Report of Analysis

Client Sample ID:	BPOW5-5		
Lab Sample ID:	JC30989-1	**Date Sampled:**	11/01/16
Matrix:	AQ - Ground Water	**Date Received:**	11/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106309.D	1	11/09/16	BK	n/a	n/a	V1B5049
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide [b]	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW5-5		
Lab Sample ID:	JC30989-1	**Date Sampled:**	11/01/16
Matrix:	AQ - Ground Water	**Date Received:**	11/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	94%		78-114%
460-00-4	4-Bromofluorobenzene	84%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	BPOW5-6		
Lab Sample ID:	JC30989-2	**Date Sampled:**	11/01/16
Matrix:	AQ - Ground Water	**Date Received:**	11/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106310.D	1	11/09/16	BK	n/a	n/a	V1B5049
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide [b]	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW5-6		
Lab Sample ID:	JC30989-2	**Date Sampled:**	11/01/16
Matrix:	AQ - Ground Water	**Date Received:**	11/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	92%		78-114%
460-00-4	4-Bromofluorobenzene	82%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	TB110116MO1		
Lab Sample ID:	JC30989-3	**Date Sampled:**	11/01/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106311.D	1	11/09/16	BK	n/a	n/a	V1B5049
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.9	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide [b]	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB110116MO1		
Lab Sample ID:	JC30989-3	**Date Sampled:**	11/01/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/02/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	97%		78-114%
460-00-4	4-Bromofluorobenzene	83%		77-115%

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

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

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

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC30989X**	**Date Collected:**	**11/01/2016 11:30**	**Matrix:**	**WATER**
Lab Sample ID:	**409842001**	**Date Received:**	**11/04/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1614241**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 01:08**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/16/2016 13:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111616.B\s6k1637.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.48	ug/L	0.100	0.100	0.200

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC30989X**	**Date Collected:**	**11/01/2016 11:40**	**Matrix:**	**WATER**
Lab Sample ID:	**409842002**	**Date Received:**	**11/04/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1614241**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 01:56**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/16/2016 13:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111616.B\s6k1639.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.174	ug/L	0.100	0.100	0.200

Report of Analysis

Client Sample ID:	BPOW5-1		
Lab Sample ID:	JC31076-1	**Date Sampled:**	11/02/16
Matrix:	AQ - Ground Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106289.D	1	11/08/16	BK	n/a	n/a	V1B5048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW5-1		
Lab Sample ID:	JC31076-1	**Date Sampled:**	11/02/16
Matrix:	AQ - Ground Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	85%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	BPOW5-2		
Lab Sample ID:	JC31076-2	**Date Sampled:**	11/02/16
Matrix:	AQ - Ground Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106290.D	1	11/09/16	BK	n/a	n/a	V1B5048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

J = Indicates 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:	JC31076-2	**Date Sampled:**	11/02/16
Matrix:	AQ - Ground Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	82%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	BPOW5-3		
Lab Sample ID:	JC31076-3	**Date Sampled:**	11/02/16
Matrix:	AQ - Ground Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106291.D	1	11/09/16	BK	n/a	n/a	V1B5048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW5-3		
Lab Sample ID:	JC31076-3	**Date Sampled:**	11/02/16
Matrix:	AQ - Ground Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	83%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	TB110216MO1		
Lab Sample ID:	JC31076-4	**Date Sampled:**	11/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106292.D	1	11/09/16	BK	n/a	n/a	V1B5048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.4	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	TB110216MO1		
Lab Sample ID:	JC31076-4	**Date Sampled:**	11/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/03/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	81%		77-115%

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

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

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

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31076X**	**Date Collected:**	**11/02/2016 11:40**	**Matrix:**	**WATER**
Lab Sample ID:	**409998001**	**Date Received:**	**11/05/2016 08:45**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-1**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1614241**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 02:44**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/16/2016 13:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111616.B\s6k1641.D**		**RTX-624**		

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31076X**	**Date Collected:**	**11/02/2016 15:40**	**Matrix:**	**WATER**
Lab Sample ID:	**409998002**	**Date Received:**	**11/05/2016 08:45**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1614241**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 03:31**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/16/2016 13:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111616.B\s6k1643.D**		**RTX-624**		

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31076X**	**Date Collected:**	**11/02/2016 12:25**	**Matrix:**	**WATER**
Lab Sample ID:	**409998003**	**Date Received:**	**11/05/2016 08:45**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1614241**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 04:19**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/16/2016 13:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111616.B\s6k1645.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.41	ug/L	0.100	0.100	0.200

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC31154-1	**Date Sampled:**	11/03/16
Matrix:	AQ - Ground Water	**Date Received:**	11/04/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106286.D	1	11/08/16	BK	n/a	n/a	V1B5048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW5-4		
Lab Sample ID:	JC31154-1	**Date Sampled:**	11/03/16
Matrix:	AQ - Ground Water	**Date Received:**	11/04/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	84%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	TB110316MO1		
Lab Sample ID:	JC31154-3	**Date Sampled:**	11/03/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/04/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106288.D	1	11/08/16	BK	n/a	n/a	V1B5048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.3	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	TB110316MO1		
Lab Sample ID:	JC31154-3	**Date Sampled:**	11/03/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/04/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	84%		77-115%

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

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

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

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**410129**	**Date Collected:**	**11/03/2016 11:05**	**Matrix:**	**WATER**
Lab Sample ID:	**410129001**	**Date Received:**	**11/09/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1616479**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 20:58**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/17/2016 12:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111716.B\s6k1709.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		1.27	ug/L	0.100	0.100	0.200

Report of Analysis

Client Sample ID:	BPOW6-2		
Lab Sample ID:	JC31323-1	**Date Sampled:**	11/07/16
Matrix:	AQ - Ground Water	**Date Received:**	11/08/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106312.D	1	11/09/16	BK	n/a	n/a	V1B5049
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide [b]	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW6-2		
Lab Sample ID:	JC31323-1	**Date Sampled:**	11/07/16
Matrix:	AQ - Ground Water	**Date Received:**	11/08/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		78-114%
460-00-4	4-Bromofluorobenzene	81%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	TB110716MO1		
Lab Sample ID:	JC31323-2	**Date Sampled:**	11/07/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/08/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106313.D	1	11/09/16	BK	n/a	n/a	V1B5049
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	2.0	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide [b]	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	TB110716MO1		
Lab Sample ID:	JC31323-2	**Date Sampled:**	11/07/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/08/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		78-114%
460-00-4	4-Bromofluorobenzene	81%		77-115%

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

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

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

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**410309**	**Date Collected:**	**11/07/2016 12:55**	**Matrix:**	**WATER**
Lab Sample ID:	**410309001**	**Date Received:**	**11/10/2016 09:10**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-2**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1616479**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/17/2016 23:28**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/17/2016 12:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111716.B\s6k1715.D**		**RTX-624**		

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

Report of Analysis

Client Sample ID:	BPOW6-5		
Lab Sample ID:	JC31436-1	**Date Sampled:**	11/08/16
Matrix:	AQ - Ground Water	**Date Received:**	11/09/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106584.D	1	11/19/16	BK	n/a	n/a	V1B5057
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW6-5		
Lab Sample ID:	JC31436-1	**Date Sampled:**	11/08/16
Matrix:	AQ - Ground Water	**Date Received:**	11/09/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	98%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	BPOW6-6		
Lab Sample ID:	JC31436-2	**Date Sampled:**	11/08/16
Matrix:	AQ - Ground Water	**Date Received:**	11/09/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106592.D	1	11/21/16	BK	n/a	n/a	V1B5058
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

J = Indicates 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:	JC31436-2	**Date Sampled:**	11/08/16
Matrix:	AQ - Ground Water	**Date Received:**	11/09/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	95%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	TB110816MO1		
Lab Sample ID:	JC31436-3	**Date Sampled:**	11/08/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/09/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106341.D	1	11/10/16	BK	n/a	n/a	V1B5049
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.94	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide [b]	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB110816MO1		
Lab Sample ID:	JC31436-3	**Date Sampled:**	11/08/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/09/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

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

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

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

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

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31436X**	**Date Collected:**	**11/08/2016 10:45**	**Matrix:**	**WATER**
Lab Sample ID:	**410420001**	**Date Received:**	**11/11/2016 08:45**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-5**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1618987**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/30/2016 22:17**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/30/2016 12:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s113016.B\s6k3031.D**		**RTX-624**		

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31436X**	**Date Collected:**	**11/08/2016 10:35**	**Matrix:**	**WATER**
Lab Sample ID:	**410420002**	**Date Received:**	**11/11/2016 08:45**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-6**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1616479**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/18/2016 01:06**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/17/2016 12:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111716.B\s6k1719.D**		**RTX-624**		

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

Report of Analysis

Client Sample ID:	BPOW5-7		
Lab Sample ID:	JC31533-1	**Date Sampled:**	11/09/16
Matrix:	AQ - Ground Water	**Date Received:**	11/10/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106582.D	1	11/19/16	BK	n/a	n/a	V1B5057
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	0.089	0.50	0.055	ug/l	J
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	BPOW5-7		
Lab Sample ID:	JC31533-1	**Date Sampled:**	11/09/16
Matrix:	AQ - Ground Water	**Date Received:**	11/10/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

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

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

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

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

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

Report of Analysis

Client Sample ID:	TB110916MO1		
Lab Sample ID:	JC31533-2	**Date Sampled:**	11/09/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/10/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106427.D	1	11/14/16	BK	n/a	n/a	V1B5051
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.4	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	0.10	0.50	0.076	ug/l	J
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	TB110916MO1		
Lab Sample ID:	JC31533-2	**Date Sampled:**	11/09/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/10/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	77%		77-115%

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

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

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

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31533X**	**Date Collected:**	**11/09/2016 16:10**	**Matrix:**	**WATER**
Lab Sample ID:	**410517001**	**Date Received:**	**11/12/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW5-7**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1616479**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/18/2016 02:42**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/17/2016 12:00**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s111716.B\s6k1723.D**		**RTX-624**		

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

Report of Analysis

Client Sample ID:	BPOW6-3		
Lab Sample ID:	JC31597-1	**Date Sampled:**	11/10/16
Matrix:	AQ - Ground Water	**Date Received:**	11/11/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106573.D	1	11/19/16	BK	n/a	n/a	V1B5057
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW6-3		
Lab Sample ID:	JC31597-1	**Date Sampled:**	11/10/16
Matrix:	AQ - Ground Water	**Date Received:**	11/11/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	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	96%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	BPOW6-4		
Lab Sample ID:	JC31597-2	**Date Sampled:**	11/10/16
Matrix:	AQ - Ground Water	**Date Received:**	11/11/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106574.D	1	11/19/16	BK	n/a	n/a	V1B5057
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	0.53	ug/l	
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

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

Report of Analysis

Client Sample ID:	BPOW6-4		
Lab Sample ID:	JC31597-2	**Date Sampled:**	11/10/16
Matrix:	AQ - Ground Water	**Date Received:**	11/11/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	97%		78-114%
460-00-4	4-Bromofluorobenzene	94%		77-115%

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

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

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

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

Report of Analysis

Client Sample ID:	TB111016MO1		
Lab Sample ID:	JC31597-3	**Date Sampled:**	11/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/11/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	1B106575.D	1	11/19/16	BK	n/a	n/a	V1B5057
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	1.3	5.0	0.53	ug/l	J
78-93-3	2-Butanone	ND	5.0	0.59	ug/l	
71-43-2	Benzene	ND	0.50	0.051	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.059	ug/l	
75-25-2	Bromoform	ND	0.50	0.083	ug/l	
74-83-9	Bromomethane	ND	0.50	0.062	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.055	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.055	ug/l	
75-00-3	Chloroethane	ND	0.50	0.076	ug/l	
67-66-3	Chloroform	ND	0.50	0.087	ug/l	
74-87-3	Chloromethane	ND	0.50	0.18	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.073	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.064	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.18	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.047	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.074	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.078	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.090	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.11	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.078	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.062	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.066	ug/l	
76-13-1	Freon 113	ND	1.0	0.18	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.076	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.24	ug/l	
100-42-5	Styrene	ND	0.50	0.094	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.065	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.091	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.11	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.049	ug/l	
108-88-3	Toluene	ND	0.50	0.054	ug/l	

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

Report of Analysis

Client Sample ID:	TB111016MO1		
Lab Sample ID:	JC31597-3	**Date Sampled:**	11/10/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/11/16
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	Northrop Grumman, OU2 Hydro, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.079	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.082	ug/l	
	m,p-Xylene	ND	0.50	0.11	ug/l	
95-47-6	o-Xylene	ND	0.50	0.060	ug/l	

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

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

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

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E = Indicates value exceeds calibration range

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31597X**	**Date Collected:**	**11/10/2016 11:50**	**Matrix:**	**WATER**
Lab Sample ID:	**410629001**	**Date Received:**	**11/15/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-3**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1618987**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/30/2016 23:11**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/30/2016 12:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s113016.B\s6k3033.D**		**RTX-624**		

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

2

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**JC31597X**	**Date Collected:**	**11/10/2016 12:10**	**Matrix:**	**WATER**
Lab Sample ID:	**410629002**	**Date Received:**	**11/15/2016 09:00**		
		Client:	**ACTL003**	**Project:**	**ACTL00316**
Client ID:	**BPOW6-4**	**Method:**	**EPA 522**	**SOP Ref:**	**GL-OA-E-073**
Batch ID:	**1618987**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**11/30/2016 23:38**	**Analyst:**	**JMB3**	**Inj. Vol:**	**1 uL**
Prep Date:	**11/30/2016 12:45**	**Aliquot:**	**100 mL**	**Final Volume:**	**2 mL**
Data File:	**s113016.B\s6k3034.D**		**RTX-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane	J	0.103	ug/L	0.100	0.100	0.200