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	s
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	s,c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	UJ	s
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	s
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	s
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	s
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	s
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	s
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	UJ	s
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	s
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	s
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1	J	s
8260C	TOLUENE	108-88-3	UG_L	0.5	UJ	s
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	s
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	s
8260C	TRICHLOROETHENE	79-01-6	UG_L	600	J	s
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	s
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	UJ	s
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	s
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	13		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-12 RE122D2-GW-093015 9/30/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	UJ	s
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	UJ	s
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	20	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	2.4	J	s
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	8.9	J	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	UJ	s
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	s,c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	4.9	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	UJ	s
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	s
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	UJ	s
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	s
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	s
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	s
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	s
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	s
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	UJ	s
8260C	BROMOFORM	75-25-2	UG_L	0.5	UJ	s
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	s
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	s
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	2	J	s
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	UJ	s
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	s
8260C	CHLOROFORM	67-66-3	UG_L	1.6	J	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	s
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	4.9	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	s
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	s
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	s
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.36	J	s,c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	UJ	s
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	s
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	s
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	s
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	s
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	s
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	UJ	s
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	s
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	s
8260C	TETRACHLOROETHENE	127-18-4	UG_L	2.6	J	s
8260C	TOLUENE	108-88-3	UG_L	0.5	UJ	s
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	s
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	s
8260C	TRICHLOROETHENE	79-01-6	UG_L	5200	J	s
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	s
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	UJ	s
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	s
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	17		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-13 RE122D3-GW-093015 9/30/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	UJ	s
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	UJ	s
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	UJ	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	UJ	s
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	s,c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	UJ	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	UJ	s
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	s
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	UJ	s
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	s
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	s
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	s
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	s
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	s
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	UJ	s
8260C	BROMOFORM	75-25-2	UG_L	0.5	UJ	s
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	s
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	s
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	UJ	s
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	UJ	s
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	s
8260C	CHLOROFORM	67-66-3	UG_L	0.5	UJ	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	s
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	UJ	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	s
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	s
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	s
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	s,c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	UJ	s
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	s
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	s
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	s
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	s
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	s
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	UJ	s
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	s
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	s
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	s
8260C	TOLUENE	108-88-3	UG_L	0.5	UJ	s
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	s
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	s
8260C	TRICHLOROETHENE	79-01-6	UG_L	10	J	s
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	s
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	UJ	s
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	s
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-14 RE103D1-GW-093015 9/30/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	12		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.52	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	8.4		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	3.6		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.31	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.61	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.6		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.26	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	6.7		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	860		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	24		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-15 RE103D2-GW-093015 9/30/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	4.9		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.54	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.72	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.3		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.5	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.46	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	4		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	830		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.1		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-16 RE103D3-GW-093015 9/30/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	2.3	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	J	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.64	J	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.96	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.74	J	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.96	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.6	J	s
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	470		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7681-17		
		Sample ID		TB01-093015		
		Sample Date		9/30/2015		
		Sample Type		Trip Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	2		
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	bl,c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	0.82	J	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	c
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	NA		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-1RA RE123D1-GW-092915 9/29/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.42	J	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.5	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	5.4	J	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.8	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	12		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	6.6		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-2RA RE123D2-GW-092915 9/29/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	bt
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.7	J	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	1.4		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.93		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-3RA RE123D3-GW-092915 9/29/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	c
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	c
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	c
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	c
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	c
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	bt
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	c
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	c
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.17	U	

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7681-4		
		Sample ID		RE120D1-GW-092915		
		Sample Date		9/29/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	1.4		
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	36		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.6		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	2.9		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	20		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.7		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.77	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.7		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1.9		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	1300	J	s
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	0.44	J	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	25		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-5 RE120D2-GW-092915 9/29/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	21		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.45	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	4.9		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.7		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.72	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.7		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.31	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.1		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	760	J	s
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	16		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-6 RE120D3-GW-092915 9/29/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	2.9		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	U	
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	120		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1.2		

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7681-7		
		Sample ID		TT101D-GW-092915		
		Sample Date		9/29/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	14		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.43	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	3.1		
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.9	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	U	
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.9		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	U	
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	2	J	c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	U	
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	67		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	13		

		Sample Delivery Group Lab ID Sample ID Sample Date Sample Type		BETHPAGE-2 SI7681-8 TT101D1-GW-092915 9/29/2015 Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	UJ	s
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	UJ	s
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	13	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.49	J	s
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	4	J	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	UJ	s
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	s,c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.92	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	UJ	s
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	s
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	UJ	s
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	s
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	s
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	s
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	s
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	s
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	UJ	s
8260C	BROMOFORM	75-25-2	UG_L	0.5	UJ	s
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	s
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	s
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.6	J	s
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	UJ	s
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	s
8260C	CHLOROFORM	67-66-3	UG_L	0.5	UJ	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	s
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.92	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	s
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	s
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	s
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.9	J	s,c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	UJ	s
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	s
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	s
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	s
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	s
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	s
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	UJ	s
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	s
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	s
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	UJ	s
8260C	TOLUENE	108-88-3	UG_L	0.5	UJ	s
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	s
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	s
8260C	TRICHLOROETHENE	79-01-6	UG_L	170	J	s
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	s
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	UJ	s
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	s
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	11	J	s

		Sample Delivery Group		BETHPAGE-2		
		Lab ID		SI7681-9		
		Sample ID		TT101D2-GW-092915		
		Sample Date		9/29/2015		
		Sample Type		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	UJ	s
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	UJ	s
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	19	J	s
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.6	J	s
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	UJ	s
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	4.7	J	s
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	UJ	s
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	UJ	s,c
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	UJ	s
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	J	s
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	UJ	s
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	UJ	s
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	UJ	s
8260C	2-BUTANONE	78-93-3	UG_L	2.5	UJ	s
8260C	2-HEXANONE	591-78-6	UG_L	2.5	UJ	s
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	UJ	s
8260C	ACETONE	67-64-1	UG_L	2.5	UJ	s
8260C	BENZENE	71-43-2	UG_L	0.5	UJ	s
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	UJ	s
8260C	BROMOFORM	75-25-2	UG_L	0.5	UJ	s
8260C	BROMOMETHANE	74-83-9	UG_L	1	UJ	s
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	UJ	s
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.4	J	s
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	UJ	s
8260C	CHLOROETHANE	75-00-3	UG_L	1	UJ	s
8260C	CHLOROFORM	67-66-3	UG_L	0.5	UJ	s
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	s
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1	J	s
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	UJ	s
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	s
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	UJ	s
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	UJ	s,c
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	UJ	s
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	UJ	s
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	UJ	s
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	UJ	s
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	UJ	s
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	s
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	UJ	s
8260C	O-XYLENE	95-47-6	UG_L	0.5	UJ	s
8260C	STYRENE	100-42-5	UG_L	0.5	UJ	s
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.84	J	s
8260C	TOLUENE	108-88-3	UG_L	0.5	UJ	s
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	UJ	s
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	UJ	s
8260C	TRICHLOROETHENE	79-01-6	UG_L	640	J	s,m
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	UJ	s
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	UJ	s
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	UJ	s
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	3.8		

Notes:
UG_L = Micrograms per liter
NA = Not analyzed
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

Appendix C

Analytical Data Validation – ARCADIS

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Northrop Grumman Corporation-Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC2751, JC2857 and JC2989

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #24352R
September 29, 2015
Review Level: Tier II
Project #NY001496.1514.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC2751, JC2857 and JC2989 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC2751	FB083115BT1	JC2751-1	Water	08/31/2015		X	X			
	TB083115BT1	JC2751-2	Water	08/31/2015		X				
	BPOW 5-1	JC2751-3	Water	08/31/2015		X	X			
JC2857	TB090115BT1	JC2857-1	Water	09/01/2015		X				
	FB090115BT1	JC2857-2	Water	09/01/2015		X	X			
	BPOW 5-2	JC2857-3	Water	09/01/2015		X	X			
JC2989	FB090215BT1	JC2989-1	Water	09/02/2015		X	X			
	TB090215BT1	JC2989-2	Water	09/02/2015		X				
	BPOW 5-3	JC2989-3	Water	09/02/2015		X	X			

Notes:

1. Semivolatile (1,4-Dioxane) analysis was performed at Accutest Laboratories, Marlborough, MA (Accutest-NE) facility.

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

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

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

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

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

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

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

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

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

s.u. Standard units

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

2. Blank Contamination

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

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

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

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 analysis was not performed on a sample location associated with these SDGs.

5. Laboratory Control Sample (LCS) Analysis

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected on a sample location associated with these SDGs.

7. Laboratory Duplicate Analysis

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

A laboratory duplicate sample was not performed on a sample location associated with these SDGs.

8. System Performance and Overall Assessment

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

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

DATA VALIDATION CHECKLIST FOR VOCs

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

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

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

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

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

A MS/MSD analysis was not performed on a sample location associated with these SDGs.

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

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected with a sample location associated with these SDGs.

7. 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		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: September 29, 2015

PEER REVIEW BY: Todd Church

DATE: October 5, 2015

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC2751

Client / Reporting Information

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

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.3141.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX
1	FB083115BT1		8/31/15	0910	BP	FB	2	2								✓	
2	TB083115BT1		8/31/15	0900	—	TB	2	2								✓	
3	BOW 5-1		8/31/15	1235	GP	GW	3	3								✓	

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

V1108

INITIAL ASSESSMENT 2A JR
LABEL VERIFICATION JK

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Labilink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

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

Please use " GP " for MS/MSD QA/QC 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 Patricia Prezorski	8/31/15 1900	1 Chris Land	2 Chris Land	9/1/15 1000	1
3 Brendan Tong		3	4	9/1/15 1710	2
5		5			4

Custody Seal # Intact Not Intact Preserved where applicable On Ice Cooler Temp. 2.7°C/D

JC2751: Chain of Custody
Page 1 of 4

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 # JC2751

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516-284-0247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.314I.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (If different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX
-1	FB083115B12		8/31/15	0910	AP	FB	2					2					✓
-3	BPOW 5-1		8/31/15	1235	AP	GW	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

Emergency & Rush T/A data available VIA Labiink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

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

Please use " AP " for MS/MSD QA/QC 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 Patricia Prezorski	8/31/15 1600	1 FX Date Time:	2 FX	9/1/15 9:30	2
3 Brenden Tong	Date Time:	3	4	Date Time:	4
5	Date Time:	5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 2.2c

Report of Analysis

Client Sample ID:	FB083115BT1		
Lab Sample ID:	JC2751-1	**Date Sampled:**	08/31/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/01/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99183.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.2	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB083115BT1		
Lab Sample ID:	JC2751-1	**Date Sampled:**	08/31/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/01/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		78-114%
460-00-4	4-Bromofluorobenzene	91%		77-115%

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

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

Report of Analysis

Client Sample ID: FB083115BT1
Lab Sample ID: JC2751-1
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 08/31/15
Date Received: 09/01/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97642.D	1	09/10/15	AMA	09/02/15	M:OP44462	M:MSI3652
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	0.20	0.078	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		26-121%
321-60-8	2-Fluorobiphenyl	66%		28-107%
1718-51-0	Terphenyl-d14	86%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

Report of Analysis

Client Sample ID:	TB083115BT1		
Lab Sample ID:	JC2751-2	**Date Sampled:**	08/31/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/01/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99184.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

Report of Analysis

Client Sample ID:	TB083115BT1		
Lab Sample ID:	JC2751-2	**Date Sampled:**	08/31/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/01/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		78-114%
460-00-4	4-Bromofluorobenzene	93%		77-115%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC2751-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 08/31/15
Date Received: 09/01/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99179.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

Report of Analysis

Client Sample ID:	BPOW 5-1		
Lab Sample ID:	JC2751-3	**Date Sampled:**	08/31/15
Matrix:	AQ - Ground Water	**Date Received:**	09/01/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

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

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

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

Report of Analysis

Client Sample ID: BPOW 5-1
Lab Sample ID: JC2751-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 08/31/15
Date Received: 09/01/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97650.D	1	09/10/15	AMA	09/02/15	M:OP44462	M:MSI3652
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	0.21	0.080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		26-121%
321-60-8	2-Fluorobiphenyl	70%		28-107%
1718-51-0	Terphenyl-d14	82%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
WB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC2857

Client / Reporting Information

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

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.314I.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (If different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40 Full analyte list	B8270SIM14DIOX	LAB USE ONLY
1	TB090115BT1		9/1/15	0830	—	TB	2	2								✓		
2	FB090115BT1		9/1/15	0950	AP	FB	2	2								✓		V1128
3	BPOW 5-2		9/1/15	1313	AP	GW	3	3								✓		

Number of preserved Bottles

Matrix Codes

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

Turnaround Time (Business days)

- [ ] 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 3A
LABEL VERIFICATION OB

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use * OW * for MS/MSD QA/QC Sample.
Full analyte list for 524.2

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

Relinquished by Sampler: 1 Patricia Prezorski	Date Time: 9/1/15 2100	Received By: 1 Chris Kael	Relinquished By: 2 Chris Kael	Date Time: 9/2/15 1720	Received By: 2
Relinquished by Sampler: 3 Brendan Tong	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 3.6°C IR

JC2857: Chain of Custody
Page 1 of 3

Report of Analysis

Client Sample ID: TB090115BT1
Lab Sample ID: JC2857-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/01/15
Date Received: 09/02/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99181.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

Report of Analysis

Client Sample ID:	TB090115BT1		
Lab Sample ID:	JC2857-1	**Date Sampled:**	09/01/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/02/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	92%		77-115%

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

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

Report of Analysis

Client Sample ID:	FB090115BT1		
Lab Sample ID:	JC2857-2	**Date Sampled:**	09/01/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/02/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99182.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	FB090115BT1		
Lab Sample ID:	JC2857-2	**Date Sampled:**	09/01/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/02/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	92%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090115BT1
Lab Sample ID: JC2857-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/01/15
Date Received: 09/02/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97654.D	1	09/10/15	AMA	09/03/15	M:OP44479	M:MSI3652
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.22	0.082	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		26-121%
321-60-8	2-Fluorobiphenyl	68%		28-107%
1718-51-0	Terphenyl-d14	82%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

Report of Analysis

Client Sample ID: BPOW5-2
Lab Sample ID: JC2857-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/01/15
Date Received: 09/02/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99180.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW5-2		
Lab Sample ID:	JC2857-3	**Date Sampled:**	09/01/15
Matrix:	AQ - Ground Water	**Date Received:**	09/02/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		78-114%
460-00-4	4-Bromofluorobenzene	90%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW5-2
Lab Sample ID: JC2857-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/01/15
Date Received: 09/02/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97655.D	1	09/10/15	AMA	09/03/15	M:OP44479	M:MSI3652
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	0.21	0.080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		26-121%
321-60-8	2-Fluorobiphenyl	64%		28-107%
1718-51-0	Terphenyl-d14	85%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
WIB

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 # JC2989

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville | State: NY | Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com | E-mail
Phone #: 631-391-5247 | Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG | Phone #: 516-287-3247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street
City | State
Project #: NY001496.314I.NAVI3
Client Purchase Order #
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (If different from Report to)

City: Bethpage | State: NY
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)

V5242NG14OW+40 Full List
B8270SIM14DIOX

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	LAB USE ONLY
1	FB090215BT2		9/2/15	0940	BB	FB	2	2								V1155
2	TB090215BT2		9/2/15	0930	-	TB	2	2								
3	BRSW 5-3		9/2/15	1305	BB	GW	3	3								

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 2B 09
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 Analyte List (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " BB " for MS/MSD QA/QC Sample.
Full analyte list for 524.2

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 Patricia Prezorski	9/2/15 16:15	1	2	9/3/15 12:00	2
3 Brendan Tong		3	4		4
5		5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp: 4.8C0

5.1 5

JC2989: Chain of Custody
Page 1 of 4

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 # | Bottle Order Control # JC2989
Accutest Quote # | Accutest Job # MC41227

Client / Reporting Information	Project Information	
Company Name: Arcadis	Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro	
Street Address: 2 Huntington Quad, Suite 1S10	Street	Billing Information (If different from Report to)
City: Melville State: NY Zip: 11747	City: Bethpage State: NY	Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
Project Contact / E-mail: Soma Das, soma.das@arcadis-us.com	Project #: NY001496.3141.NAVI3	Street Address: 630 Plaza Drive, Suite 600
Phone #: 631-391-5247 Fax #: 631-249-7610	Client Purchase Order #: Work Authorization #: NY001496_2015	City: Highlands Ranch, State: CO Zip: 80129
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 287-6247	Project Manager: Carlo San Giovanni	Attention: Soma Das

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+48 Full List	B8270SIM14DIOX	LAB USE ONLY
-1	FB090215BT2 -1		9/2/15	0840	PP	FB	2					2					✓	-1
-2 3	BPOW 5-3 -3		9/2/15	1305	PP	GW	2					2					✓	-3
																		16D

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 Analyte List (V5242NG14OW+48 Full List) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " PP " for MS/MSD QA/QC 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 Patricia Prezorski	9/2/15 1700	1 FX	2 FX	9/3/15 9:30	2 [signature]
Relinquished by Sampler: 3 Brendan Tong	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. 1.5°

JC2989: Chain of Custody
Page 2 of 4

Report of Analysis

Client Sample ID: FB090215BT1
Lab Sample ID: JC2989-1
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/02/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99193.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.3	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB090215BT1		
Lab Sample ID:	JC2989-1	**Date Sampled:**	09/02/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		78-114%
460-00-4	4-Bromofluorobenzene	91%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090215BT1
Lab Sample ID: JC2989-1
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/02/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97759.D	1	09/16/15	AMA	09/08/15	M:OP44541	M:MSI3656
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	0.20	0.078	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		26-121%
321-60-8	2-Fluorobiphenyl	71%		28-107%
1718-51-0	Terphenyl-d14	94%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

Report of Analysis

Client Sample ID: TB090215BT1
Lab Sample ID: JC2989-2
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/02/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99194.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB090215BT1		
Lab Sample ID:	JC2989-2	**Date Sampled:**	09/02/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	90%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 5-3
Lab Sample ID: JC2989-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/02/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99202.D	1	09/09/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW 5-3		
Lab Sample ID:	JC2989-3	**Date Sampled:**	09/02/15
Matrix:	AQ - Ground Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	90%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 5-3
Lab Sample ID: JC2989-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/02/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97760.D	1	09/16/15	AMA	09/08/15	M:OP44541	M:MSI3656
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	0.39	0.21	0.079	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		26-121%
321-60-8	2-Fluorobiphenyl	77%		28-107%
1718-51-0	Terphenyl-d14	91%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
Infrastructure · Water · Environment · Buildings

Imagine the result

Northrop Grumman Corporation-Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC3811, JC3916 and JC4092

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #24355R
October 8, 2015
Review Level: Tier II
Project #NY001496.1514.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC3811, JC3916 and JC4092 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC3811	TB091415BT1	JC3811-1	Water	09/14/2015		X				
	FB091415BT1	JC3811-2	Water	09/14/2015		X	X			
	BPOW 5-4	JC3811-3	Water	09/14/2015		X	X			
JC3916	TB091515BT1	JC3916-1	Water	09/15/2015		X				
	FB091515BT1	JC3916-2	Water	09/15/2015		X	X			
	BPOW 5-5	JC3916-3	Water	09/15/2015		X	X			
JC4092	TB091615BT1	JC4092-1	Water	09/16/2015		X				
	FB09165BT1	JC4092-2	Water	09/16/2015		X	X			
	BPOW 5-6	JC4092-3	Water	09/16/2015		X	X			

Notes:

1. Semivolatile (1,4-Dioxane) analysis was performed at Accutest Laboratories, Marlborough, MA (Accutest-NE) facility.

2. The matrix spike (MS) analysis was performed on sample location BPOW 5-5 for VOC and SVOC.

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

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

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

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

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

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

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

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

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

s.u. Standard units

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

2. Blank Contamination

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

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

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
BPOW 5-4	Acetone (Field Blank)	Detected sample results <RL and <BAL	"UB" at the RL
BPOW 5-5			
BPOW 5-6			

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.

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
BPOW 5-5	2-Butanone	AC	>UL

AC Acceptable

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

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

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

Sample Locations	Compound
BPOW 5-5	1,1-Dichloroethane
	cis-1,3-Dichlorpropene

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.

6. Field Duplicate Analysis

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

A field duplicate was not collected on a sample location associated with these SDGs.

7. Laboratory Duplicate Analysis

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

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

8. System Performance and Overall Assessment

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

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

DATA VALIDATION CHECKLIST FOR VOCs

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

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

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

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

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

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

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

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected with a sample location associated with these SDGs.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

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

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: October 8, 2015

PEER REVIEW BY: Todd Church

DATE: October 11, 2015

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
WIB

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

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC3811

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 267-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX
1	TB09141515BT1		9/14/15	1030	—	TB	2	2								✓	
2	FB09141515BT1		9/14/15	1045	AP	FB	2	2								✓	
3	BPOW 5-4		9/14/15	1334	AP	GW	3	3								✓	

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: V58

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)

Please use " " for MS/MSD QA/QC Sample.

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 Patricia Prezorski	9/14/15 1745	1 Chris Faul	2 Chris Faul	9/15/15 1650	2
3 Brendan Tong		3	4		4
5		5	Custody Seal #	☑ Intact ☐ Not Intact	Preserved where applicable ☐ On Ice ☑ Cooler Temp. 13°C IP

5.1
5

JC3811: Chain of Custody
Page 1 of 3

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 # JC3811

Client / Reporting Information

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

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street:
City: Bethpage | State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX
-2	FB091415BT1		9/14/15	1045	AP	FB	2					2					✓
-3	BP0L 5-4		9/14/15	1334	AP	GW	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

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): / Data:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)

Please use " AP " for MS/MSD QA/QC 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 Patricia Prezorski	9/14/15 1745	1 Date Time	2		2
3 Brendan Tong		3	4		4
5 FEDX	9-15-15 100	5	Custody Seal #	☐ Intact ☐ Not Intact	Preserved where applicable ☐	On Ice ☐	Cooler Temp. 0.3 °C

JC3811: Chain of Custody
Page 3 of 3

Report of Analysis

Client Sample ID: TB091415BT1
Lab Sample ID: JC3811-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/14/15
Date Received: 09/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99424.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB091415BT1		
Lab Sample ID:	JC3811-1	**Date Sampled:**	09/14/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/15/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	104%		78-114%
460-00-4	4-Bromofluorobenzene	86%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091415BT1
Lab Sample ID: JC3811-2
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/14/15
Date Received: 09/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99425.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

Report of Analysis

Client Sample ID:	FB091415BT1		
Lab Sample ID:	JC3811-2	**Date Sampled:**	09/14/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/15/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	86%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091415BT1
Lab Sample ID: JC3811-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/14/15
Date Received: 09/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97933.D	1	09/24/15	AMA	09/17/15	M:OP44660	M:MSI3662
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	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		26-121%
321-60-8	2-Fluorobiphenyl	67%		28-107%
1718-51-0	Terphenyl-d14	89%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC3811-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/14/15
Date Received: 09/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99426.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone 5.0	~~1.5~~	5.0	0.91	ug/l	~~J~~ UB
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW 5-4		
Lab Sample ID:	JC3811-3	**Date Sampled:**	09/14/15
Matrix:	AQ - Ground Water	**Date Received:**	09/15/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		78-114%
460-00-4	4-Bromofluorobenzene	84%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 5-4
Lab Sample ID: JC3811-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/14/15
Date Received: 09/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97934.D	1	09/24/15	AMA	09/17/15	M:OP44660	M:MSI3662
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.28	0.22	0.083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		26-121%
321-60-8	2-Fluorobiphenyl	75%		28-107%
1718-51-0	Terphenyl-d14	89%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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 # JC3916

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 267-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX	LAB USE ONLY
1	TB091515BT1		9/15/15	0000	—	TB	2	2								✓		
2	FB091515BT1		9/15/15	1040	AP	FB	2	2								✓		V82
3	BP0W 5-5		9/15/15	1329	AP	GW	9	9								✓		

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 9/16/15
LABEL VERIFICATION

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " BP0W5-5 " for MS/MSD QA/QC 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 Patricia Prezorski	9/15/15 1930	1	2	9/16/15 1852	2
3 Brendan Tong		3	4		4
5		5			

Custody Seal # | [ ] Intact [x] Not Intact | Preserved where applicable [ ] | On Ice [x] | Cooler Temp. 2.6°C/I

5.1 5

JC3916: Chain of Custody
Page 1 of 3

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 # JC3916

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 297-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

V5242NG FULL LIST
B8270SIM14DIOX

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	V5242NG FULL LIST	B8270SIM14DIOX	LAB USE ONLY
-2	FB091515BT1		9/15/15	1040	BP	FB	2					2					✓	
-3S,D	BPOW 5-5		9/15/15	1328	BP	GW	6					6					✓	

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 Labfax

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)

Please use " BPOW 5-5 " for MS/MSD QA/QC Sample.

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

Relinquished by Sampler: 1 Patricia Prezorski	Date Time: 9/15/15 1830	Received By: 1 FedEx	Relinquished By: 2	Date Time: 9/16/15	Received By: 2	
Relinquished by Sampler: 3 Brendan Tong	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. 0.4, 1.3 °

Report of Analysis

Client Sample ID: TB091515BT1
Lab Sample ID: JC3916-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/15/15
Date Received: 09/16/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99416.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.94	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

Report of Analysis

Client Sample ID:	TB091515BT1		
Lab Sample ID:	JC3916-1	**Date Sampled:**	09/15/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/16/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	85%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091515BT1
Lab Sample ID: JC3916-2
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/15/15
Date Received: 09/16/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99417.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.2	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB091515BT1		
Lab Sample ID:	JC3916-2	**Date Sampled:**	09/15/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/16/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		78-114%
460-00-4	4-Bromofluorobenzene	86%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091515BT1
Lab Sample ID: JC3916-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/15/15
Date Received: 09/16/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97911.D	1	09/23/15	AMA	09/19/15	M:OP44675	M:MSI3661
Run #2							

	Initial Volume	Final Volume
Run #1	820 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.24	0.093	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		26-121%
321-60-8	2-Fluorobiphenyl	64%		28-107%
1718-51-0	Terphenyl-d14	74%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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:	JC3916-3	**Date Sampled:**	09/15/15
Matrix:	AQ - Ground Water	**Date Received:**	09/16/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99414.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound		Result	RL	MDL	Units	Q	
67-64-1	Acetone	5.0	~~2.2~~	5.0	0.91	ug/l	~~J~~	UB
78-93-3	2-Butanone		ND	5.0	0.57	ug/l		
71-43-2	Benzene		ND	0.50	0.057	ug/l		
75-27-4	Bromodichloromethane		ND	0.50	0.082	ug/l		
75-25-2	Bromoform		ND	0.50	0.046	ug/l		
74-83-9	Bromomethane		ND	0.50	0.077	ug/l		
75-15-0	Carbon disulfide		ND	0.50	0.028	ug/l		
108-90-7	Chlorobenzene		ND	0.50	0.027	ug/l		
75-00-3	Chloroethane		ND	0.50	0.037	ug/l		
67-66-3	Chloroform		ND	0.50	0.031	ug/l		
74-87-3	Chloromethane		ND	0.50	0.044	ug/l		
56-23-5	Carbon tetrachloride		ND	0.50	0.074	ug/l		
75-34-3	1,1-Dichloroethane		ND	0.50	0.039	ug/l	J	
75-35-4	1,1-Dichloroethylene		ND	0.50	0.054	ug/l		
107-06-2	1,2-Dichloroethane		ND	0.50	0.034	ug/l		
78-87-5	1,2-Dichloropropane		ND	0.50	0.082	ug/l		
124-48-1	Dibromochloromethane		ND	0.50	0.042	ug/l		
156-60-5	trans-1,2-Dichloroethylene		ND	0.50	0.039	ug/l		
156-59-2	cis-1,2-Dichloroethylene		ND	0.50	0.081	ug/l		
10061-02-6	trans-1,3-Dichloropropene		ND	0.50	0.033	ug/l		
10061-01-5	cis-1,3-Dichloropropene		ND	0.50	0.063	ug/l	J	
100-41-4	Ethylbenzene		ND	0.50	0.033	ug/l		
76-13-1	Freon 113		ND	1.0	0.10	ug/l		
591-78-6	2-Hexanone		ND	2.0	0.084	ug/l		
75-09-2	Methylene chloride		ND	0.50	0.047	ug/l		
108-10-1	4-Methyl-2-pentanone		ND	2.0	0.27	ug/l		
100-42-5	Styrene		ND	0.50	0.028	ug/l		
71-55-6	1,1,1-Trichloroethane		ND	0.50	0.050	ug/l		
79-34-5	1,1,2,2-Tetrachloroethane		ND	0.50	0.035	ug/l		
79-00-5	1,1,2-Trichloroethane		ND	0.50	0.052	ug/l		
127-18-4	Tetrachloroethylene		ND	0.50	0.091	ug/l		
108-88-3	Toluene		ND	0.50	0.044	ug/l		

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

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

Report of Analysis

Client Sample ID:	BPOW 5-5		
Lab Sample ID:	JC3916-3	**Date Sampled:**	09/15/15
Matrix:	AQ - Ground Water	**Date Received:**	09/16/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	86%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 5-5
Lab Sample ID: JC3916-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/15/15
Date Received: 09/16/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97909.D	1	09/23/15	AMA	09/19/15	M:OP44675	M:MSI3661
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.39	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		26-121%
321-60-8	2-Fluorobiphenyl	63%		28-107%
1718-51-0	Terphenyl-d14	78%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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 # JC4092

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 287 6147

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX	LAB USE ONLY
1	TB091615BT2		9/16/15	1000	—	TB	2	2								✓		
2	FB091615BT2		9/16/15	1010	BP	FB	2	2								✓		V102
3	BPOW 5-6		9/16/15	1259	BP	GW	3	3								✓		

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 26 JK
LABEL VERIFICATION

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " BP " for MS/MSD QA/QC Sample.

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

Relinquished by Sampler: 1 Patricia Prezorski	Date Time: 9/16/15 2000	Received By: 1	Relinquished By: Date Time: 9/16/15 1700	Received By: 2	Date Time: 9/17/15 1057
Relinquished by Sampler: 3 Brendan Tong	Date Time:	Received By: 3	Relinquished By: 4	Received By: 4	Date Time:
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice ✓	Cooler Temp. 03 2.00 2.0

5.1.5

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
Phone #: 631-391-5247 | Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG | Phone #: 516 287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage | State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Preserved: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX	LAB USE ONLY
	FB091615T2		9/16/15	1010	AP	FB	2					2					✓	
	BPOU 5-6		9/16/15	1259	AP	GW	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 Analyte List (V5242NG FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use * * for MS/MSD QA/QC 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	Patricia Prezorski	9/16/15 1800	1	2		2
3	Brendan Tong		3	4		4
5		9-17-15 910	5	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice ✓	Cooler Temp. 1.3 C

JC4092: Chain of Custody
Page 3 of 3

Report of Analysis

Client Sample ID: TB091615BT1
Lab Sample ID: JC4092-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/16/15
Date Received: 09/17/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99463.D	1	09/19/15	MD	n/a	n/a	V1B4714
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

Report of Analysis

Client Sample ID:	TB091615BT1		
Lab Sample ID:	JC4092-1	**Date Sampled:**	09/16/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/17/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		78-114%
460-00-4	4-Bromofluorobenzene	85%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091615BT1
Lab Sample ID: JC4092-2
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/16/15
Date Received: 09/17/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99464.D	1	09/19/15	MD	n/a	n/a	V1B4714
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	FB091615BT1		
Lab Sample ID:	JC4092-2	**Date Sampled:**	09/16/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/17/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		78-114%
460-00-4	4-Bromofluorobenzene	83%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091615BT1
Lab Sample ID: JC4092-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/16/15
Date Received: 09/17/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I98026.D	1	09/30/15	AMA	09/20/15	M:OP44688	M:MSI3665
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	0.20	0.078	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	51%		26-121%
321-60-8	2-Fluorobiphenyl	47%		28-107%
1718-51-0	Terphenyl-d14	59%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC4092-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/16/15
Date Received: 09/17/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99465.D	1	09/19/15	MD	n/a	n/a	V1B4714
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone 5.0	~~1.3~~	5.0	0.91	ug/l	~~J~~ UB
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW 5-6		
Lab Sample ID:	JC4092-3	**Date Sampled:**	09/16/15
Matrix:	AQ - Ground Water	**Date Received:**	09/17/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	84%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 5-6
Lab Sample ID: JC4092-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/16/15
Date Received: 09/17/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97967.D	1	09/28/15	AMA	09/20/15	M:OP44688	M:MSI3663
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.23	0.086	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	46%		26-121%
321-60-8	2-Fluorobiphenyl	40%		28-107%
1718-51-0	Terphenyl-d14	55%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
Infrastructure · Water · Environment · Buildings

Imagine the result

Northrop Grumman Corporation-Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC3119, JC3192 and JC3373

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #24353R
September 29, 2015
Review Level: Tier II
Project #NY001496.1514.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC3119, JC3192 and JC3373 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC3119	FB090315BT1	JC3119-1	Water	09/03/2015		X	X			
	TB090315BT1	JC3119-2	Water	09/03/2015		X				
	BPOW 6-1	JC3119-3	Water	09/03/2015		X	X			
JC3192	FB090415BT1	JC3192-1	Water	09/04/2015		X	X			
	TB090415BT1	JC3192-2	Water	09/04/2015		X				
	BPOW 6-2	JC3192-3	Water	09/04/2015		X	X			
JC3373	TB090815BT1	JC3373-1	Water	09/08/2015		X				
	FB090815BT1	JC3373-2	Water	09/08/2015		X	X			
	BPOW 6-3	JC3373-3	Water	09/08/2015		X	X			

Notes:

1. Semivolatile (1,4-Dioxane) analysis was performed at Accutest Laboratories, Marlborough, MA (Accutest-NE) facility.

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

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

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

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

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

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

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

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

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

s.u. Standard units

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

2. Blank Contamination

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

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

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

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 analysis was not performed on a sample location associated with these SDGs.

5. Laboratory Control Sample (LCS) Analysis

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected on a sample location associated with these SDGs.

7. Laboratory Duplicate Analysis

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

A laboratory duplicate sample was not performed on a sample location associated with these SDGs.

8. System Performance and Overall Assessment

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

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

DATA VALIDATION CHECKLIST FOR VOCs

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

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

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

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

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

A MS/MSD analysis was not performed on a sample location associated with these SDGs.

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

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected with a sample location associated with these SDGs.

7. 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		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: September 29, 2015

PEER REVIEW BY: Todd Church

DATE: October 5, 2015

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ACCUTEST LABORATORIES

GW
FB
WTB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC3119

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 #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.314I.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

V5242NG14GW(+40), B8270SIM14DIOX

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	V5242NG14GW(+40)	B8270SIM14DIOX	LAB USE ONLY
1	FB090315BT1		9/3/15	0850	CB	FB	2	2								✓		U1172
2	TB090315BT1		9/3/15	0830	—	TB	2	2								✓		
3	BPOWG-1		9/3/15	1208	CB	GW	3	3								✓		

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 2B OB
LABEL VERIFICATION OB

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG14GW(+40) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " " for MS/MSD QA/QC 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 Patricia Prezorski	9/3/15 1745	1 Chris Lau	Date Time: 9/4/15 12:52 2 Chris Lau	9/4/15 1653	2
3 Brendan Tong		3	4		4
5		5	Custody Seal #	Intact / Not Intact	Preserved where applicable: On Ice ✓ Cooler Temp. 2.1°C/0

5.1 5

JC3119: Chain of Custody
Page 1 of 4

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

JC3119 PAGE 1 OF 1

FED-EX Tracking # | Bottle Order Control # #4
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, E-mail: soma.das@arcadis-us.com
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516-287-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.314I.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

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

Requested Analysis (see TEST CODE sheet): V5242NG14OW+40 Full List; B8270SIM14DIOX

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
	FB090315BT1		9/3/15	0850	PP	FB	2					2					✓	
	BPOW 6-1		9/3/15	1208	PP	GW	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 Analyte List (V5242NG14OW+40) Full List plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " PP " for MS/MSD QA/QC 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 Prezorski	9/3/15 1600	1 Date Time:	2		2
3 Tong		3	4		4
5		5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ] On Ice [ ] Cooler Temp.

JC3119: Chain of Custody
Page 2 of 4

Report of Analysis

Client Sample ID: FB090315BT1
Lab Sample ID: JC3119-1
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/03/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99199.D	1	09/08/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	FB090315BT1		
Lab Sample ID:	JC3119-1	**Date Sampled:**	09/03/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	92%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090315BT1
Lab Sample ID: JC3119-1
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/03/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97761.D	1	09/16/15	AMA	09/08/15	M:OP44541	M:MSI3656
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	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		26-121%
321-60-8	2-Fluorobiphenyl	75%		28-107%
1718-51-0	Terphenyl-d14	93%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

Report of Analysis

Client Sample ID:	TB090315BT1		
Lab Sample ID:	JC3119-2	**Date Sampled:**	09/03/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99200.D	1	09/09/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB090315BT1		
Lab Sample ID:	JC3119-2	**Date Sampled:**	09/03/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		78-114%
460-00-4	4-Bromofluorobenzene	90%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW6-1
Lab Sample ID: JC3119-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/03/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99201.D	1	09/09/15	MD	n/a	n/a	V1B4703
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW6-1		
Lab Sample ID:	JC3119-3	**Date Sampled:**	09/03/15
Matrix:	AQ - Ground Water	**Date Received:**	09/03/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	89%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW6-1
Lab Sample ID: JC3119-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/03/15
Date Received: 09/03/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97762.D	1	09/16/15	AMA	09/08/15	M:OP44541	M:MSI3656
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	0.21	0.080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		26-121%
321-60-8	2-Fluorobiphenyl	71%		28-107%
1718-51-0	Terphenyl-d14	83%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
WB

CHAIN OF CUSTODY

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

PAGE 1 OF 1

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC3192

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516-297-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.~~3141~~1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

V5242NG14OW+40 plus 1,4-Dioxane
B8270SIM14DIOX

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	LAB USE ONLY
1	FB090415BT1		9/4/15	0900	AP	FB	2	2								V1172
2	TB090415BT1		9/4/15	0930	—	TB	2	2								
3	BPOW 6-2		9/4/15	1153	AP	GW	3	3								

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:
INITIAL ASESSMENT 2BOD
LABEL VERIFICATION JS

Data Deliverable Information

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

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

Comments / Special Instructions

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

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 Patricia Prezorski	9/4/15 1254	1 Chris Law	2 Chris Law Date Time: 9/4/15 12:54	9/4/15 1655	2
3 Brendan Tong		3	4		4
5		5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp. 2.1°C IR

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 # JC3192

Client / Reporting Information	Project Information	
Company Name: Arcadis	Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro	
Street Address: 2 Huntington Quad, Suite 1S10	Street	Billing Information (If different from Report to) Company Name: Arcadis, U.S., Inc. Attn: Accts Payable
City: Melville State: NY Zip: 11747	City: Bethpage State: NY	Street Address: 630 Plaza Drive, Suite 600
Project Contact / E-mail: Soma Das, soma.das@arcadis-us.com	Project #: NY001496.3141.NAVI3	City: Highlands Ranch, State: CO Zip: 80129
Phone #: 631-391-5247 Fax #: 631-249-7610	Client Purchase Order #: Work Authorization #: NY001496_2015	Attention: Soma Das
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516-287-6147	Project Manager: Carlo San Giovanni	

Requested Analysis (see TEST CODE sheet): V5242NG14OW+40 P Fill list; B8270SIM14DIOX

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG14OW+40	B8270SIM14DIOX	LAB USE ONLY
-1	FB090415BT2		9/4/15	0900	PP	FB	2					2				✓		
-3	BPOW 6-2		9/4/15	1153	PP	GW	2					2				✓		
																		16F

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 Analyte list (V5242NG14OW+40) plus 1,4-Dioxane (B8270SIM14DIOX) Fill list. Please use " PP " for MS/MSD QA/QC 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 Patricia Prezorski [signature]	9/4/15 1345	1 FX Date Time:	2 FX	9/5/15 1000	2 [signature]
3 Brendan Tong		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☐ Cooler Temp. 1.0°

JC3192: Chain of Custody
Page 2 of 3

Report of Analysis

Client Sample ID: FB090415BT1
Lab Sample ID: JC3192-1
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/04/15
Date Received: 09/04/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99220.D	1	09/09/15	MD	n/a	n/a	V1B4705
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.2	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB090415BT1		
Lab Sample ID:	JC3192-1	**Date Sampled:**	09/04/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/04/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	86%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090415BT1
Lab Sample ID: JC3192-1
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/04/15
Date Received: 09/04/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97764.D	1	09/16/15	AMA	09/08/15	M:OP44541	M:MSI3656
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	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		26-121%
321-60-8	2-Fluorobiphenyl	73%		28-107%
1718-51-0	Terphenyl-d14	84%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

Report of Analysis

Client Sample ID:	TB090415BT1		
Lab Sample ID:	JC3192-2	**Date Sampled:**	09/04/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/04/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99221.D	1	09/09/15	MD	n/a	n/a	V1B4705
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB090415BT1		
Lab Sample ID:	JC3192-2	**Date Sampled:**	09/04/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/04/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	98%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC3192-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/04/15
Date Received: 09/04/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99222.D	1	09/09/15	MD	n/a	n/a	V1B4705
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW 6-2		
Lab Sample ID:	JC3192-3	**Date Sampled:**	09/04/15
Matrix:	AQ - Ground Water	**Date Received:**	09/04/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	89%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 6-2
Lab Sample ID: JC3192-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/04/15
Date Received: 09/04/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97763.D	1	09/16/15	AMA	09/08/15	M:OP44541	M:MSI3656
Run #2							

	Initial Volume	Final Volume
Run #1	700 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.29	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		26-121%
321-60-8	2-Fluorobiphenyl	71%		28-107%
1718-51-0	Terphenyl-d14	85%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
WIB

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 # #1
Accutest Quote #
Bottle Order Control # JC3373
Accutest Job # JC3411 9/9/15

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 #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516-267-6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (If different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG (HOW-40) 8P Full List	B8270SIM14DIOX
1	TB090815BT1		9/8/15	0830	—	TB	2	2								✓	
2	FB090815BT2		9/8/15	0855	BP	FB	2	2								✓	
3	BROW 6-3		9/8/15	1205	BP	GW	3	3								✓	

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

V1208

INITIAL ASESSMENT 2/9/15
LABEL VERIFICATION NV

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

OU2 Hydro Analyte List (V5242NG (HOW-40) plus 1,4-Dioxane (B8270SIM14DIOX) CAT List
Please use " BP " for MS/MSD QA/QC Sample.

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

Relinquished by Sampler: 1 Patricia Prezorski	Date Time: 9/9/15 2030	Received By: 1 Chris Lad	Date Time: 9/9/15 10:00	Relinquished By: 2 Chris Lad	Date Time: 9/9/15 1630	Received By: 2	
Relinquished by Sampler: 3 Brendan Tong	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. 1.9°C/D

JC3373: Chain of Custody
Page 1 of 3

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 # JC3373

Client / Reporting Information

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

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.~~3141~~ 1514 NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

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

Requested Analysis (see TEST CODE sheet): V5242NG~~14OW+40~~ Full List; B8270SIM14DIOX

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG Full List	B8270SIM14DIOX	LAB USE ONLY
-2	FB090815BT1		9/8/15	0955	PP	FB	2					2					✓	
-3	BPOW 6-3		9/8/15	1205	PP	GW	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: 16F

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte list (V5242NG~~14OW+40~~ Full List) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " PP " for MS/MSD QA/QC 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 Patricia Prezorski [signature]	9/8/15 1600	1 FX	2 FX	9/9/15 1000	2 [signature]
3 Brendan Tong		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐

On Ice: X Cooler Temp. 1.5°C T

JC3373: Chain of Custody
Page 2 of 3

Report of Analysis

Client Sample ID: TB090815BT1
Lab Sample ID: JC3373-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/08/15
Date Received: 09/09/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99315.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB090815BT1		
Lab Sample ID:	JC3373-1	**Date Sampled:**	09/08/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/09/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	87%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090815BT1
Lab Sample ID: JC3373-2
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/08/15
Date Received: 09/09/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99316.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	FB090815BT1		
Lab Sample ID:	JC3373-2	**Date Sampled:**	09/08/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/09/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090815BT1
Lab Sample ID: JC3373-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/08/15
Date Received: 09/09/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97870.D	1	09/22/15	AMA	09/11/15	M:OP44578	M:MSI3660
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.23	0.086	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		26-121%
321-60-8	2-Fluorobiphenyl	53%		28-107%
1718-51-0	Terphenyl-d14	84%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC3373-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/08/15
Date Received: 09/09/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99317.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW 6-3		
Lab Sample ID:	JC3373-3	**Date Sampled:**	09/08/15
Matrix:	AQ - Ground Water	**Date Received:**	09/09/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	85%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 6-3
Lab Sample ID: JC3373-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/08/15
Date Received: 09/09/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97871.D	1	09/22/15	AMA	09/11/15	M:OP44578	M:MSI3660
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		26-121%
321-60-8	2-Fluorobiphenyl	54%		28-107%
1718-51-0	Terphenyl-d14	75%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
Infrastructure · Water · Environment · Buildings

Imagine the result

Northrop Grumman Corporation-Operable Unit 2

Data Review

BETHPAGE, NEW YORK

Volatile and Semivolatile Analyses

SDGs #JC3500, JC3649 and JC3705

Analyses Performed By:
Accutest Laboratories
Dayton, New Jersey

Report #24354R
October 8, 2015
Review Level: Tier II
Project #NY001496.1514.NAVI4

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #JC3500, JC3649 and JC3705 for samples collected in association with the Northrop Grumman-Bethpage Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDGs	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	MET	MISC
JC3500	TB090915BT1	JC3500-1	Water	09/09/2015		X				
	FB090915BT1	JC3500-2	Water	09/09/2015		X	X			
	BPOW 6-4	JC3500-3	Water	09/09/2015		X	X			
	BPOW 6-4R	JC3500-4	Water	09/09/2015		X	X			
JC3649	TB091015BT1	JC3649-1	Water	09/10/2015		X				
	FB091015BT1	JC3649-2	Water	09/10/2015		X	X			
	BPOW 6-5	JC3649-3	Water	09/10/2015		X	X			
JC3705	FB091115BT1	JC3705-1	Water	09/11/2015		X	X			
	TB091115BT1	JC3705-2	Water	09/11/2015		X				
	BPOW 6-6	JC3705-3	Water	09/11/2015		X	X			

Notes:

1. Semivolatile (1,4-Dioxane) analysis was performed at Accutest Laboratories, Marlborough, MA (Accutest-NE) facility.

2. The matrix spike (MS) analysis was performed on sample location BPOW 6-4 for VOC.

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

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

QA - Quality Assurance

VOLATILE ANALYSIS INTRODUCTION

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

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

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

- Concentration (C) Qualifiers

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

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

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

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

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

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

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

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

  R The sample results are rejected.

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

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

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

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

s.u. Standard units

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

2. Blank Contamination

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

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

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

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.

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

5. Laboratory Control Sample (LCS) Analysis

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected on a sample location associated with these SDGs.

7. Laboratory Duplicate Analysis

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

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

8. System Performance and Overall Assessment

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

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

DATA VALIDATION CHECKLIST FOR VOCs

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

%R Percent Recovery RPD Relative Percent Difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

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

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

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

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

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

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

3. Surrogates/System Monitoring Compounds

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

All surrogate recoveries were within control limits.

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

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

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

A MS/MSD analysis was not performed on a sample location associated with these SDGs.

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

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

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

6. Field Duplicate Analysis

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

A field duplicate was not collected with a sample location associated with these SDGs.

7. System Performance and Overall Assessment

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

DATA VALIDATION CHECKLIST FOR SVOCs

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

%R Percent recovery RPD Relative percent difference

VALIDATION PERFORMED BY: Lisa Horton

SIGNATURE: 

DATE: October 8, 2015

PEER REVIEW BY: Todd Church

DATE: October 11, 2015

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

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

FED-EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC3500

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 2876247
Project Manager: Carlo San Giovanni

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015

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	V5242NG FULL LIST	B8270SIM14DIOX
1	TB090915BT1		9/9/15	0900	—	TB	2	2								✓	
2	FB090915BT1		9/9/15	0905	AP	FB	2	2								✓	
3	BROW G-4		9/9/15	1207	AP	GW	3	3								✓	
4	BROW G-4R		9/9/15	—	AP	GW	3	3								✓	

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

J11

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 ~~ALL IA~~
LABEL VERIFICATION 08

Data Deliverable Information

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

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

Comments / Special Instructions

OU2 Hydro Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " " for MS/MSD QA/QC 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	Patricia Prezorski	9/9/15 2100	1	2	9/10/15 11:30	2
3	Brendan Tong		3	4	9/10/15 1900	4
5			5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 2.7C0

5.1
5

JC3500: Chain of Custody
Page 1 of 3

Report of Analysis

Client Sample ID: TB090915BT1
Lab Sample ID: JC3500-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99313.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB090915BT1		
Lab Sample ID:	JC3500-1	**Date Sampled:**	09/09/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/10/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	99%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090915BT1
Lab Sample ID: JC3500-2
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99314.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.5	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

Report of Analysis

Client Sample ID:	FB090915BT1		
Lab Sample ID:	JC3500-2	**Date Sampled:**	09/09/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/10/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	104%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

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

Report of Analysis

Client Sample ID: FB090915BT1
Lab Sample ID: JC3500-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97890.D	1	09/22/15	AMA	09/12/15	M:OP44598	M:MSI3660
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.24	0.089	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		26-121%
321-60-8	2-Fluorobiphenyl	70%		28-107%
1718-51-0	Terphenyl-d14	86%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC3500-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99311.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW 6-4		
Lab Sample ID:	JC3500-3	**Date Sampled:**	09/09/15
Matrix:	AQ - Ground Water	**Date Received:**	09/10/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	104%		78-114%
460-00-4	4-Bromofluorobenzene	91%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 6-4
Lab Sample ID: JC3500-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97891.D	1	09/22/15	AMA	09/12/15	M:OP44598	M:MSI3660
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		26-121%
321-60-8	2-Fluorobiphenyl	69%		28-107%
1718-51-0	Terphenyl-d14	81%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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 6-4R
Lab Sample ID: JC3500-4
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99312.D	1	09/14/15	MD	n/a	n/a	V1B4710
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW 6-4R		
Lab Sample ID:	JC3500-4	**Date Sampled:**	09/09/15
Matrix:	AQ - Ground Water	**Date Received:**	09/10/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	101%		78-114%
460-00-4	4-Bromofluorobenzene	87%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW 6-4R
Lab Sample ID: JC3500-4
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/09/15
Date Received: 09/10/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97892.D	1	09/22/15	AMA	09/12/15	M:OP44598	M:MSI3660
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.23	0.086	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		26-121%
321-60-8	2-Fluorobiphenyl	71%		28-107%
1718-51-0	Terphenyl-d14	84%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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
WB

CHAIN OF CUSTODY

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

Impair

PAGE 1 OF 1

FED EX Tracking # #4 | Bottle Order Control #
Accutest Quote # | Accutest Job # JC3649

Client / Reporting Information

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

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells
Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX	LAB USE ONLY
1	TB091015BT1		9/10/15	0830	—	TB	2	2								✓		V30
2	FB091015BT1		9/10/15	0900	BP	FB	2	2								✓		
3	BPOW G-5		9/10/15	1225	DP	GW	3	3								✓		

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 2AOB
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 Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " BP " for MS/MSD QA/QC Sample.

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

Relinquished by Sampler: 1 Patricia Prezorski	Date Time: 9/10/15 1545	Received By: 1	Relinquished By: 2 #59	Date Time: 9-11 8:25	Received By: 2
Relinquished by Sampler: 3 Brendan Tong	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp. 4.2

5.1 5

JC3649: Chain of Custody
Page 1 of 3

Report of Analysis

Client Sample ID: TB091015BT1
Lab Sample ID: JC3649-1
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/10/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99372.D	1	09/15/15	MD	n/a	n/a	V1B4711
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

Report of Analysis

Client Sample ID:	TB091015BT1		
Lab Sample ID:	JC3649-1	**Date Sampled:**	09/10/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/11/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		78-114%
460-00-4	4-Bromofluorobenzene	88%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091015BT1
Lab Sample ID: JC3649-2
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/10/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99420.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	FB091015BT1		
Lab Sample ID:	JC3649-2	**Date Sampled:**	09/10/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/11/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	100%		78-114%
460-00-4	4-Bromofluorobenzene	86%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091015BT1
Lab Sample ID: JC3649-2
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/10/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97783.D	1	09/17/15	AMA	09/13/15	M:OP44602	M:MSI3657
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.25	0.095	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		26-121%
321-60-8	2-Fluorobiphenyl	73%		28-107%
1718-51-0	Terphenyl-d14	90%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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: JC3649-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/10/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99421.D	1	09/17/15	MD	n/a	n/a	V1B4712
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.91	ug/l	
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	0.24	0.50	0.028	ug/l	J
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

J = Indicates 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:	JC3649-3	**Date Sampled:**	09/10/15
Matrix:	AQ - Ground Water	**Date Received:**	09/11/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		78-114%
460-00-4	4-Bromofluorobenzene	87%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW6-5
Lab Sample ID: JC3649-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/10/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97784.D	1	09/17/15	AMA	09/13/15	M:OP44602	M:MSI3657
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.22	0.083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		26-121%
321-60-8	2-Fluorobiphenyl	63%		28-107%
1718-51-0	Terphenyl-d14	88%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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 # JC3705

Client / Reporting Information

Company Name: Arcadis
Street Address: 2 Huntington Quad, Suite 1S10
City: Melville State: NY Zip: 11747
Project Contact: Soma Das, soma.das@arcadis-us.com E-mail:
Phone #: 631-391-5247 Fax #: 631-249-7610
Sampler(s) Name(s): PATRICIA PREZORSKI, BRENDAN TONG Phone #: 516 297 6247

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #: Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (If different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	V5242NG FULL LIST	B8270SIM14DIOX
1	FB09115BT1		9/11/15	0840	AP	FB	2	2								✓	
2	TB09115BT1		9/11/15	0830	—	TB	2	2								✓	
3	BPOW 6-6		9/11/15	1230	AP	GW	3	3								✓	

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

V30

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 09
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 Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " " for MS/MSD QA/QC Sample.

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

Relinquished by Sampler: 1 Patricia Prezorski	Date Time: 9/11/15 1525	Received By:	Relinquished By:	Date Time:	Received By: 2
Relinquished by Sampler: 3 Brendan Tong	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp. 4.2

5.1
5

JC3705: Chain of Custody
Page 1 of 3

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 # JC3705

Client / Reporting Information

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

Project Information

Project Name: AGMNYM62235 // OU2 Outpost Wells Northrop Grumman OU2 Hydro
Street:
City: Bethpage State: NY
Project #: NY001496.1514.NAVI3
Client Purchase Order #:
Work Authorization #: NY001496_2015
Project Manager: Carlo San Giovanni

Billing Information (if different from Report to)

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

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	EnCore	V5242NG FULL LIST	B8270SIM14DIOX	LAB USE ONLY
-1	FB091115 BT1		9/11/15	0840	AP	FB	2					2					✓	
-3	BROW G-6		9/11/15	1230	AP	GW	2					2					✓	
																		17A,

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 Analyte List (V5242NG -FULL LIST) plus 1,4-Dioxane (B8270SIM14DIOX)
Please use " BR " for MS/MSD QA/QC 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 Patricia Prezorski	9/11/15 1500	1 FX	2 FX	9/12/15 10:00	2
3 Brendan Tong		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not Intact	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 1.6°C

5.1 5

JC3705: Chain of Custody
Page 3 of 3

Report of Analysis

Client Sample ID: FB091115BT1
Lab Sample ID: JC3705-1
Matrix: AQ - Field Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/11/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99369.D	1	09/15/15	MD	n/a	n/a	V1B4711
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.3	5.0	0.91	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.57	ug/l	
71-43-2	Benzene	ND	0.50	0.057	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.082	ug/l	
75-25-2	Bromoform	ND	0.50	0.046	ug/l	
74-83-9	Bromomethane	ND	0.50	0.077	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.028	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.027	ug/l	
75-00-3	Chloroethane	ND	0.50	0.037	ug/l	
67-66-3	Chloroform	ND	0.50	0.031	ug/l	
74-87-3	Chloromethane	ND	0.50	0.044	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.074	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.039	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.054	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.034	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.082	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.042	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.039	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.081	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.033	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.063	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.033	ug/l	
76-13-1	Freon 113	ND	1.0	0.10	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.084	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.047	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.27	ug/l	
100-42-5	Styrene	ND	0.50	0.028	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.050	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.035	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.052	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.091	ug/l	
108-88-3	Toluene	ND	0.50	0.044	ug/l	

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

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

Report of Analysis

Client Sample ID:	FB091115BT1		
Lab Sample ID:	JC3705-1	**Date Sampled:**	09/11/15
Matrix:	AQ - Field Blank Water	**Date Received:**	09/11/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		78-114%
460-00-4	4-Bromofluorobenzene	89%		77-115%

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

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

Report of Analysis

Client Sample ID: FB091115BT1
Lab Sample ID: JC3705-1
Matrix: AQ - Field Blank Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/11/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97753.D	1	09/16/15	AMA	09/14/15	M:OP44621	M:MSI3656
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.24	0.089	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		26-121%
321-60-8	2-Fluorobiphenyl	65%		28-107%
1718-51-0	Terphenyl-d14	81%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

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

Report of Analysis

Client Sample ID: TB091115BT1
Lab Sample ID: JC3705-2
Matrix: AQ - Trip Blank Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/11/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99370.D	1	09/15/15	MD	n/a	n/a	V1B4711
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	TB091115BT1		
Lab Sample ID:	JC3705-2	**Date Sampled:**	09/11/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/11/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	103%		78-114%
460-00-4	4-Bromofluorobenzene	89%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW6-6
Lab Sample ID: JC3705-3
Matrix: AQ - Ground Water
Method: EPA 524.2 REV 4.1
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/11/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1B99371.D	1	09/15/15	MD	n/a	n/a	V1B4711
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Special VOA List

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

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

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

Report of Analysis

Client Sample ID:	BPOW6-6		
Lab Sample ID:	JC3705-3	**Date Sampled:**	09/11/15
Matrix:	AQ - Ground Water	**Date Received:**	09/11/15
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

Special VOA List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	102%		78-114%
460-00-4	4-Bromofluorobenzene	87%		77-115%

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

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

Report of Analysis

Client Sample ID: BPOW6-6
Lab Sample ID: JC3705-3
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: Northrop Grumman, OU2 Hydro, Bethpage, NY

Date Sampled: 09/11/15
Date Received: 09/11/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I97754.D	1	09/16/15	AMA	09/14/15	M:OP44621	M:MSI3656
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	0.22	0.084	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		26-121%
321-60-8	2-Fluorobiphenyl	60%		28-107%
1718-51-0	Terphenyl-d14	72%		29-129%

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates 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 Report: *Results of Third Quarter*

2015 Groundwater Monitoring (ARCADIS, 2015)

Mr. Henry Wilkie
Project Manager
New York State Department of Environmental Conservation
Remedial Bureau A
625 Broadway
Albany, New York 12233-7015

Mr. Steven Scharf, P.E.
Project Manager
New York State Department of Environmental Conservation
Remedial Bureau A
625 Broadway
Albany, New York 12233-7015

Arcadis of New York, Inc.
Two Huntington Quadrangle
Suite 1S10
Melville
New York 11747
Tel 631 249 7600
Fax 631 249 7610
www.arcadis.com

ENVIRONMENT

Date:

November 30, 2015

Contact:

David Stern

Phone:

631.391.5284

Email:

david.stern@arcadis.com

Our ref:

NY001496. 314I.NAVI4

Subject:

Results of Third Quarter 2015 Groundwater Monitoring,
Operable Unit 2, Northrop Grumman Systems Corporation and Naval Weapons Industrial Reserve Plant (NWIRP) Sites, Bethpage, New York.
(NYSDEC Site #s 1-30-003A and B)

Dear Mr. Scharf:

On behalf of Northrop Grumman Systems Corporation (Northrop Grumman), ARCADIS is providing the NYSDEC with the validated results of Operable Unit 2 (OU2) groundwater monitoring, performed in accordance with the approved Groundwater Monitoring Plan (ARCADIS of New York, Inc. 2012) and the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003). Table 1 summarizes OU2 remedial system performance operational data and water balance. Tables 2 and 3 provide the validated analytical results of monitoring for this period. Table 4, 5 and 6 provide the validated analytical results for vapor samples collected from the system for this period. Figure 1 shows the site plan with well locations.

Please contact us if you have any questions or comments.

Sincerely,

Arcadis of New York, Inc.

David E. Stern
Senior Hydrogeologist

Enclosures

Mr. Henry Wilkie
Mr. Steven Scharf, P.E.
November 30, 2015

Copies:
Ed Hannon – Northrop Grumman
Fred Weber – Northrop Grumman
Walter Parish – NYSDEC Region 1
Steven Karpinski – New York State Department of Health
Michael Alarcon – Nassau County Department of Health
Joseph DeFranco – Nassau County Department of Health
Lora Fly – NAVFAC Midlant Environmental
David Brayack – TetraTech NUS, Inc.
Roger Smith – Glenn Springs Holdings, Inc.
Kevin Lumpe – Steel Equities
Thomas Taccone – USEPA
Robert Alvey – USEPA
Carol Stein-USEPA
Matthew Russo – Town of Oyster Bay
Stan Carey – Massapequa Water District
Matthew Snyder – New York American Water
Charles Prucha – South Farmingdale Water District
John Reinhardt – Town of Hempstead Water District
Michael Boufis – Bethpage Water District
Lois Lovisolo – Bethpage Public Library (Public Repository)
File

TABLES

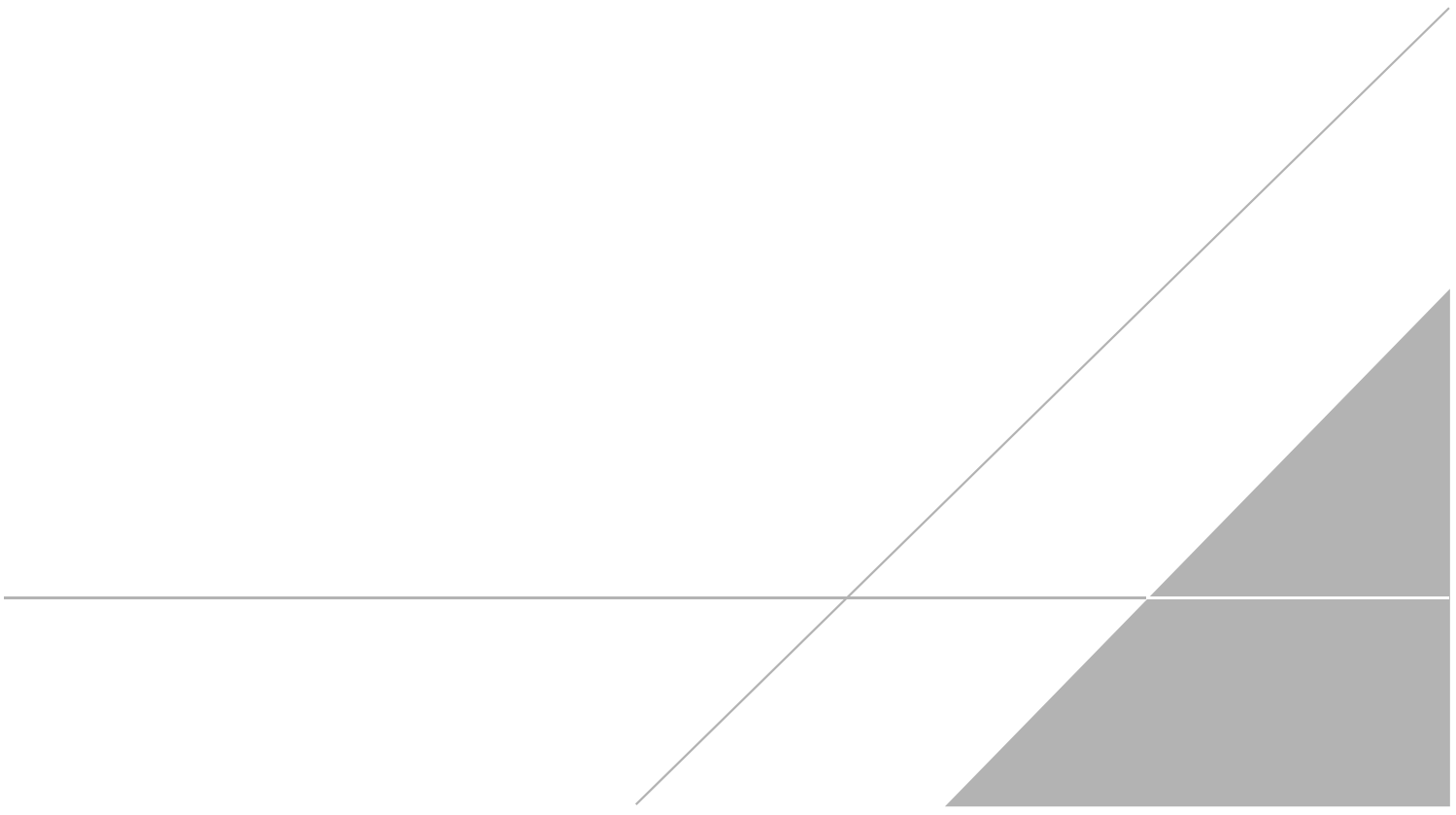


Table 1
Operational Summary for the On-Site Portion of the Operable Unit 2 Groundwater Remedy
Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

	Quarterly Flow Rates (gpm)		Quarterly Flow Volumes (MG)			Quarterly VOC Concentrations (µg/L)		VOC Mass Removed (lbs) [7]
	Design [2]	Average [3,4,17]	Design [2]	Actual [3,4]	% of Design	TCE [5]	TVOC [5,6]	Quarterly
Influent Groundwater								
Well 1 [11,13]	800	803	104.8	101.0	96%	852	900	760
Well 3R [12,13]	700	916	91.7	118.9	130%	557	620	603
Well 17 [14,16]	1,000	998	131.0	126.9	97%	178	220	228
Well 18 [16]	600	616	78.6	79.1	101%	61	83	54
Well 19 [15,16]	700	750	91.7	92.4	101%	153	180	136
Total	3,800	4,083	498	518	104%	--	--	1,781
Effluent Groundwater [8]								
Calpine	100 - 400	497	--	65.9	--	--	--	--
OXY Biosparge [10]	2 - 42	3.8	--	0.5	--	--	--	--
West Recharge Basins	1,112 - 1,455	852	--	111.6	--	--	0.90	--
South Recharge Basins	2,231	2,597	292.4	340.3	116%	--	1.18	--
Total Effluent Groundwater	--	3,950	--	518	--	--	--	--
Additional Flow to South Recharge Basins								
Storm Water Runoff Contributing to South Recharge Basins Flow Volume [18]				20.7				
Total Flow Volume to South Recharge Basins [19]			292.4	361.0	123%			
Treatment Efficiencies [9]								
Tower 96 System:	99.9%							
Tower 102 System:	>99.9%							

See notes on next page

Table 1
Operational Summary for the On-Site Portion of the Operable Unit 2 Groundwater Remedy
Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes:

(1) Quarterly reporting period: July 06, 2015 through October 05, 2015

(2) "Design" flow rates were determined for the five remedial wells and for the South Recharge Basins based on computer modeling (ARCADIS G&M, Inc. 2003c, modified in April 2005). Flow rates for Calpine, OXY Biosparge and West Recharge Basins are typical flow rates and are provided for reader information. "Design" flow volumes represent the volume of water that should be pumped/discharged during the reporting period and is calculated by multiplying the design rate by the reporting period duration.

(3) "Average" flow rates for the remedial wells represent the average actual pumping rates when the pumps are operational and do not take into account the time that a well is not operational. During this reporting period, the remedial wells operated for the following percentage of the time: Well 1 (96%), Well 3R (99%), Well 17 (97%), Well 18 (98%), and Well 19 (94%). "Actual" volumes are determined via totalizing flow meters.

(4) "Average" flow rates for the system discharges represent the average flow rate during the entire reporting period and are determined by dividing the total flow during the reporting period by the reporting period duration. The Calpine and South Recharge Basins flow volumes are determined via totalizing flow meters. The West Recharge Basin flow is calculated by subtracting the cumulative flow to the other discharges from the total influent flow. Actual flow to the recharge basins are greater than shown because storm water combines with the plant effluent prior to discharge to the recharge basins.

(5) The TCE and TVOC concentrations for the remedial wells are from the quarterly sampling event performed during this reporting period on September 9, 2015 (Table 2).

(6) The TVOC concentration for the two sets of recharge basins are their respective average monthly SPDES concentration for the current quarter.

(7) TVOC mass removed for the reporting period is calculated by multiplying the TVOC concentration from the quarterly sampling event and the quantity of water pumped during the reporting period.

(8) There are four discharges for the effluent groundwater: South Recharge Basins, West Recharge Basins, Calpine and OXY Biosparge system. Treated water is continuously discharged to the south and west recharge basins, and is available "on-demand" to both the Calpine Power Plant (Calpine) for use as make-up water, and the biosparge remediation system operated by Occidental Chemical (OXY Biosparge).

(9) Treatment System Efficiencies are calculated by dividing the difference between the influent and effluent TVOC concentrations by the influent concentration.

(10) The flow rate and volume for OXY Biosparge (Occidental Chemical) were estimated based on the average pumping rate calculated from data from April 2007 through March 2012.

(11) Well 1 was shutdown from September 21 through 24, 2015 due to replacement of the existing drop pipe with stainless steel pipe.

(12) A Well 3R pilot study was started on July 14, 2014 in an effort to increase the VOC mass removal through an increased pumping rate to approximately 1,000 gpm. The TVOC concentration and mass removal have increased since the initiation of the pilot study. On April 3, 2015 Well 3R flow rate was decreased to approximately 900 gpm to eliminate the increasing trend of TVOC concentration at Tower 96 effluent. Well 3R was brought online December 2013 to replace Well 3 due to decreasing specific capacity at Well 3 indicative of imminent well failure.

(13) Well 1 and Well 3R were shutdown on August 26, 2015 due to cleaning of the distribution tray at the Tower 96 air stripper.

(14) Well 17 was shut down due to pressure gauge issues and replacement, and installation of additional ball valve on the sampling port line.

(15) Well 19 was shut down from August 21 through 25, 2015 due to flow meter calibration and repair.

(16) Wells 17, 18 and 19 were shut down various times throughout the reporting period due to Tower 102 treatment system alarm testing, routine maintenance and well communication alarms.

(17) Total pumpage/recharge rates are accurate to -/+ 15% due to limitations in metering. Flow meter calibration is scheduled.

(18) Storm Water Runoff Volume is calculated by multiplying the adjusted tributary area and NOAA precipitation data for the reporting period. The adjusted tributary area is tributary area that is adjusted by the runoff coefficient to exclude the infiltration volume from the total rainfall volume. The tributary area, runoff coeficient, and adjusted tributary area are from Dvirka and Bartilucci Consulting Engineers' Storm Water Permit Evaluation Report (January, 28, 2010). The NOAA precipitation data are calculated as a sum of NOAA daily precipitation data for the reporting period. NOAA precipitation data are retrieved from Station GHCND:USW00054787 - FARMINGDALE REPUBLIC AIRPORT, NY US.

(19) Total Flow Volume to South Recharge Basins is estimated as a sum of flow volumes contributed from the Effluent Groundwater to South Recharge Basins and from Storm Water Runoff to South Recharge Basins.

Abbreviations:

--	Not Available or Not Applicable	TCE	Trichloroethene
TVOC	Total Volatile Organic Compounds	lbs	pounds
µg/L	micrograms per liter	MG	Million Gallons
VOC	Volatile Organic Compounds	NOAA	National Oceanic and Atmospheric Administration
gpm	gallons per minute	SPDES	State Pollutant Discharge Elimination System

Table 2
Water Sample Analytical Results for Groundwater
Remedial Wells and Treatment Systems, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Constituent (Units in µg/L)	Location: / Sample ID: / Date:	WELL 1 / WELL 1 / 9/9/2015	WELL 3R / WELL 3R / 9/9/2015	96 EFFLUENT / T96 EFFLUENT (GW) / 9/9/2015
Volatile Organic Compounds (VOCs)[1]				
1,1,1-Trichloroethane		<5.0	<5.0	<1.0
1,1,2,2-Tetrachloroethane		<5.0	<5.0	<1.0
1,1,2-Trichloroethane		<5.0	<5.0	<1.0
1,1-Dichloroethane		<5.0	**1.3 J**	<1.0
1,1-Dichloroethene		**2.8 J**	**3.9 J**	<1.0
1,2-Dichloroethane		<5.0	<5.0	<1.0
1,2-Dichloropropane		**5.0**	<5.0	<1.0
2-Butanone (MEK)		<50	<50	<10
2-Hexanone (MBK)		<25	<25	<5.0
4-methyl-2-pentanone (MIK)		<25	<25	<5.0
Acetone		<50	<50	<10
Benzene		<2.5	<2.5	<0.50
Bromodichloromethane		<5.0	<5.0	<1.0
Bromoform		<5.0	<5.0	<1.0
Bromomethane		<10	<10	<2.0
Carbon Disulfide		<10	<10	<2.0
Carbon tetrachloride		<5.0	<5.0	<1.0
Chlorobenzene		<5.0	<5.0	<1.0
Chloroethane		<5.0	<5.0	<1.0
Chloroform		<5.0	<5.0	<1.0
Chloromethane		<5.0	<5.0	<1.0
cis-1,2-dichloroethene		**4.6 J**	**6.4**	<1.0
cis-1,3-dichloropropene		<5.0	<5.0	<1.0
Dibromochloromethane		<5.0	<5.0	<1.0
Ethylbenzene		<5.0	<5.0	<1.0
Methylene Chloride		<10	<10	<2.0
Styrene		<5.0	<5.0	<1.0
Tetrachloroethene		**35.4**	**36.6**	<1.0
Toluene		<5.0	<5.0	<1.0
trans-1,2-dichloroethene		<5.0	<5.0	<1.0
trans-1,3-dichloropropene		<5.0	<5.0	<1.0
Trichloroethylene		**852**	**557**	**0.66 J**
Trichlorotrifluoroethane (Freon 113)		**4.3 J**	**4.8 J**	<5.0
Vinyl Chloride		<5.0	**12.7**	<1.0
Xylene-o		<5.0	<5.0	<1.0
Xylenes-m,p		<5.0	<5.0	<1.0
Total VOCs [2]		**900**	**620**	**0.66**
1,4-Dioxane[3]		**3.4**	**8.5**	**6.8**

See notes on last page.

Table 2
Water Sample Analytical Results for Groundwater
Remedial Wells and Treatment Systems, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Constituent (Units in µg/L)	Location: / Sample ID: / Date:	WELL 17 / WELL 17 / 9/9/2015	WELL 17-REP / REP-090915-EE-1 / 9/9/2015	WELL 18 / WELL 18 / 9/9/2015	WELL 19 / WELL 19 / 9/9/2015	102 EFFLUENT / T102 EFFLUENT (GW) / 9/9/2015
Volatile Organic Compounds (VOCs)[1]						
1,1,1-Trichloroethane		**0.51 J**	**0.54 J**	**0.87 J**	**0.43 J**	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0	<1.0 J
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		**1.2**	**1.1**	**1.4**	**0.77 J**	<1.0
1,1-Dichloroethene		**1.9**	**2.0**	<1.0	**1.3**	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	**0.46 J**	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10	<10 J
2-Hexanone (MBK)		<5.0	<5.0	<5.0	<5.0	<5.0 J
4-methyl-2-pentanone (MIK)		<5.0	<5.0	<5.0	<5.0	<5.0 J
Acetone		<10	<10	<10	<10	<10 J
Benzene		<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride		<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform		**0.43 J**	**0.47 J**	<1.0	**0.44 J**	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene		**3.8**	**3.7**	**2.0**	**18.3**	<1.0
cis-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane		<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride		<2.0	<2.0	<2.0	<2.0	<2.0
Styrene		<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		**30**	**30.5**	**15.2**	**6.7**	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-dichloroethene		<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene		<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene		**178**	**177**	**61.3**	**153**	<1.0
Trichlorotrifluoroethane (Freon 113)		**2.4 J**	**2.5 J**	**2.3 J**	**0.97 J**	<5.0
Vinyl Chloride		<1.0	<1.0	<1.0	<1.0	<1.0
Xylene-o		<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes-m,p		<1.0	<1.0	<1.0	<1.0	<1.0
Total VOCs [2]		**220**	**220**	**83**	**180**	0
1,4-Dioxane[3]		**2.8**	**3.0**	**2.2**	**1.9**	**2.8**

See notes on last page.

Table 2
Water Sample Analytical Results for Groundwater
Remedial Wells and Treatment Systems, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes and Abbreviations:

(1) VOC samples analyzed using Method 8260C.
(2) Total VOC results rounded to two significant figures.
(3) 1,4-Dioxane samples analyzed using Method 8270D SIM.

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

Bold	Constituent detected
VOCs	Volatile Organic Compounds
µg/L	Micrograms per liter
J	Constituent value is estimated
REP	Field replicate
<5.0	Compound not detected above its laboratory quantification limit.
OU2	Operable Unit 2

Table 3
Concentrations of Site Related Volatile Organic Compunds and 1,4-Dioxane in Outpost Wells[1]
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Constituent (Units in µg/L)	Well: / Sample ID: / Date:	BPOW 1-1 / BPOW 1-1 / 8/11/2015	BPOW 1-2 / BPOW 1-2 / 8/11/2015	BPOW 1-3 / BPOW 1-3 / 8/13/2015	BPOW 1-4 / BPOW 1-4 / 8/18/2015	BPOW 1-5 / BPOW 1-5 / 8/18/2015	BPOW 1-6 / BPOW 1-6 / 8/17/2015	BPOW 2-1 / BPOW 2-1 / 8/10/2015
Volatile Organic Compounds (VOCs) [3]								
1,1,1-Trichloroethane		**0.67**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane		**0.21J**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene		**0.6**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform		**0.15J**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorotrifluoroethane (Freon 113)		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene		**1.1**	**0.30J**	<0.50	<0.50	<0.50	<0.50	<0.50
Total Site-Related VOCs [4] :		**2.7**	**0.3**	0	0	0	0	0
1,4-Dioxane [5]		<0.20	<0.20	<0.21	<0.21	<0.20	<0.22	**0.09J**

See notes on last page.

Table 3
Concentrations of Site Related Volatile Organic Compunds and 1,4-Dioxane in Outpost Wells[1]
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Constituent (Units in µg/L)	Well: / Sample ID: / Date:	BPOW 2-2 / BPOW 2-2 / 8/14/2015	BPOW 2-3 / BPOW 2-3 / 8/14/2015	BPOW 3-1 / BPOW 3-1 / 8/12/2015	BPOW 3-2 / BPOW 3-2 / 9/17/2015	BPOW 3-3 / BPOW 3-3 / 8/25/2015	BPOW 3-4 / BPOW 3-4 / 8/25/2015	BPOW 3-4 / REP082515BT1 / 8/25/2015
Volatile Organic Compounds (VOCs) [3]								
1,1,1-Trichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	**0.79J**	**0.74J**
1,1-Dichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	**0.61**	**0.64**
1,2-Dichloroethane		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride		<0.50	<0.50	<0.50	<0.50	<0.50	**1**	**1.1**
Chlorobenzene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform		<0.50	<0.50	<0.50	<0.50	<0.50	**1.3**	**1.4**
cis-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	**1.1**	**1.1**
Trichlorotrifluoroethane (Freon 113)		<1.0	<1.0	<1.0	<1.0	<1.0	**0.75J**	**0.72J**
Tetrachloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene		<0.50	<0.50	<0.50	<0.50	<0.50	**60.9D**	**61D**
Total Site-Related VOCs [4] :		0	0	0	0	0	**66**	**67**
1,4-Dioxane [5]		<0.21	<0.21	**0.28**	**1.1**	**0.6**	**0.77J**	**0.32J**

See notes on last page.

Table 3
Concentrations of Site Related Volatile Organic Compunds and 1,4-Dioxane in Outpost Wells[1]
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Constituent (Units in µg/L)	Well: / Sample ID: / Date:	BPOW 4-1R[2] / BPOW 4-1R / 8/26/2015	BPOW 4-2R[2] / BPOW 4-2R / 8/26/2015
Volatile Organic Compounds (VOCs) [3]			
1,1,1-Trichloroethane		<0.50	**0.063J**
1,1,2,2-Tetrachloroethane		<0.50	<0.50
1,1,2-Trichloroethane		<0.50	<0.50
1,1-Dichloroethane		<0.50	<0.50
1,1-Dichloroethene		**0.38J**	**0.52**
1,2-Dichloroethane		**0.13J**	**0.072J**
Carbon Tetrachloride		**0.21J**	**0.19J**
Chlorobenzene		<0.50	<0.50
Chloroform		**0.15J**	**0.090J**
cis-1,2-Dichloroethene		**0.086J**	**0.18J**
Trichlorotrifluoroethane (Freon 113)		**14.7**	**12.9**
Tetrachloroethene		<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50
Trichloroethene		**0.92J**	**1.6**
Total Site-Related VOCs [4] :		**17**	**16**
1,4-Dioxane [5]		**0.58**	**0.41**

See notes on last page.

Table 3
Concentrations of Site Related Volatile Organic Compunds and 1,4-Dioxane in Outpost Wells(1)
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes and Abbreviations:

(1) These outpost wells have been recently repurposed for use as plume monitoring wells per the June 2015 Groundwater Monitoring Plan Addendum (ARCADIS of New York, Inc., 2015) as conditionally approved by the NYSDEC (August 25, 2015). Therefore, TVOC trigger levels that may have been previously established are no longer shown.

(2) The NAVY abandoned original Wells BPOW4-1 and BPOW4-2 and installed replacement Wells BPOW4-1R and BPOW4-2R between August, 2014 and October, 2014.

(3) Samples analyzed for site related VOCs per the PWSCP (ARCADIS G&M, Inc. 2003) using USEPA Method 524.2

(4) Site-related VOCs were established for the wells identified above in the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003). Total Site-Related VOCs rounded to two significant figures.

(5) Samples analyzed for 1,4-Dioxane by USEPA Method 8270D SIM.

Bold	Bold value indicates constituent detected.
J	Constituent value is estimated
D	Concentration is based on a diluted sample analysis
REP	Replicate Sample
TVOCs	Total Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
µg/L	micrograms per liter
<0.5	Compound not detected above its laboratory quantification limit.

Table 4
Vapor Sample Analytical Results for Treatment Systems
Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituent (Units in µg/m3)	Sample ID: Date:	T96 Influent 9/9/2015	T96 Midtrain 9/9/2015	T96 Effluent 9/9/2015	T102 Influent 9/9/2015	T102 Effluent 9/9/2015
1,1,1-Trichloroethane		<65	**9.3**	<0.55	**10**	<0.55
1,1,2,2-Tetrachloroethane		<82	<5.5	<0.69	<5.5	<0.69
1,1,2-Trichloroethane		<65	<4.4	<0.55	<4.4	<0.55
1,1-Dichloroethane		49.0 J	**39**	**34**	**23**	**8.1**
1,1-Dichloroethylene		**148**	**142**	**60.7**	**52.7**	**35**
1,2-Dichloroethane		<97	<6.5	<0.81	<6.5	<0.81
1,2-Dichloropropane		84.1 J	**18**	<0.92	<7.4	<0.92
Benzene		<77	<5.1	<0.64	<5.1	**0.51**
Bromodichloromethane		<80	< 5.4	<0.67	< 5.4	<0.67
Bromoform		<49	< 3.3	<0.41	< 3.3	<0.41
Bromomethane		<93	< 6.2	<0.78	< 6.2	<0.78
Carbon disulfide		<75	< 5.0	<0.62	< 5.0	<0.62
Carbon tetrachloride		<30	<2.0	<0.25	<2.0	<0.25
Chlorobenzene		<110	<7.4	<0.92	<7.4	<0.92
Chloroethane		<63	**11**	**13**	<4.2	<0.53
Chloroform		<120	6.8 J	**2.5**	**8.8**	**1.6**
Chloromethane		<50	<3.3	**1.6**	<3.3	**1.3**
cis-1,3-Dichloropropene		<110	<7.3	<0.91	<7.3	<0.91
Dibromochloromethane		<100	<6.8	<0.85	<6.8	<0.85
Ethylbenzene		<100	<6.9	<0.87	<6.9	0.69 J
Methylene chloride		**154**	<5.6	**1.7**	<5.6	**1.5**
Styrene		<100	<6.8	<0.85	<6.8	<0.85
Tetrachloroethylene		**1,460**	**178**	**0.37**	**411**	**3.7**
Toluene		<90	<6.0	<0.75	< 6.0	**21**
trans-1,3-Dichloropropene		<110	<7.3	<0.91	<7.3	<0.91
Trichloroethylene		**29,900**	**8,010**	**3.8**	**3,710**	**12**
Trichlorotrifluoroethane (Freon 113)		**189**	**109**	**2.6**	**52**	**7.7**
Vinyl chloride		**268**	**284**	**28.4**	<0.82	<0.10
Xylene-o		<100	<6.9	<0.87	<6.9	0.56 J
Xylenes - m,p		<100	<6.9	<0.87	<6.9	**1.9**
Total VOCs [(2)]		**32,104**	**8,617**	**54**	**4,182**	**96**

See notes on last page.

Table 4
Vapor Sample Analytical Results for Treatment Systems
Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Notes and Abbreviations:

(1) Vapor samples collected by ARCADIS on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per Modified USEPA Method TO-15.

(2) "Total VOCs" represents the sum of individual concentrations of compounds detected rounded to the nearest whole number.

Acronyms\Key:

700 Bold data indicates that the analyte was detected at or above its reporting limit.

16 Data that is not bold indicates analyte detected but below its reporting limit; the value is estimated.

ELAP Environmental Laboratory Approval Program

NYSDOH New York State Department of Health

USEPA United States Environmental Protection Agency.

VOC Volatile organic compound.

$\mu g/m^3$ Micrograms per cubic meter.

Table 5A
Summary of SCREEN3 Model Input and Outputs
Tower 96 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Parameters	Date Sampled:	11/13/2014	3/16/2015	5/11/2015	9/9/2015
SCREEN3 Model Input					
Source Type		Point	Point	Point	Point
Emission Rate (g/s)		1	1	1	1
Stack Height (ft)		55	55	55	55
Stack Height (m)		16.8	16.8	16.8	16.8
Stack Inside Diameter (m)		0.508	0.508	0.508	0.508
Air Flow Rate (scfm@stack temp)(1)		4,606	4,627	4,688	4,581
Air Flow Rate (acfm)(2), (3)		4,780	4,810	4,936	4,840
Stack Gas Exit Temperature (K)(2)		305	306	310	311
Ambient Air Temperature (K)(4)		286	277	287	293
Receptor Height (m)(5)		1.5	1.5	1.5	1.5
Urban/Rural		Urban	Urban	Urban	Urban
Building Height (m)		6.7	6.7	6.7	6.7
Min Horizontal Bldg Dim (m)		9.8	9.8	9.8	9.8
Max Horizontal Bldg Dim (m)		12.8	12.8	12.8	12.8
Consider Bldg Downwash?		Yes	Yes	Yes	Yes
Simple/Complex Terrain Above Stack		Simple	Simple	Simple	Simple
Simple/Complex Terrain Above Stack Base		Simple	Simple	Simple	Simple
Meteorology		Full	Full	Full	Full
Automated Distances Array		Yes	Yes	Yes	Yes
Terrain Height Above Stack Base		0	0	0	0
SCREEN3 Model Output					
1-HR Max Concentration at Receptor Height (µg/m^3) (6)		198	197	195	199
Annualization Factor(7)		0.08	0.08	0.08	0.08
Average Annual Concentration at Receptor Height (µg/m^3)(8)		15.8	15.8	15.6	15.9
Distance To Max Concentration (m)(9)		110	110	110	109

See notes on last page.

Table 5A
Summary of SCREEN3 Model Input and Outputs
Tower 96 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes:

(1) The stack air flow rate at the stack temperature (in scfm) was calculated by multiplying the stack air flow rate in acfm by the ratio of the standard temperature to the actual stack gas exit temperature in degrees Kelvin.
(2) The stack air flow rate (in acfm) and temperature were measured using inline instrumentation. Values were measured at the blower effluent location.
(3) The stack air flow rate is taken from the actual stack air flow rate on the day of sampling.
(4) The ambient temperature was recorded from weather.newsday.com website for Islip, New York. The mean actual temperature from the website was used in the model calculation
(5) The receptor height corresponds to the average inhalation level.
(6) SCREEN3 calculated constituent concentration at listed conditions at the specified inhalation level.
(7) A USEPA time averaging conversion factor of 1/0.08 was used to convert the 1-hour maximum concentration output to an annual average.
(8) Average annual constituent concentration at the receptor height was calculated by multiplying the one hour maximum concentration by the annualization factor.
(9) SCREEN3 calculated distance to the 1-hour maximum concentration.

Acronyms\Key:

µg/m^3	Micrograms per cubic meter.
acfm	Actual cubic feet per minute.
ft	Feet.
g/s	Grams per second.
K	Kelvin.
m	Meters.
scfm	Standard cubic feet per minute.
USEPA	United States Environmental Protection Agency.

Table 5B
Summary of Maximum Allowable Stack Concentration Calculations
Tower 96 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Compound	SGC[1] (µg/m^3)	Actual Effluent Concentrations[2] (µg/m^3)			
		11/13/2014	3/16/2015	5/11/2015	9/9/2015
1,1-Dichloroethane	95,000 [3]	0	8.9	0.57	34
1,1-Dichloroethene	188,000 [3]	3.7	138	2.3	60.7
Benzene	1,300	0.38	0	0	0
Chloroethane	619,000 [3]	19	20	12	13
Chloroform	150	0	0.63	0	2.5
Chloromethane	22,000	1.2	3.7	3.5	1.6
Methylene Chloride	14,000	18	1.5	1.7	1.7
Tetrachloroethylene	1,000	1.4	14	2.7	0.37
Toluene	37,000	0.49	0	0	0
Trichloroethylene	14,000	2	203	32	3.8
Trichlorotrifluoroethane (Freon 113)	960,000	0	4.5	0	2.6
Vinyl chloride	180,000	99.9	281	1.0	28.4

Compound	AGC[4] (µg/m^3)	Annual MASC[5] (µg/m^3)			
		11/13/2014	3/16/2015	5/11/2015	9/9/2015
1,1-Dichloroethane	0.63	1.77E+04	1.76E+04	1.73E+04	1.73E+04
1,1-Dichloroethene	200	5.61E+06	5.58E+06	5.50E+06	5.51E+06
Benzene	0.13	3.65E+03	3.62E+03	3.58E+03	3.58E+03
Chloroethane	10,000	2.81E+08	2.79E+08	2.75E+08	2.75E+08
Chloroform	14.700	4.12E+05	4.10E+05	4.05E+05	4.05E+05
Chloromethane	90	2.53E+06	2.51E+06	2.48E+06	2.48E+06
Methylene Chloride	60	1.68E+06	1.67E+06	1.65E+06	1.65E+06
Tetrachloroethylene	4.0	1.12E+05	1.12E+05	1.10E+05	1.10E+05
Toluene	5,000	1.40E+08	1.39E+08	1.38E+08	1.38E+08
Trichloroethylene	0.2	5.61E+03	5.58E+03	5.50E+03	5.51E+03
Trichlorotrifluoroethane (Freon 113)	180,000	5.05E+09	5.02E+09	4.95E+09	4.96E+09
Vinyl chloride	0.068	1.91E+03	1.90E+03	1.87E+03	1.87E+03

See notes on last page.

Table 5B
Summary of Maximum Allowable Stack Concentration Calculations
Tower 96 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Compound	Percent of Annual MASC[6]				Cumulative % MASC[7]
	11/13/2014	3/16/2015	5/11/2015	9/9/2015	
1,1-Dichloroethane	0.0%	0.05%	0.0%	0.20%	0.08%
1,1-Dichloroethene	0.0%	0.0%	0.0%	0.0%	0.0%
Benzene	0.01%	0.0%	0.0%	0.0%	0.0%
Chloroethane	0.0%	0.0%	0.0%	0.0%	0.0%
Chloroform	0.0%	0.0%	0.0%	0.0%	0.0%
Chloromethane	0.0%	0.0%	0.0%	0.0%	0.0%
Methylene Chloride	0.0%	0.0%	0.0%	0.0%	0.0%
Tetrachloroethylene	0.0%	0.01%	0.0%	0.0%	0.0%
Toluene	0.0%	0.0%	0.0%	0.0%	0.0%
Trichloroethylene	0.04%	3.64%	0.58%	0.07%	1.35%
Trichlorotrifluoroethane (Freon 113)	0.0%	0.0%	0.0%	0.0%	0.0%
Vinyl chloride	5.24%	14.82%	0.05%	1.52%	6.45%

Notes:

(1) Refers to the compound-specific SGC per the NYSDEC DAR-1 AGC/SGC tables revised February 28, 2014.

(2) Only VOCs that were detected in the effluent vapor sample (T96 EFF) over the past year of system operation are included in this table.

(3) An SGC was not provided in the DAR-1 AGC/SGC Tables, dated February 28, 2014. An interim SGC was developed based on guidelines provided in Section IV.A.2.b.1 of the NYSDEC DAR-1 Guidelines for the Control of Toxic Ambient Air Contaminants, 1991 edition.

(4) AGC refers to the compound-specific annual guideline concentration per the NYSDEC DAR-1 AGC/SGC tables, revised February 28, 2014. NYSDEC DAR-1 AGCs were scaled using the results of a site-specific annual USEPA SCREEN 3 model to calculate the annual MASC per monitoring event.

(5) Annual MASC was calculated by dividing the product of the AGC of a compound and the ratio of the SCREEN3 gas emission rate and the SCREEN 3 average annual concentration at receptor height by the air flow rate at the stack temperature and multiplying by the appropriate conversion factors.

(6) Percent of MASC was calculated by dividing the actual effluent concentration by the MASC for the past four quarters of operation. Percentages have been rounded to two digits.

(7) Cumulative percent of the MASC was calculated using a time-weighted average of the percent MASC per event. Percentages have been rounded to two digits.

Acronyms\Key:

µg/m^3	Micrograms per cubic meter.
AGC	Annual guideline concentration.
SGC	Short-term guideline concentration
DAR-1	Division of Air Resources-1
MASC	Maximum allowable stack concentration.
NL	Compound concentration is not listed
NYSDEC	New York State Department of Environmental Conservation

Table 6A
Summary of SCREEN3 Model Input and Outputs
Tower 102 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Parameters	Date Sampled:	11/13/14	3/16/15	5/11/15	9/9/15
SCREEN3 Model Input					
Source Type		Point	Point	Point	Point
Emission Rate (g/s)		1	1	1	1
Stack Height (ft)		69.52	69.52	69.52	69.52
Stack Height (m)		21.19	21.19	21.19	21.19
Stack Inside Diameter (m)		0.61	0.61	0.61	0.61
Air Flow Rate (scfm@stack temp)(1)		8,123	8,231	8,068	7,930
Air Flow Rate (acfm)(2), (3)		8,320	8,420	8,220	8,080
Stack Gas Exit Temperature (K)(2)		301	301	300	300
Ambient Air Temperature (K)(4)		286	277	287	293
Receptor Height (m)(5)		1.5	1.5	1.5	1.5
Urban/Rural		Urban	Urban	Urban	Urban
Building Height (m)		7.62	7.62	7.62	7.62
Min Horizontal Bldg Dim (m)		12.5	12.5	12.5	12.5
Max Horizontal Bldg Dim (m)		15.54	15.54	15.54	15.54
Consider Bldg Downwash?		Yes	Yes	Yes	Yes
Simple/Complex Terrain Above Stack		Simple	Simple	Simple	Simple
Simple/Complex Terrain Above Stack Base		Simple	Simple	Simple	Simple
Meteorology		Full	Full	Full	Full
Automated Distances Array		Yes	Yes	Yes	Yes
Terrain Height Above Stack Base		0	0	0	0
SCREEN3 Model Output					
1-HR Max Concentration at Receptor Height (µg/m^3) (6)		108.0	106.6	108.7	110.6
Annualization Factor(7)		0.08	0.08	0.08	0.08
Average Annual Concentration at Receptor Height (µg/m^3)(8)		8.6	8.5	8.7	8.8
Distance To Max Concentration (m)(9)		146	146	145	144

See notes on last page.

Table 6A
Summary of SCREEN3 Model Input and Outputs
Tower 102 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes:

(1) The stack air flow rate at the stack temperature (in scfm) was calculated by multiplying the stack air flow rate in acfm by the ratio of the standard temperature to the actual stack gas exit temperature in degrees Kelvin.

(2) The stack air flow rate (in acfm) and temperature were measured using inline instrumentation. Values were measured at the blower effluent location.

(3) The stack air flow rate is taken from the actual stack air flow rate on the day of sampling.

(4) The ambient temperature was recorded from weather.newsday.com website for Islip, New York. The mean actual temperature from the website was used in the model calculation

(5) The receptor height corresponds to the average inhalation level.

(6) SCREEN3 calculated constituent concentration at listed conditions at the specified inhalation level.

(7) A USEPA time averaging conversion factor of 1/0.08 was used to convert the 1-hour maximum concentration output to an annual average.

(8) Average annual constituent concentration at the receptor height was calculated by multiplying the one hour maximum concentration by the annualization

(9) SCREEN3 calculated distance to the 1-hour maximum concentration.

Acronyms\Key:

µg/m^3	Micrograms per cubic meter.
acfm	Actual cubic feet per minute.
ft	Feet.
g/s	Grams per second.
K	Kelvin.
m	Meters.
scfm	Standard cubic feet per minute.
USEPA	United States Environmental Protection Agency.

Table 6B
Summary of Maximum Allowable Stack Concentration Calculations
Tower 102 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Compound	SGC[1] ($\mu g/m^3$)	Actual Effluent Concentrations[2] ($\mu g/m^3$)			
		11/13/2014	3/16/2015	5/11/2015	9/9/2015
1,1,1-Trichloroethane	9,000	0	0	0.55	0
1,1-Dichloroethane	95,000 [3]	4.5	3.2	5.7	8.1
1,1-Dichloroethene	188,000 [3]	15	11	21	35
Benzene	1,300	0	0	0	0.51
Carbon Disulfide	6,200	0	1.6	0	0
Chloroform	150	1.1	0.88	1.6	1.6
Chloromethane	22,000	1.1	1.2	0.99	1.3
Ethylbenzene	54,000	0	0	0	0.69
Methylene Chloride	14,000	13	16	1.3	1.5
Tetrachloroethene	1,000	7.5	5.2	1.6	3.7
Toluene	37,000	0	0	0	21
Trichloroethene	14,000	22	20	34	12
Trichlorotrifluoroethane (Freon 113)	960,000	4.4	3.1	7.1	7.7
Vinyl Chloride	180,000	0.41	0.31	0	0
Xylene-m,p	4,300	0	0	0	1.9
Xylene-o	4,300	0	0	0	0.56

See notes on last page.

Table 6B
Summary of Maximum Allowable Stack Concentration Calculations
Tower 102 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Compound	AGC[4] ($\mu g/m^3$)	Annual MASC[5] (µg/m3)			
		11/13/2014	3/16/2015	5/11/2015	9/9/2015
1,1,1-Trichloroethane	5,000	1.48E+08	1.48E+08	1.48E+08	1.49E+08
1,1-Dichloroethane	0.63	1.87E+04	1.87E+04	1.87E+04	1.88E+04
1,1-Dichloroethene	200	5.92E+06	5.92E+06	5.93E+06	5.96E+06
Benzene	0.13	3.85E+03	3.85E+03	3.85E+03	3.87E+03
Carbon Disulfide	700	2.07E+07	2.07E+07	2.07E+07	2.09E+07
Chloroform	14.700	4.35E+05	4.35E+05	4.36E+05	4.38E+05
Chloromethane	90	2.67E+06	2.66E+06	2.67E+06	2.68E+06
Ethylbenzene	1,000	2.96E+07	2.96E+07	2.96E+07	2.98E+07
Methylene Chloride	60.0	1.78E+06	1.78E+06	1.78E+06	1.79E+06
Tetrachloroethene	4	1.18E+05	1.18E+05	1.19E+05	1.19E+05
Toluene	5,000	1.48E+08	1.48E+08	1.48E+08	1.49E+08
Trichloroethene	0.2	5.92E+03	5.92E+03	5.93E+03	5.96E+03
Trichlorotrifluoroethane (Freon 113)	180,000	5.33E+09	5.33E+09	5.33E+09	5.36E+09
Vinyl Chloride	0.068	2.01E+03	2.01E+03	2.01E+03	2.03E+03
Xylene-m,p	100	2.96E+06	2.96E+06	2.96E+06	2.98E+06
Xylene-o	100	2.96E+06	2.96E+06	2.96E+06	2.98E+06

See notes on last page.

Table 6B
Summary of Maximum Allowable Stack Concentration Calculations
Tower 102 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

Compound	Percent of Annual MASC[6]				Cumulative % MASC[7]
	11/13/14	03/16/15	5/11/2015	9/9/2015	
1,1,1-Trichloroethane	0.0%	0.0%	0.0%	0.0%	0.0%
1,1-Dichloroethane	0.02%	0.02%	0.03%	0.04%	0.03%
1,1-Dichloroethene	0.0%	0.0%	0.0%	0.0%	0.0%
Benzene	0.0%	0.0%	0.0%	0.01%	0.0%
Carbon Disulfide	0.0%	0.0%	0.0%	0.0%	0.0%
Chloroform	0.0%	0.0%	0.0%	0.0%	0.0%
Chloromethane	0.0%	0.0%	0.0%	0.0%	0.0%
Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%
Methylene Chloride	0.0%	0.0%	0.0%	0.0%	0.0%
Tetrachloroethene	0.01%	0.0%	0.0%	0.0%	0.0%
Toluene	0.0%	0.0%	0.0%	0.0%	0.0%
Trichloroethene	0.37%	0.34%	0.57%	0.20%	0.33%
Trichlorotrifluoroethane (Freon 113)	0.0%	0.0%	0.0%	0.0%	0.0%
Vinyl Chloride	0.02%	0.02%	0.0%	0.0%	0.01%
Xylene-m,p	0.0%	0.0%	0.0%	0.0%	0.0%
Xylene-o	0.0%	0.0%	0.0%	0.0%	0.0%

See notes on last page.

Table 6B
Summary of Maximum Allowable Stack Concentration Calculations
Tower 102 Treatment System, Third Quarter 2015
Northrop Grumman Systems Corporation, Operable Unit 2
Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Notes:

(1) Refers to the compound-specific SGC per the NYSDEC DAR-1 AGC/SGC tables revised February 28, 2014.

(2) Only VOCs that were detected in the effluent vapor sample (T102 EFF) over the past year of system operation are included in this table.

(3) An SGC was not provided in the DAR-1 AGC/SGC Tables, dated February 28, 2014. An interim SGC was developed based on guidelines provided in Section IV.A.2.b.1 of the NYSDEC DAR-1 Guidelines for the Control of Toxic Ambient Air Contaminants, 1991 edition.

(4) AGC refers to the compound-specific annual guideline concentration per the NYSDEC DAR-1 AGC/SGC tables, revised February 28, 2014. NYSDEC DAR-1 AGCs were scaled using the results of a site-specific annual USEPA SCREEN 3 model to calculate the annual MASC per monitoring event.

(5) Annual MASC was calculated by dividing the product of the AGC of a compound and the ratio of the SCREEN3 gas emission rate and the SCREEN 3 average annual concentration at receptor height by the air flow rate at the stack temperature and multiplying by the appropriate conversion factors.

(6) Percent of MASC was calculated by dividing the actual effluent concentration by the MASC for the past four quarters of operation. Percentages have been rounded to two digits.

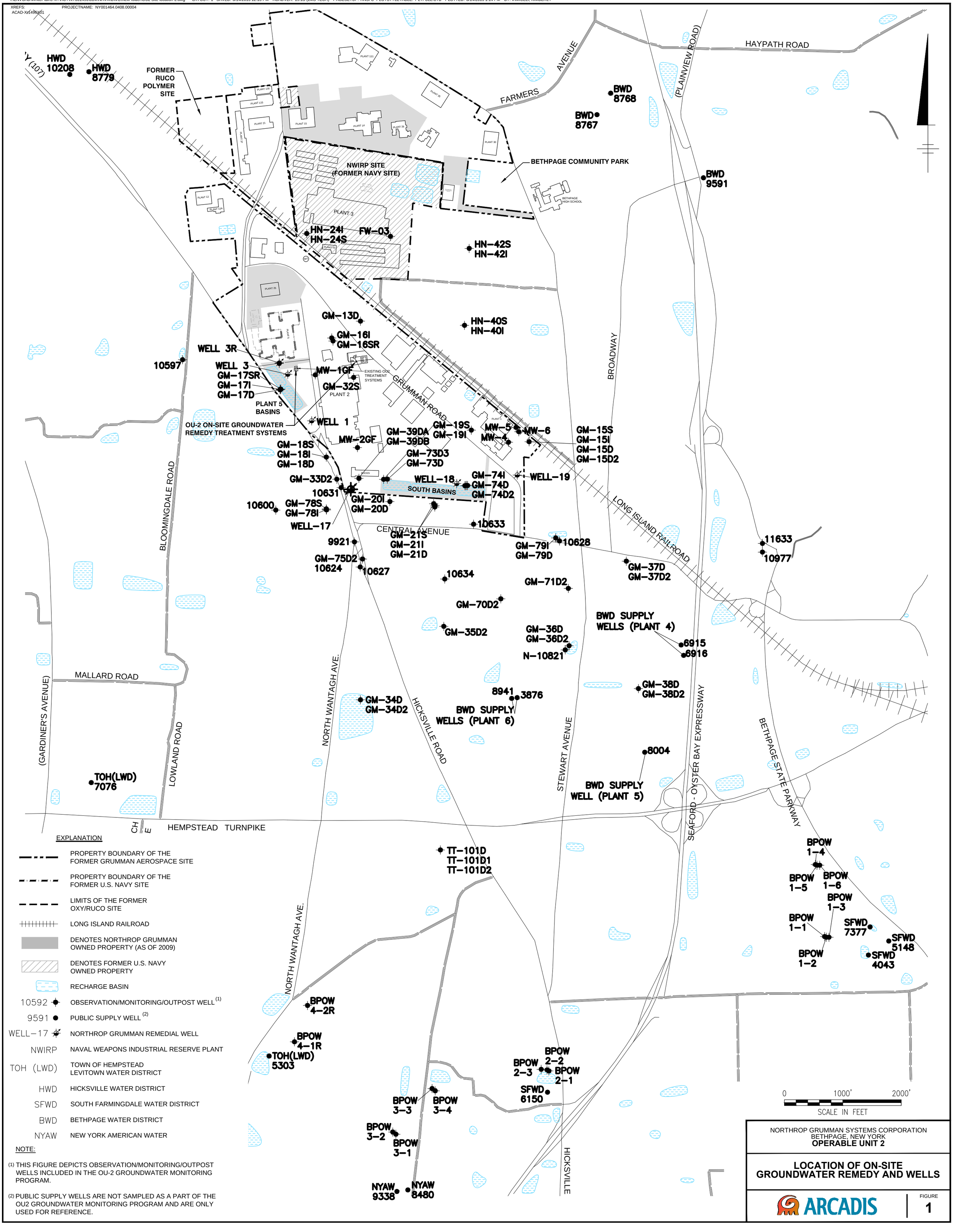
(7) Cumulative percent of the MASC was calculated using a time-weighted average of the percent MASC per event. Percentages have been rounded to two digits.

Acronyms\Key:

-- Compound not reported, unable to compute MASC
AGC Annual guideline concentration.
NL Compound concentration not listed
DAR-1 Division of Air Resources-1
MASC Maximum allowable stack concentration.
$\mu g/m^3$ Micrograms per cubic meter.
NYSDEC New York State Department of Environmental Conservation

FIGURES

CITY:MELVILLE DIV/GROUP:ENV DB:ALS LD: PIC: PM:CSG TM:DS LYR:ON=*;OFF=*REF*
I:\ENVCAD\WhitePlains-NY\ACT\NY001496\314I\NAVI4\DWG\New folder\OU2 Site location-2.dwg LAYOUT: 1 SAVED: 8/14/2015 12:15 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ANSI C PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/14/2015 1:14 PM BY: IAMICELI, KIMBERLY
XREFS: PROJECTNAME: NY001464.0408.00004
ACAD-X:1496X01



EXPLANATION

- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
- PROPERTY BOUNDARY OF THE FORMER U.S. NAVY SITE
- LIMITS OF THE FORMER OXY/RUCO SITE
- LONG ISLAND RAILROAD
- DENOTES NORTHROP GRUMMAN OWNED PROPERTY (AS OF 2009)
- DENOTES FORMER U.S. NAVY OWNED PROPERTY
- RECHARGE BASIN
- 10592 OBSERVATION/MONITORING/OUTPOST WELL (1)
- 9591 PUBLIC SUPPLY WELL (2)
- WELL-17 NORTHROP GRUMMAN REMEDIAL WELL
- NWIRP NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
- TOH (LWD) TOWN OF HEMPSTEAD LEVITOWN WATER DISTRICT
- HWD HICKSVILLE WATER DISTRICT
- SFWD SOUTH FARMINGDALE WATER DISTRICT
- BWD BETHPAGE WATER DISTRICT
- NYAW NEW YORK AMERICAN WATER

NOTE:

(1) THIS FIGURE DEPICTS OBSERVATION/MONITORING/OUTPOST WELLS INCLUDED IN THE OU-2 GROUNDWATER MONITORING PROGRAM.

(2) PUBLIC SUPPLY WELLS ARE NOT SAMPLED AS A PART OF THE OU2 GROUNDWATER MONITORING PROGRAM AND ARE ONLY USED FOR REFERENCE.

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK
OPERABLE UNIT 2

LOCATION OF ON-SITE GROUNDWATER REMEDY AND WELLS

ARCADIS

FIGURE 1