

Pelton, Jason M (DEC)

From: Zahradnik, Art <Art.Zahradnik@arcadis.com>
Sent: Monday, November 12, 2018 6:05 PM
To: Pelton, Jason M (DEC)
Cc: Scharf, Steven (DEC); Hesler, Donald (DEC); Hannon, ED [US] (AS); Stern, David; Wolfert, Mike
Subject: DELIVERABLE - Form 1 Data - Northrop Grumman Bethpage - OU2 3Q-2018 Groundwater Sampling
Attachments: Form1_BPOW2 cluster.pdf

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Good afternoon Jason:

On behalf of Northrop Grumman, Arcadis is submitting the attached Form 1 data. As per discussions between Northrop Grumman and NYSDEC, NYSDEC requested that Northrop Grumman submit the validated Form 1s as soon as the information is available.

The attached Form 1's are for the OU2 Third Quarter 2018 routine sampling event (samples collected between 08/29/18 and 09/06/18) per the OU2 Groundwater Monitoring Plan (Arcadis 2016).

Regards,
-Art

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Report of Analysis

Client Sample ID: BPOW 2-1	Date Sampled: 08/29/18
Lab Sample ID: JC72834-1	Date Received: 08/30/18
Matrix: AQ - Water	Percent Solids: n/a
Method: EPA 524.2 REV 4.1	
Project: Navy Wells OU2, Bethpage, NY	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.15	ug/l	
	m,p-Xylene	ND	0.50	0.14	ug/l	
95-47-6	o-Xylene	ND	0.50	0.076	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	81%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

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

- (a) EPA 524.2 is not a certified method for non-potable water samples.
- (b) Associated CCV and BS outside of control limits high, sample was ND.

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

4.1
4

Report of Analysis

Client Sample ID: TB082918AD2 Lab Sample ID: JC72834-2 Matrix: AQ - Trip Blank Water Method: EPA 524.2 REV 4.1 Project: Navy Wells OU2, Bethpage, NY	Date Sampled: 08/29/18 Date Received: 08/30/18 Percent Solids: n/a
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VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.15	ug/l	
	m,p-Xylene	ND	0.50	0.14	ug/l	
95-47-6	o-Xylene	ND	0.50	0.076	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
2199-69-1	1,2-Dichlorobenzene-d4	81%		70-130%		
460-00-4	4-Bromofluorobenzene	82%		70-130%		
CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q	
	Total TIC, Volatile		0	ug/l		

- (a) EPA 524.2 is not a certified method for non-potable water samples.
- (b) Associated CCV and BS outside of control limits high, sample was ND.
- (c) Associated CCV outside of control limits high, sample was ND.

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

4.2
4

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: JC72834X
 Lab Sample ID: 458847001
 Client Sample: 1X
 Client ID: BPOW 2-1
 Batch ID: 1802579
 Run Date: 09/18/2018 20:03
 Prep Date: 09/18/2018 11:30
 Data File: s091818.B\s6i1813.D

Date Collected: 08/29/2018 09:45
 Date Received: 09/06/2018 09:00
 Client: ACTL003
 Method: EPA 522
 Inst: MSD6.I
 Analyst: JMB3
 Aliquot: 100 mL
 Rx-624

Matrix: WATER
 Project: ACTL00316
 SOP Ref: GL-OA-E-073
 Dilution: 1
 Inj. Vol: 1 uL
 Final Volume: 2 mL

CAS No.	Parname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		2.14	ug/L	0.100	0.100	

2

Report of Analysis

Client Sample ID: BPOW2-2		Date Sampled: 09/06/18
Lab Sample ID: JC73420-1		Date Received: 09/07/18
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: EPA 524.2 REV 4.1		
Project: Navy Wells OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.15	ug/l	
	m,p-Xylene	ND	0.50	0.14	ug/l	
95-47-6	o-Xylene	ND	0.50	0.076	ug/l	

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

CAS No.	Tentatively Identified Compounds	R. T.	Est. Conc.	Units	Q
1066-40-6	Silanol, trimethyl-	9.79	.53	ug/l	JN
	Total TIC, Volatile		.53	ug/l	J N

- (a) EPA 524.2 is not a certified method for non-potable water samples.
- (b) Associated CCV outside of control limits high, sample was ND.

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

4.1
4

Report of Analysis

Client Sample ID: BPOW2-3	Date Sampled: 09/06/18
Lab Sample ID: JC73420-2	Date Received: 09/07/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 524.2 REV 4.1	
Project: Navy Wells OU2, Bethpage, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	1B116360.D	1	09/11/18 20:40	CSF	n/a	n/a	V1B5601
Run #2							

Run #	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	2.5	ug/l	
78-93-3	2-Butanone	ND	5.0	0.43	ug/l	
71-43-2	Benzene	ND	0.50	0.16	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.13	ug/l	
75-25-2	Bromoform	ND	0.50	0.27	ug/l	
74-83-9	Bromomethane	ND	0.50	0.18	ug/l	
75-15-0	Carbon disulfide	ND	0.50	0.18	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.093	ug/l	
75-00-3	Chloroethane	ND	0.50	0.080	ug/l	
67-66-3	Chloroform	ND	0.50	0.17	ug/l	
74-87-3	Chloromethane	ND	0.50	0.13	ug/l	
56-23-5	Carbon tetrachloride ^b	ND	0.50	0.24	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.22	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.19	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.18	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.19	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.14	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.21	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.14	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.18	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.16	ug/l	
100-41-4	Ethylbenzene	ND	0.50	0.076	ug/l	
76-13-1	Freon 113	ND	1.0	0.34	ug/l	
591-78-6	2-Hexanone	ND	2.0	0.24	ug/l	
75-09-2	Methylene chloride	ND	0.50	0.37	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.22	ug/l	
100-42-5	Styrene	ND	0.50	0.069	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.19	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.23	ug/l	
108-88-3	Toluene	ND	0.50	0.11	ug/l	

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 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.2
 4

Report of Analysis

Client Sample ID: BPOW2-3	Date Sampled: 09/06/18
Lab Sample ID: JC73420-2	Date Received: 09/07/18
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 524.2 REV 4.1	
Project: Navy Wells OU2, Bethpage, NY	

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.15	ug/l	
	m,p-Xylene	ND	0.50	0.14	ug/l	
95-47-6	o-Xylene	ND	0.50	0.076	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	79%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

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

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

(b) Associated CCV outside of control limits high, sample was ND.

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

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

4.2
4

Report of Analysis

Client Sample ID: TB090618DC1		Date Sampled: 09/06/18
Lab Sample ID: JC73420-3		Date Received: 09/07/18
Matrix: AQ - Trip Blank Water		Percent Solids: n/a
Method: EPA 524.2 REV 4.1		
Project: Navy Wells OU2, Bethpage, NY		

VOA OU2 Outpost List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.15	ug/l	
	m,p-Xylene	ND	0.50	0.14	ug/l	
95-47-6	o-Xylene	ND	0.50	0.076	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	82%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

CAS No.	Tentatively Identified Compounds	R. T.	Est. Conc.	Units	Q
1066-40-6	Silanol, trimethyl-	9.79	.58	ug/l	JN
	Total TIC, Volatile		.58	ug/l	J N

- (a) EPA 524.2 is not a certified method for non-potable water samples.
- (b) Associated CCV outside of control limits high, sample was ND.

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

4.3
4

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: JC73420X
 Lab Sample ID: 459186001
 Client Sample: 1X
 Client ID: BPOW 2-2
 Batch ID: 1802579
 Run Date: 09/18/2018 22:31
 Prep Date: 09/18/2018 11:30
 Data File: s091818.B\s6i1819.D

Date Collected: 09/06/2018 10:05
 Date Received: 09/11/2018 09:50
 Client: ACTL003
 Method: EPA 522
 Inst: MSD6.I
 Analyst: JMB3
 Aliquot: 100 mL
 Rx-624

Matrix: WATER
 Project: ACTL00316
 SOP Ref: GL-OA-E-073
 Dilution: 1
 Inj. Vol: 1 uL
 Final Volume: 2 mL

CAS No.	Parname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		0.430	ug/L	0.100	0.100	0.200

2

**Semi-Volatile
Certificate of Analysis
Sample Summary**

SDG Number: JC73420X
 Lab Sample ID: 459186002
 Client Sample: 2X
 Client ID: BPOW 2-3
 Batch ID: 1802579
 Run Date: 09/18/2018 23:21
 Prep Date: 09/18/2018 11:30
 Data File: s091818.B\s6i1821.D

Date Collected: 09/06/2018 12:25
 Date Received: 09/11/2018 09:50
 Client: ACTL003
 Method: EPA 522
 Inst: MSD6.I
 Analyst: JMB3
 Aliquot: 100 mL
 Rtx-624

Matrix: WATER
 Project: ACTL00316
 SOP Ref: GL-OA-E-073
 Dilution: 1
 Inj. Vol: 1 uL
 Final Volume: 2 mL

CAS No.	Parname	Qualifier	Result	Units	MDL	LOD	LOQ
123-91-1	1,4-Dioxane		4.27	ug/L	0.100	0.100	0.200

2