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Mr. Thomas Murtaugh
Ms. Melissa Arnold-Murtaugh
261 Old Bayview Road
North East, Maryland 21901

ENVIRONMENT

Subject:
Potable Well Sampling Results
261 Old Bayview Road
North East, Maryland 21901

Date:
December 13, 2018

Contact:
Paul Goodell

Phone:
919-415-2327

Email:
Paul.Goodell@Arcadis.com

Our ref:
B0085851.0010

Dear Mr. Murtaugh and Ms. Arnold-Murtaugh:

Thank you for your cooperation in allowing Arcadis U.S., Inc. (Arcadis), on behalf of ExxonMobil Environmental Services Company (EMES), to sample the granular activated carbon (GAC) point of entry treatment (POET) system that was installed at your property on November 26, 2018. The Maryland Department of the Environment (MDE) has requested that three monthly sampling events be completed to evaluate the effectiveness of the GAC POET system in eliminating dissolved-phase chemicals of concern (COCs). The first monthly sampling event was completed at your property on November 28, 2018.

During sampling activities, water samples were collected at three points from your GAC POET system as follow: 1) before the GAC units (Influent), 2) between the GAC units (Midfluent), and 3) after the GAC units (Effluent). Water samples from each point were collected and analyzed separately for full list Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 524.2.

The results of the November 28, 2018 potable well sampling indicated the following:

- Influent: Dissolved-phase concentrations of methyl tert-butyl ether (MTBE) (22 µg/L) were detected above the minimum laboratory detection limit. The dissolved-phase detection of MTBE (22 µg/L) exceeds the applicable MDE Generic Numeric Cleanup Standard for MTBE of 20 µg/L. Dissolved-phase concentrations of 2-butanone and tetrahydrofuran at (2,000 µg/L) and (2,800 µg/L) were detected above the minimum laboratory detection limit, respectively.

- Midfluent: Dissolved-phase concentrations of 2-butanone and tetrahydrofuran at (310 µg/L) and (380 µg/L) were detected above the minimum laboratory detection limit, respectively.

- Effluent: Dissolved-phase concentrations of 2-butanone and tetrahydrofuran at (1,800 µg/L) and (2,700 µg/L) were detected above the minimum laboratory detection limit, respectively.

2-butanone and tetrahydrofuran are compounds that are typically associated with solvents, paints, and glues such as PVC primer/glue. As these constituents have not historically been detected in samples collected from your potable well, it is likely these compounds are derived from the recent GAC POET system installation. Arcadis notified the MDE Case Manager, Ms. Susan Bull, of the detections on December 10, 2018. Ms. Bull contacted Arcadis on December 11, 2018 and stated she has observed similar detections with other recently installed GAC POET systems. Ms. Bull also stated that she expected these detections to decrease rapidly as the GAC POET system is utilized. Both 2-butanone and tetrahydrofuran do not have MDE Generic Numeric Cleanup Standards or United States Environmental Protection Agency (USEPA) Maximum Contaminant Level (MCL) Standards.

The next monthly GAC POET system sampling event is tentatively scheduled for December 28, 2018. Arcadis will contact you in advance of the sampling date to confirm that access to the GAC POET system can be granted.

Thank you for your cooperation. If you have any questions regarding the sampling results or investigation in your area, please contact Mr. Paul Goodell (Arcadis) at 919-415-2327, Ms. Susan Bull (MDE) at 410-537-3499, or Ms. Calista Campbell (EMES) at 201-341-4687.

Sincerely,

Arcadis U.S., Inc.

Paul Goodell
Certified Project Manager

Mr. Thomas Murtaugh
Ms. Melissa Arnold-Murtaugh
December 13, 2018

Attachments:

Laboratory Analytical Report (261 Old Bayview Road) – December 7, 2018

Copies:

Ms. Calista Campbell – EMES

Ms. Susan Bull – MDE

File – EM 14489

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ExxonMobil c/o Arcadis
801 Corporate Center Drive
Suite 300
Raleigh NC 27607

Report Date: December 07, 2018 16:23

Project: 14489 - Northeast, MD

Account #: 42309
Group Number: 2013564
PO Number: B0085851.0010
Release Number: CAMPBELL
State of Sample Origin: MD

Electronic Copy To	Arcadis	Attn: Francisco Corella
Electronic Copy To	Arcadis	Attn: Paul Goodell
Electronic Copy To	ExxonMobil c/o Arcadis	Attn: Kim Abbott

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
261 Bayview-Influent Grab Potable Water	11/28/2018 15:30	9917883
261 Bayview-Midfluent Grab Potable Water	11/28/2018 15:40	9917884
261 Bayview-Effluent Grab Potable Water	11/28/2018 15:50	9917885
Trip Blank Water	11/28/2018	9917886

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **261 Bayview-Influent Grab Potable Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018 15:30

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917883
ELLE Group #: 2013564
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	Acetone	67-64-1	< 5.0	5.0	1
03648	Acrylonitrile	107-13-1	< 10	10	1
03648	Allyl Chloride	107-05-1	< 0.5	0.5	1
03648	Benzene	71-43-2	< 0.5	0.5	1
03648	Bromobenzene	108-86-1	< 0.5	0.5	1
03648	Bromochloromethane	74-97-5	< 0.5	0.5	1
03648	Bromodichloromethane	75-27-4	< 0.5	0.5	1
03648	Bromoform	75-25-2	< 0.5	0.5	1
03648	Bromomethane	74-83-9	< 0.5	0.5	1
03648	2-Butanone	78-93-3	2,000	50	10
03648	n-Butylbenzene	104-51-8	< 0.5	0.5	1
03648	sec-Butylbenzene	135-98-8	< 0.5	0.5	1
03648	tert-Butylbenzene	98-06-6	< 0.5	0.5	1
03648	Carbon Disulfide	75-15-0	< 2.0	2.0	1
03648	Carbon Tetrachloride	56-23-5	< 0.5	0.5	1
03648	Chloroacetonitrile	107-14-2	< 50	50	1
03648	Chlorobenzene	108-90-7	< 0.5	0.5	1
03648	1-Chlorobutane	109-69-3	< 0.5	0.5	1
03648	Chloroethane	75-00-3	< 0.5	0.5	1
03648	Chloroform	67-66-3	< 0.5	0.5	1
03648	Chloromethane	74-87-3	< 0.5	0.5	1
03648	2-Chlorotoluene	95-49-8	< 0.5	0.5	1
03648	4-Chlorotoluene	106-43-4	< 0.5	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	1
03648	Dibromochloromethane	124-48-1	< 0.5	0.5	1
03648	1,2-Dibromoethane	106-93-4	< 0.5	0.5	1
03648	Dibromomethane	74-95-3	< 0.5	0.5	1
03648	trans-1,4-Dichloro-2-butene	110-57-6	< 5.0	5.0	1
03648	1,2-Dichlorobenzene	95-50-1	< 0.5	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	< 0.5	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	< 0.5	0.5	1
03648	Dichlorodifluoromethane	75-71-8	< 0.5	0.5	1
03648	1,1-Dichloroethane	75-34-3	< 0.5	0.5	1
03648	1,2-Dichloroethane	107-06-2	< 0.5	0.5	1
03648	1,1-Dichloroethene	75-35-4	< 0.5	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	< 0.5	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	< 0.5	0.5	1
03648	1,2-Dichloropropane	78-87-5	< 0.5	0.5	1
03648	1,3-Dichloropropane	142-28-9	< 0.5	0.5	1
03648	2,2-Dichloropropane	594-20-7	< 0.5	0.5	1
03648	1,1-Dichloropropanone	513-88-2	< 50	50	1
03648	1,1-Dichloropropene	563-58-6	< 0.5	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	< 0.5	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	< 0.5	0.5	1
03648	Ethyl Ether	60-29-7	< 0.5	0.5	1
03648	Ethyl Methacrylate	97-63-2	< 0.5	0.5	1
03648	Ethylbenzene	100-41-4	< 0.5	0.5	1
03648	Hexachlorobutadiene	87-68-3	< 0.5	0.5	1
03648	Hexachloroethane	67-72-1	< 0.5	0.5	1

Sample Description: **261 Bayview-Influent Grab Potable Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018 15:30

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917883
ELLE Group #: 2013564
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	2-Hexanone	591-78-6	< 5.0	5.0	1
03648	Isopropylbenzene	98-82-8	< 0.5	0.5	1
03648	p-Isopropyltoluene	99-87-6	< 0.5	0.5	1
03648	Methacrylonitrile	126-98-7	< 5.0	5.0	1
03648	Methyl Acrylate	96-33-3	< 5.0	5.0	1
03648	Methyl Iodide	74-88-4	< 0.5	0.5	1
03648	Methyl Methacrylate	80-62-6	< 0.5	0.5	1
03648	Methyl Tertiary Butyl Ether	1634-04-4	22	0.5	1
03648	4-Methyl-2-pentanone	108-10-1	< 5.0	5.0	1
03648	Methylene Chloride	75-09-2	< 0.5	0.5	1
03648	Naphthalene	91-20-3	< 0.5	0.5	1
03648	Nitrobenzene	98-95-3	< 50	50	1
03648	2-Nitropropane	79-46-9	< 53	53	1
03648	Pentachloroethane	76-01-7	< 0.5	0.5	1
03648	Propionitrile	107-12-0	< 10	10	1
03648	n-Propylbenzene	103-65-1	< 0.5	0.5	1
03648	Styrene	100-42-5	< 0.5	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	< 0.5	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	< 0.5	0.5	1
03648	Tetrachloroethene	127-18-4	< 0.5	0.5	1
03648	Tetrahydrofuran	109-99-9	2,800	70	10
03648	Toluene	108-88-3	< 0.5	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	< 0.5	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	< 0.5	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	< 0.5	0.5	1
03648	1,1,2-Trichloroethane	79-00-5	< 0.5	0.5	1
03648	Trichloroethene	79-01-6	< 0.5	0.5	1
03648	Trichlorofluoromethane	75-69-4	< 0.5	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	< 0.5	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	< 0.5	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	< 0.5	0.5	1
03648	Vinyl Chloride	75-01-4	< 0.5	0.5	1
03648	m+p-Xylene	179601-23-1	< 0.5	0.5	1
03648	o-Xylene	95-47-6	< 0.5	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by EPA 524.2	EPA 524.2	1	S183341AA	12/01/2018 02:28	Don V Viray	1
03648	VOCs by EPA 524.2	EPA 524.2	1	S183341AA	12/01/2018 02:55	Don V Viray	10

Sample Description: **261 Bayview-Midfluent Grab Potable Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018 15:40

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917884
ELLE Group #: 2013564
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	Acetone	67-64-1	< 5.0	5.0	1
03648	Acrylonitrile	107-13-1	< 10	10	1
03648	Allyl Chloride	107-05-1	< 0.5	0.5	1
03648	Benzene	71-43-2	< 0.5	0.5	1
03648	Bromobenzene	108-86-1	< 0.5	0.5	1
03648	Bromochloromethane	74-97-5	< 0.5	0.5	1
03648	Bromodichloromethane	75-27-4	< 0.5	0.5	1
03648	Bromoform	75-25-2	< 0.5	0.5	1
03648	Bromomethane	74-83-9	< 0.5	0.5	1
03648	2-Butanone	78-93-3	310	5.0	1
03648	n-Butylbenzene	104-51-8	< 0.5	0.5	1
03648	sec-Butylbenzene	135-98-8	< 0.5	0.5	1
03648	tert-Butylbenzene	98-06-6	< 0.5	0.5	1
03648	Carbon Disulfide	75-15-0	< 2.0	2.0	1
03648	Carbon Tetrachloride	56-23-5	< 0.5	0.5	1
03648	Chloroacetonitrile	107-14-2	< 50	50	1
03648	Chlorobenzene	108-90-7	< 0.5	0.5	1
03648	1-Chlorobutane	109-69-3	< 0.5	0.5	1
03648	Chloroethane	75-00-3	< 0.5	0.5	1
03648	Chloroform	67-66-3	< 0.5	0.5	1
03648	Chloromethane	74-87-3	< 0.5	0.5	1
03648	2-Chlorotoluene	95-49-8	< 0.5	0.5	1
03648	4-Chlorotoluene	106-43-4	< 0.5	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	1
03648	Dibromochloromethane	124-48-1	< 0.5	0.5	1
03648	1,2-Dibromoethane	106-93-4	< 0.5	0.5	1
03648	Dibromomethane	74-95-3	< 0.5	0.5	1
03648	trans-1,4-Dichloro-2-butene	110-57-6	< 5.0	5.0	1
03648	1,2-Dichlorobenzene	95-50-1	< 0.5	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	< 0.5	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	< 0.5	0.5	1
03648	Dichlorodifluoromethane	75-71-8	< 0.5	0.5	1
03648	1,1-Dichloroethane	75-34-3	< 0.5	0.5	1
03648	1,2-Dichloroethane	107-06-2	< 0.5	0.5	1
03648	1,1-Dichloroethene	75-35-4	< 0.5	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	< 0.5	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	< 0.5	0.5	1
03648	1,2-Dichloropropane	78-87-5	< 0.5	0.5	1
03648	1,3-Dichloropropane	142-28-9	< 0.5	0.5	1
03648	2,2-Dichloropropane	594-20-7	< 0.5	0.5	1
03648	1,1-Dichloropropanone	513-88-2	< 50	50	1
03648	1,1-Dichloropropene	563-58-6	< 0.5	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	< 0.5	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	< 0.5	0.5	1
03648	Ethyl Ether	60-29-7	< 0.5	0.5	1
03648	Ethyl Methacrylate	97-63-2	< 0.5	0.5	1
03648	Ethylbenzene	100-41-4	< 0.5	0.5	1
03648	Hexachlorobutadiene	87-68-3	< 0.5	0.5	1
03648	Hexachloroethane	67-72-1	< 0.5	0.5	1

Sample Description: **261 Bayview-Midfluent Grab Potable Water**
EM# 14489
261 Old Bayview Rd - North East, MD

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917884
ELLE Group #: 2013564
Matrix: Potable Water

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018 15:40

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	2-Hexanone	591-78-6	< 5.0	5.0	1
03648	Isopropylbenzene	98-82-8	< 0.5	0.5	1
03648	p-Isopropyltoluene	99-87-6	< 0.5	0.5	1
03648	Methacrylonitrile	126-98-7	< 5.0	5.0	1
03648	Methyl Acrylate	96-33-3	< 5.0	5.0	1
03648	Methyl Iodide	74-88-4	< 0.5	0.5	1
03648	Methyl Methacrylate	80-62-6	< 0.5	0.5	1
03648	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1
03648	4-Methyl-2-pentanone	108-10-1	< 5.0	5.0	1
03648	Methylene Chloride	75-09-2	< 0.5	0.5	1
03648	Naphthalene	91-20-3	< 0.5	0.5	1
03648	Nitrobenzene	98-95-3	< 50	50	1
03648	2-Nitropropane	79-46-9	< 53	53	1
03648	Pentachloroethane	76-01-7	< 0.5	0.5	1
03648	Propionitrile	107-12-0	< 10	10	1
03648	n-Propylbenzene	103-65-1	< 0.5	0.5	1
03648	Styrene	100-42-5	< 0.5	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	< 0.5	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	< 0.5	0.5	1
03648	Tetrachloroethene	127-18-4	< 0.5	0.5	1
03648	Tetrahydrofuran	109-99-9	380	7.0	1
03648	Toluene	108-88-3	< 0.5	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	< 0.5	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	< 0.5	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	< 0.5	0.5	1
03648	1,1,2-Trichloroethane	79-00-5	< 0.5	0.5	1
03648	Trichloroethene	79-01-6	< 0.5	0.5	1
03648	Trichlorofluoromethane	75-69-4	< 0.5	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	< 0.5	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	< 0.5	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	< 0.5	0.5	1
03648	Vinyl Chloride	75-01-4	< 0.5	0.5	1
03648	m+p-Xylene	179601-23-1	< 0.5	0.5	1
03648	o-Xylene	95-47-6	< 0.5	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by EPA 524.2	EPA 524.2	1	S183341AA	12/01/2018 02:01	Don V Viray	1

Sample Description: **261 Bayview-Effluent Grab Potable Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018 15:50

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917885
ELLE Group #: 2013564
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	Acetone	67-64-1	< 5.0	5.0	1
03648	Acrylonitrile	107-13-1	< 10	10	1
03648	Allyl Chloride	107-05-1	< 0.5	0.5	1
03648	Benzene	71-43-2	< 0.5	0.5	1
03648	Bromobenzene	108-86-1	< 0.5	0.5	1
03648	Bromochloromethane	74-97-5	< 0.5	0.5	1
03648	Bromodichloromethane	75-27-4	< 0.5	0.5	1
03648	Bromoform	75-25-2	< 0.5	0.5	1
03648	Bromomethane	74-83-9	< 0.5	0.5	1
03648	2-Butanone	78-93-3	1,800	50	10
03648	n-Butylbenzene	104-51-8	< 0.5	0.5	1
03648	sec-Butylbenzene	135-98-8	< 0.5	0.5	1
03648	tert-Butylbenzene	98-06-6	< 0.5	0.5	1
03648	Carbon Disulfide	75-15-0	< 2.0	2.0	1
03648	Carbon Tetrachloride	56-23-5	< 0.5	0.5	1
03648	Chloroacetonitrile	107-14-2	< 50	50	1
03648	Chlorobenzene	108-90-7	< 0.5	0.5	1
03648	1-Chlorobutane	109-69-3	< 0.5	0.5	1
03648	Chloroethane	75-00-3	< 0.5	0.5	1
03648	Chloroform	67-66-3	< 0.5	0.5	1
03648	Chloromethane	74-87-3	< 0.5	0.5	1
03648	2-Chlorotoluene	95-49-8	< 0.5	0.5	1
03648	4-Chlorotoluene	106-43-4	< 0.5	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	1
03648	Dibromochloromethane	124-48-1	< 0.5	0.5	1
03648	1,2-Dibromoethane	106-93-4	< 0.5	0.5	1
03648	Dibromomethane	74-95-3	< 0.5	0.5	1
03648	trans-1,4-Dichloro-2-butene	110-57-6	< 5.0	5.0	1
03648	1,2-Dichlorobenzene	95-50-1	< 0.5	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	< 0.5	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	< 0.5	0.5	1
03648	Dichlorodifluoromethane	75-71-8	< 0.5	0.5	1
03648	1,1-Dichloroethane	75-34-3	< 0.5	0.5	1
03648	1,2-Dichloroethane	107-06-2	< 0.5	0.5	1
03648	1,1-Dichloroethene	75-35-4	< 0.5	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	< 0.5	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	< 0.5	0.5	1
03648	1,2-Dichloropropane	78-87-5	< 0.5	0.5	1
03648	1,3-Dichloropropane	142-28-9	< 0.5	0.5	1
03648	2,2-Dichloropropane	594-20-7	< 0.5	0.5	1
03648	1,1-Dichloropropanone	513-88-2	< 50	50	1
03648	1,1-Dichloropropene	563-58-6	< 0.5	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	< 0.5	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	< 0.5	0.5	1
03648	Ethyl Ether	60-29-7	< 0.5	0.5	1
03648	Ethyl Methacrylate	97-63-2	< 0.5	0.5	1
03648	Ethylbenzene	100-41-4	< 0.5	0.5	1
03648	Hexachlorobutadiene	87-68-3	< 0.5	0.5	1
03648	Hexachloroethane	67-72-1	< 0.5	0.5	1

Sample Description: **261 Bayview-Effluent Grab Potable Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018 15:50

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917885
ELLE Group #: 2013564
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	2-Hexanone	591-78-6	< 5.0	5.0	1
03648	Isopropylbenzene	98-82-8	< 0.5	0.5	1
03648	p-Isopropyltoluene	99-87-6	< 0.5	0.5	1
03648	Methacrylonitrile	126-98-7	< 5.0	5.0	1
03648	Methyl Acrylate	96-33-3	< 5.0	5.0	1
03648	Methyl Iodide	74-88-4	< 0.5	0.5	1
03648	Methyl Methacrylate	80-62-6	< 0.5	0.5	1
03648	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1
03648	4-Methyl-2-pentanone	108-10-1	< 5.0	5.0	1
03648	Methylene Chloride	75-09-2	< 0.5	0.5	1
03648	Naphthalene	91-20-3	< 0.5	0.5	1
03648	Nitrobenzene	98-95-3	< 50	50	1
03648	2-Nitropropane	79-46-9	< 53	53	1
03648	Pentachloroethane	76-01-7	< 0.5	0.5	1
03648	Propionitrile	107-12-0	< 10	10	1
03648	n-Propylbenzene	103-65-1	< 0.5	0.5	1
03648	Styrene	100-42-5	< 0.5	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	< 0.5	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	< 0.5	0.5	1
03648	Tetrachloroethene	127-18-4	< 0.5	0.5	1
03648	Tetrahydrofuran	109-99-9	2,700	70	10
03648	Toluene	108-88-3	< 0.5	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	< 0.5	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	< 0.5	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	< 0.5	0.5	1
03648	1,1,2-Trichloroethane	79-00-5	< 0.5	0.5	1
03648	Trichloroethene	79-01-6	< 0.5	0.5	1
03648	Trichlorofluoromethane	75-69-4	< 0.5	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	< 0.5	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	< 0.5	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	< 0.5	0.5	1
03648	Vinyl Chloride	75-01-4	< 0.5	0.5	1
03648	m+p-Xylene	179601-23-1	< 0.5	0.5	1
03648	o-Xylene	95-47-6	< 0.5	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by EPA 524.2	EPA 524.2	1	S183341AA	12/01/2018 01:34	Don V Viray	1
03648	VOCs by EPA 524.2	EPA 524.2	1	S183391AA	12/05/2018 20:22	Don V Viray	10

Sample Description: **Trip Blank Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917886
ELLE Group #: 2013564
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	Acetone	67-64-1	170	5.0	1
03648	Acrylonitrile	107-13-1	< 10	10	1
03648	Allyl Chloride	107-05-1	< 0.5	0.5	1
03648	Benzene	71-43-2	< 0.5	0.5	1
03648	Bromobenzene	108-86-1	< 0.5	0.5	1
03648	Bromochloromethane	74-97-5	< 0.5	0.5	1
03648	Bromodichloromethane	75-27-4	< 0.5	0.5	1
03648	Bromoform	75-25-2	< 0.5	0.5	1
03648	Bromomethane	74-83-9	< 0.5	0.5	1
03648	2-Butanone	78-93-3	< 5.0	5.0	1
03648	n-Butylbenzene	104-51-8	< 0.5	0.5	1
03648	sec-Butylbenzene	135-98-8	< 0.5	0.5	1
03648	tert-Butylbenzene	98-06-6	< 0.5	0.5	1
03648	Carbon Disulfide	75-15-0	< 2.0	2.0	1
03648	Carbon Tetrachloride	56-23-5	< 0.5	0.5	1
03648	Chloroacetonitrile	107-14-2	< 50	50	1
03648	Chlorobenzene	108-90-7	< 0.5	0.5	1
03648	1-Chlorobutane	109-69-3	< 0.5	0.5	1
03648	Chloroethane	75-00-3	< 0.5	0.5	1
03648	Chloroform	67-66-3	< 0.5	0.5	1
03648	Chloromethane	74-87-3	< 0.5	0.5	1
03648	2-Chlorotoluene	95-49-8	< 0.5	0.5	1
03648	4-Chlorotoluene	106-43-4	< 0.5	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	< 1.0	1.0	1
03648	Dibromochloromethane	124-48-1	< 0.5	0.5	1
03648	1,2-Dibromoethane	106-93-4	< 0.5	0.5	1
03648	Dibromomethane	74-95-3	< 0.5	0.5	1
03648	trans-1,4-Dichloro-2-butene	110-57-6	< 5.0	5.0	1
03648	1,2-Dichlorobenzene	95-50-1	< 0.5	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	< 0.5	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	< 0.5	0.5	1
03648	Dichlorodifluoromethane	75-71-8	< 0.5	0.5	1
03648	1,1-Dichloroethane	75-34-3	< 0.5	0.5	1
03648	1,2-Dichloroethane	107-06-2	< 0.5	0.5	1
03648	1,1-Dichloroethene	75-35-4	< 0.5	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	< 0.5	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	< 0.5	0.5	1
03648	1,2-Dichloropropane	78-87-5	< 0.5	0.5	1
03648	1,3-Dichloropropane	142-28-9	< 0.5	0.5	1
03648	2,2-Dichloropropane	594-20-7	< 0.5	0.5	1
03648	1,1-Dichloropropanone	513-88-2	< 50	50	1
03648	1,1-Dichloropropene	563-58-6	< 0.5	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	< 0.5	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	< 0.5	0.5	1
03648	Ethyl Ether	60-29-7	< 0.5	0.5	1
03648	Ethyl Methacrylate	97-63-2	< 0.5	0.5	1
03648	Ethylbenzene	100-41-4	< 0.5	0.5	1
03648	Hexachlorobutadiene	87-68-3	< 0.5	0.5	1
03648	Hexachloroethane	67-72-1	< 0.5	0.5	1

Sample Description: **Trip Blank Water**
EM# 14489
261 Old Bayview Rd - North East, MD

Project Name: **14489 - Northeast, MD**

Submittal Date/Time: 11/29/2018 21:15
Collection Date/Time: 11/28/2018

ExxonMobil c/o Arcadis
ELLE Sample #: PW 9917886
ELLE Group #: 2013564
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**ug/l**	**ug/l**	
03648	2-Hexanone	591-78-6	< 5.0	5.0	1
03648	Isopropylbenzene	98-82-8	< 0.5	0.5	1
03648	p-Isopropyltoluene	99-87-6	< 0.5	0.5	1
03648	Methacrylonitrile	126-98-7	< 5.0	5.0	1
03648	Methyl Acrylate	96-33-3	< 5.0	5.0	1
03648	Methyl Iodide	74-88-4	< 0.5	0.5	1
03648	Methyl Methacrylate	80-62-6	< 0.5	0.5	1
03648	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1
03648	4-Methyl-2-pentanone	108-10-1	< 5.0	5.0	1
03648	Methylene Chloride	75-09-2	< 0.5	0.5	1
03648	Naphthalene	91-20-3	< 0.5	0.5	1
03648	Nitrobenzene	98-95-3	< 50	50	1
03648	2-Nitropropane	79-46-9	< 53	53	1
03648	Pentachloroethane	76-01-7	< 0.5	0.5	1
03648	Propionitrile	107-12-0	< 10	10	1
03648	n-Propylbenzene	103-65-1	< 0.5	0.5	1
03648	Styrene	100-42-5	< 0.5	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	< 0.5	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	< 0.5	0.5	1
03648	Tetrachloroethene	127-18-4	< 0.5	0.5	1
03648	Tetrahydrofuran	109-99-9	< 7.0	7.0	1
03648	Toluene	108-88-3	< 0.5	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	< 0.5	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	< 0.5	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	< 0.5	0.5	1
03648	1,1,2-Trichloroethane	79-00-5	< 0.5	0.5	1
03648	Trichloroethene	79-01-6	< 0.5	0.5	1
03648	Trichlorofluoromethane	75-69-4	< 0.5	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	< 0.5	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	< 0.5	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	< 0.5	0.5	1
03648	Vinyl Chloride	75-01-4	< 0.5	0.5	1
03648	m+p-Xylene	179601-23-1	< 0.5	0.5	1
03648	o-Xylene	95-47-6	< 0.5	0.5	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by EPA 524.2	EPA 524.2	1	S183341AA	12/01/2018 01:07	Don V Viray	1

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Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Group Number: 2013564
Reported: 12/07/2018 16:23

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ
	ug/l	ug/l
Batch number: S183341AA	Sample number(s): 9917883-9917886	
Acetone	< 5.0	5.0
Acrylonitrile	< 10	10
Allyl Chloride	< 0.5	0.5
Benzene	< 0.5	0.5
Bromobenzene	< 0.5	0.5
Bromochloromethane	< 0.5	0.5
Bromodichloromethane	< 0.5	0.5
Bromoform	< 0.5	0.5
Bromomethane	< 0.5	0.5
2-Butanone	< 5.0	5.0
n-Butylbenzene	< 0.5	0.5
sec-Butylbenzene	< 0.5	0.5
tert-Butylbenzene	< 0.5	0.5
Carbon Disulfide	< 2.0	2.0
Carbon Tetrachloride	< 0.5	0.5
Chloroacetonitrile	< 50	50
Chlorobenzene	< 0.5	0.5
1-Chlorobutane	< 0.5	0.5
Chloroethane	< 0.5	0.5
Chloroform	< 0.5	0.5
Chloromethane	< 0.5	0.5
2-Chlorotoluene	< 0.5	0.5
4-Chlorotoluene	< 0.5	0.5
1,2-Dibromo-3-chloropropane	< 1.0	1.0
Dibromochloromethane	< 0.5	0.5
1,2-Dibromoethane	< 0.5	0.5
Dibromomethane	< 0.5	0.5
trans-1,4-Dichloro-2-butene	< 5.0	5.0
1,2-Dichlorobenzene	< 0.5	0.5
1,3-Dichlorobenzene	< 0.5	0.5
1,4-Dichlorobenzene	< 0.5	0.5
Dichlorodifluoromethane	< 0.5	0.5
1,1-Dichloroethane	< 0.5	0.5
1,2-Dichloroethane	< 0.5	0.5
1,1-Dichloroethene	< 0.5	0.5
cis-1,2-Dichloroethene	< 0.5	0.5
trans-1,2-Dichloroethene	< 0.5	0.5
1,2-Dichloropropane	< 0.5	0.5
1,3-Dichloropropane	< 0.5	0.5

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 12/07/2018 16:23

Group Number: 2013564

Method Blank (continued)

Analysis Name	Result	LOQ
	ug/l	ug/l
2,2-Dichloropropane	< 0.5	0.5
1,1-Dichloropropanone	< 50	50
1,1-Dichloropropene	< 0.5	0.5
cis-1,3-Dichloropropene	< 0.5	0.5
trans-1,3-Dichloropropene	< 0.5	0.5
Ethyl Ether	< 0.5	0.5
Ethyl Methacrylate	< 0.5	0.5
Ethylbenzene	< 0.5	0.5
Hexachlorobutadiene	< 0.5	0.5
Hexachloroethane	< 0.5	0.5
2-Hexanone	< 5.0	5.0
Isopropylbenzene	< 0.5	0.5
p-Isopropyltoluene	< 0.5	0.5
Methacrylonitrile	< 5.0	5.0
Methyl Acrylate	< 5.0	5.0
Methyl Iodide	< 0.5	0.5
Methyl Methacrylate	< 0.5	0.5
Methyl Tertiary Butyl Ether	< 0.5	0.5
4-Methyl-2-pentanone	< 5.0	5.0
Methylene Chloride	< 0.5	0.5
Naphthalene	< 0.5	0.5
Nitrobenzene	< 50	50
2-Nitropropane	< 53	53
Pentachloroethane	< 0.5	0.5
Propionitrile	< 10	10
n-Propylbenzene	< 0.5	0.5
Styrene	< 0.5	0.5
1,1,1,2-Tetrachloroethane	< 0.5	0.5
1,1,2,2-Tetrachloroethane	< 0.5	0.5
Tetrachloroethene	< 0.5	0.5
Tetrahydrofuran	< 7.0	7.0
Toluene	< 0.5	0.5
1,2,3-Trichlorobenzene	< 0.5	0.5
1,2,4-Trichlorobenzene	< 0.5	0.5
1,1,1-Trichloroethane	< 0.5	0.5
1,1,2-Trichloroethane	< 0.5	0.5
Trichloroethene	< 0.5	0.5
Trichlorofluoromethane	< 0.5	0.5
1,2,3-Trichloropropane	< 0.5	0.5
1,2,4-Trimethylbenzene	< 0.5	0.5
1,3,5-Trimethylbenzene	< 0.5	0.5
Vinyl Chloride	< 0.5	0.5
m+p-Xylene	< 0.5	0.5
o-Xylene	< 0.5	0.5

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 12/07/2018 16:23

Group Number: 2013564

Method Blank (continued)

Analysis Name	Result	LOQ
	ug/l	ug/l
Batch number: S183391AA	Sample number(s): 9917885	
2-Butanone	< 5.0	5.0
Tetrahydrofuran	< 7.0	7.0

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: S183341AA	Sample number(s): 9917883-9917886								
Acetone	37.5	37.33			100		70-130		
Acrylonitrile	112.5	115.6			103		70-130		
Allyl Chloride	5.00	6.39			128		70-130		
Benzene	5.00	5.18			104		70-130		
Bromobenzene	5.00	6.19			124		70-130		
Bromochloromethane	5.00	5.40			108		70-130		
Bromodichloromethane	5.00	5.63			113		70-130		
Bromoform	5.00	5.89			118		70-130		
Bromomethane	2.00	1.69			85		70-130		
2-Butanone	37.5	42.44			113		70-130		
n-Butylbenzene	5.00	5.17			103		70-130		
sec-Butylbenzene	5.00	5.45			109		70-130		
tert-Butylbenzene	5.00	5.43			109		70-130		
Carbon Disulfide	5.00	4.64			93		70-130		
Carbon Tetrachloride	5.00	5.81			116		70-130		
Chloroacetonitrile	250	283.26			113		70-130		
Chlorobenzene	5.00	6.16			123		70-130		
1-Chlorobutane	5.00	5.08			102		70-130		
Chloroethane	2.00	1.92			96		70-130		
Chloroform	5.00	5.45			109		70-130		
Chloromethane	2.00	1.97			98		70-130		
2-Chlorotoluene	5.00	5.50			110		70-130		
4-Chlorotoluene	5.00	5.52			110		70-130		
1,2-Dibromo-3-chloropropane	5.00	6.08			122		70-130		
Dibromochloromethane	5.00	5.70			114		70-130		
1,2-Dibromoethane	5.00	5.97			119		70-130		
Dibromomethane	5.00	5.58			112		70-130		
trans-1,4-Dichloro-2-butene	25	27.76			111		70-130		
1,2-Dichlorobenzene	5.00	5.81			116		70-130		
1,3-Dichlorobenzene	5.00	5.96			119		70-130		
1,4-Dichlorobenzene	5.00	6.05			121		70-130		
Dichlorodifluoromethane	2.00	1.91			96		70-130		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 12/07/2018 16:23

Group Number: 2013564

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethane	5.00	5.25			105		70-130		
1,2-Dichloroethane	5.00	6.04			121		70-130		
1,1-Dichloroethene	5.00	4.85			97		70-130		
cis-1,2-Dichloroethene	5.00	5.65			113		70-130		
trans-1,2-Dichloroethene	5.00	5.09			102		70-130		
1,2-Dichloropropane	5.00	5.76			115		70-130		
1,3-Dichloropropane	5.00	5.48			110		70-130		
2,2-Dichloropropane	5.00	5.62			112		70-130		
1,1-Dichloropropanone	500	579.69			116		70-130		
1,1-Dichloropropene	5.00	5.33			107		70-130		
cis-1,3-Dichloropropene	5.00	5.33			107		70-130		
trans-1,3-Dichloropropene	5.00	5.39			108		70-130		
Ethyl Ether	5.00	4.67			93		70-130		
Ethyl Methacrylate	5.00	5.03			101		70-130		
Ethylbenzene	5.00	5.93			119		70-130		
Hexachlorobutadiene	5.00	6.18			124		70-130		
Hexachloroethane	5.00	5.29			106		70-130		
2-Hexanone	25	24.81			99		70-130		
Isopropylbenzene	5.00	5.61			112		70-130		
p-Isopropyltoluene	5.00	5.92			118		70-130		
Methacrylonitrile	37.5	42.45			113		70-130		
Methyl Acrylate	25	25.16			101		70-130		
Methyl Iodide	5.00	4.73			95		70-130		
Methyl Methacrylate	5.00	5.20			104		70-130		
Methyl Tertiary Butyl Ether	5.00	5.83			117		70-130		
4-Methyl-2-pentanone	25	25.48			102		70-130		
Methylene Chloride	5.00	5.37			107		70-130		
Naphthalene	5.00	4.89			98		70-130		
Nitrobenzene	250	290.83			116		70-130		
2-Nitropropane	500	611.78			122		70-130		
Pentachloroethane	5.00	5.89			118		70-130		
Propionitrile	100	106.9			107		70-130		
n-Propylbenzene	5.00	5.70			114		70-130		
Styrene	5.00	6.11			122		70-130		
1,1,1,2-Tetrachloroethane	5.00	5.72			114		70-130		
1,1,2,2-Tetrachloroethane	5.00	5.43			109		70-130		
Tetrachloroethene	5.00	5.43			109		70-130		
Tetrahydrofuran	45	47.81			106		70-130		
Toluene	5.00	5.30			106		70-130		
1,2,3-Trichlorobenzene	5.00	5.70			114		70-130		
1,2,4-Trichlorobenzene	5.00	5.39			108		70-130		
1,1,1-Trichloroethane	5.00	5.51			110		70-130		
1,1,2-Trichloroethane	5.00	5.68			114		70-130		
Trichloroethene	5.00	5.24			105		70-130		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ExxonMobil c/o Arcadis
Reported: 12/07/2018 16:23

Group Number: 2013564

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichlorofluoromethane	2.00	1.96			98		70-130		
1,2,3-Trichloropropane	5.00	6.17			123		70-130		
1,2,4-Trimethylbenzene	5.00	6.05			121		70-130		
1,3,5-Trimethylbenzene	5.00	5.95			119		70-130		
Vinyl Chloride	2.00	1.85			93		70-130		
m+p-Xylene	10	12.64			126		70-130		
o-Xylene	5.00	5.88			118		70-130		
Batch number: S183391AA	Sample number(s): 9917885								
2-Butanone	37.5	43.28			115		70-130		
Tetrahydrofuran	45	49.86			111		70-130		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs by EPA 524.2
Batch number: S183341AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
9917883	113	96
9917884	103	94
9917885	120	96
9917886	91	99
Blank	88	98
LCS	103	113
Limits:	80-120	80-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

ExxonMobil Analysis Request/Chain of Custody

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Acct. # 42309 Group # 2013564 Sample # 9917883-86

Consultant Company: Arcadis US, Inc.			
Site Address: 261 Bayview	Site ID #: 14489		
Consultant PM: Paul Goodell	P.O. #: B0085851.0010		
Sampler: Jordan Burkovsky	XOM PM: Kalista Campbell		
Bill to : ☐ XOM ☒ Consultant	Contract # A2604415		
State where samples were collected: MD	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Potable Water	Ground	NPDES	Surface	Other:	Total # of Containers	Analyses Requested: VOCs by EPA 5342	Preservation and Filtration Codes	Remarks
261 Bayview - Influent	11/28/18	1530	X					X					4	X		
261 Bayview - Midfluent	11/28/18	1540	X					X					4	X		
261 Bayview - Effluent	11/28/18	1550	X					X					4	X		
Trip Blank								X					2	X		

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other - HCl/MeOH

For Lab Use Only: SF #: ; SCR #: 235310

Turnaround Time Requested (TAT) (please check): Standard ☒ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

RUSH (Please circle one): 5 day 4 day 72 hour 48 hour 24 hour

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ OTHER

Type III (Reduced non-CLP/NJ Reduced) ☐ _____

TX TRRP-13 ☐

NJ DKQP ☐

NYSDEC Category ☐ A ☐ B

EDD Format(s) Needed: _____

Relinquished by:	Date	Time	Received by:	Date	Time
Bottle Storage					
Jordan Burkovsky	11/29/18	0700		11/29/18	1700
	11/29/18	2110			
				1/30/18	2116

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234585

Group Number(s): 2013564

Client: Arcadis US, Inc.

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	11/29/2018 21:15
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	MD		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	Asc
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 23:02 on 11/29/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.