DES Waste Management Division
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095

May 2018 Unvalidated Groundwater Data Submittal
Saint-Gobain Performance Plastics
701 Daniel Webster Highway
Merrimack, New Hampshire 03054
NHDES Site No.: 199712055
Project Number: 36430

Prepared For:
Saint-Gobain Performance Plastics Corp.
14 McCaffrey Street
Hoosick Falls, New York 12090
Phone Number (518) 686-6268
RP Contact Name: Chris Angier
RP Contact Email:
Christopher.Angier@saint-gobain.com

Prepared By:
Golder Associates Inc.
670 North Commercial Street
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Phone Number: (603) 688-0880
Contact Name: Ross Bennett
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DN:
cn=ross_bennett@golder.com
Date: 2018.07.13 16:10:01
-04'00'

Date of Report: July 13, 2018

GOLDER

July 13, 2018 Project No. 166-8623

Ms. Lea Anne Atwell
New Hampshire Department of Environmental Services
Waste Management Division
P.O. Box 95, 29 Hazen Drive
Concord, New Hampshire 03302-0095

RE: MAY 2018 UNVALIDATED GROUNDWATER DATA SUBMITTAL
SAINT-GOBAIN PERFORMANCE PLASTICS
701 DANIEL WEBSTER HIGHWAY, MERRIMACK, NEW HAMPSHIRE
NHDES SITE NO. 199712055

Dear Ms. Atwell:

Golder Associates Inc. (Golder) is pleased to provide this Data Submittal to the New Hampshire Department of Environmental Services (NHDES) on behalf of Saint-Gobain Performance Plastics (SGPP) for the SGPP facility located at 701 Daniel Webster Highway, Merrimack, New Hampshire (Site). This letter summarizes the May 2018 groundwater monitoring results.

At the request of the New Hampshire Department of Environmental Services (NHDES), Golder sampled three monitoring wells (GZ-1, GZ-2, and GZ-3) located on Flatley-owned tax lot 6E3-5 in Merrimack, New Hampshire on May 30, 2018. Golder sent the groundwater samples under chain-of-custody procedures to Eurofins Lancaster Laboratories Environmental, Inc. of Lancaster, Pennsylvania (ELLE) for analysis of per- and polyfluoroalkyl substances (PFAS) by Method 537.1.1. Laboratory analytical reports are included as Attachment A and field forms for the sampling event are provided as Attachment B. Analytical results are summarized in Table 1. Analytical results provided in this data submittal have not yet been validated. Validated data will be submitted to NHDES within 45 days of receipt of analytical data in all formats necessary for the validation process from ELLE, which have not been provided to Golder as of July 13, 2018. Golder measured the depth-to-water in the monitoring wells on May 30, 2018 after sampling was completed. Groundwater elevation data are summarized in Table 2.

Should you have any questions regarding this Data Submittal, please call Mr. Ross Bennett at (603) 668-0880.

Sincerely,

Golder Associates Inc.

Alistair Macdonald, P.G., LSP
Senior Program Leader and Principal

Ross Bennett, P.E.
Senior Engineer

Encl: Table 1 – Preliminary Groundwater Data Summary Table – May 2018
Table 2 – Groundwater Elevation Summary – May 2018
Attachment A – May 2018 Laboratory Analytical Reports
Attachment B – May 2018 Field Sampling Forms

LWL/RWB/drb

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Golder Associates Inc.
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TABLES

Table 1: Preliminary Groundwater Data Summary Table - May 2018
Saint-Gobain Performance Plastics
Merrimack, New Hampshire

Location	Sample Date	Sample Type	Analyte Name	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		Perfluorobutanesulfonic acid (PFBS)		Perfluorobutanoic acid (PFBA)		Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDOA)		Perfluoroheptanoic acid (PFHPA)		Perfluorohexanesulfonic acid (PFHXS)		Perfluorohexanoic acid (PFHXA)		Perfluorononanoic acid (PFNA)		Perfluoro-octanesulfonic acid (PFOS)		Perfluorooctanoic acid (PFOA)		Perfluoropentanoic acid (PFPEA)		Perfluorotetradecanoic acid (PFTEDA)		Perfluorotridecanoic acid (PFTRDA)		Perfluoroundecanoic acid (PFUNA)	
			Validated (Y/N)	ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l		ng/l	
GZ-1	5/30/2018	N	N	0.92	U	0.92	U	18		200		0.92	U	0.28	U	1500		58		1500		26		30		7000		610		0.28	U	0.28	U	0.37	U
		FD	N	0.90	U	0.90	U	16		180		0.90	U	0.27	U	1200		52		1400		23		25		5900		570		0.27	U	0.27	U	0.36	U
GZ-2	5/30/2018	N	N	9.0	U	9.0	U	12		350		9.0	U	2.7	U	3300		130		1200		5.3	J	3.8	J	11000		650		2.7	U	2.7	U	3.6	U
GZ-3	5/30/2018	N	N	9.0	U	9.0	U	5.9	J	310		9.0	U	2.7	U	1100		80		740		3.6	U	4.1	J	19000		590		2.7	U	2.7	U	3.6	U

Notes:

1. Samples were collected by Golder on the dates indicated and submitted to Eurofins Lancaster Laboratory Environmental, Inc. (ELLE) of Lancaster, PA for analysis of the indicated compounds. Data presented in the table are unvalidated.
2. U - analytical results below laboratory method detection limit
   J = analytical results above laboratory method detection limit but below laboratory reporting limit
3. N = indicates normal sample FD - indicates the sample is a field duplicate
4. ng/L - nanograms per liter

Prepared By: LWL
Checked By: STD
Reviewed By: RWB

TABLE 2: Groundwater Elevation Summary - May 2018
Saint-Gobain Performance Plastics
Merrimack, New Hampshire

Monitoring Location	Date	5/30/2018	
	Ref. Elev.	DTW (ft)	Elevation (ft amsl)
GZ-1	186.04	10.30	175.74
GZ-2	185.73	9.38	176.35
GZ-3	184.56	7.81	176.75

Notes:
1. Groundwater elevation data were collected by Golder Associates, Inc. after sampling was completed.
2. NM = not measured
   DTW = depth to water
   ft = feet
   amsl = above mean sea level

Prepared by: LWL
Checked by: STD
Reviewed by: RWB

ATTACHMENT A

ANALYSIS REPORT

Prepared by:

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

Prepared for:

Golder Associates
670 North Commercial Street
Suite 103
Manchester NH 03101

Report Date: June 18, 2018 16:05

Project: SGPP-Merrimack NH

Account #: 10253
Group Number: 1949637
SDG: GOA19
PO Number: PROJECT: 166-8623
State of Sample Origin: NH

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Golder Associates	Attn: Scott Drew
Electronic Copy To	Golder Associates	Attn: Ross Bennett
Electronic Copy To	Environmental Standards	Attn: SaintGobain
Electronic Copy To	Environmental Standards	Attn: Meg Michell
Electronic Copy To	Golder Associates	Attn: Jim Peace

Respectfully Submitted,

Nancy Jean Bornholm

Nancy Jean Bornholm
Principal Specialist

(717) 556-7250

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
GZ-1 Grab Groundwater	05/30/2018 10:35	9636396
GZ-2 Grab Groundwater	05/30/2018 12:35	9636397
GZ-3 Grab Groundwater	05/30/2018 14:30	9636398
Dup-1 Grab Groundwater	05/30/2018 10:35	9636399
EB-1 Grab Water	05/30/2018 14:45	9636400
FB-1 Grab Water	05/30/2018 14:10	9636401
TB-1 Grab Water	05/30/2018 14:55	9636402

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

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Project Name: SGPP-Merrimack NH
ELLE Group #: 1949637

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if 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.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 Version 1.1 Modified, LC/MS/MS Miscellaneous

Sample #s: 9636397, 9636398

Reporting limits were raised due to interference from the sample matrix.

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Analysis Report

Sample Description: GZ-1 Grab Groundwater SGPP

Project Name: SGPP-Merrimack NH

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 10:35
SDG#: GOA19-01

Golder Associates
ELLE Sample #: WW 9636396
ELLE Group #: 1949637
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	0.92 U	0.92	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	0.92 U	0.92	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	18	0.28	0.92	1
14473	Perfluorobutanoic acid	375-22-4	200	1.8	5.5	1
14473	Perfluorodecanoic acid	335-76-2	0.92 U	0.92	1.8	1
14473	Perfluorododecanoic acid	307-55-1	0.28 U	0.28	0.92	1
14473	Perfluoroheptanoic acid	375-85-9	1,500	28	92	100
14473	Perfluorohexanesulfonic Acid	355-46-4	58	0.37	1.8	1
14473	Perfluorohexanoic acid	307-24-4	1,500	3.7	18	10
14473	Perfluorononanoic acid	375-95-1	26	0.37	1.8	1
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	30	0.37	1.8	1
14473	Perfluorooctanoic acid	335-67-1	7,000	28	92	100
14473	Perfluoropentanoic acid	2706-90-3	610	18	55	10
14473	Perfluorotetradecanoic acid	376-06-7	0.28 U	0.28	0.92	1
14473	Perfluorotridecanoic acid	72629-94-8	0.28 U	0.28	0.92	1
14473	Perfluoroundecanoic acid	2058-94-8	0.37 U	0.37	1.8	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 01:38	Joshua P Trost	1
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 03:42	Joshua P Trost	10
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 04:44	Joshua P Trost	100
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: GZ-2 Grab Groundwater SGPP

Project Name: SGPP-Merrimack NH

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 12:35
SDG#: GOA19-02

Golder Associates
ELLE Sample #: WW 9636397
ELLE Group #: 1949637
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	9.0 U	9.0	27	10
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	9.0 U	9.0	27	10
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	12	2.7	9.0	10
14473	Perfluorobutanoic acid	375-22-4	350	18	54	10
14473	Perfluorodecanoic acid	335-76-2	9.0 U	9.0	18	10
14473	Perfluorododecanoic acid	307-55-1	2.7 U	2.7	9.0	10
14473	Perfluoroheptanoic acid	375-85-9	3,300	27	90	100
14473	Perfluorohexanesulfonic Acid	355-46-4	130	3.6	18	10
14473	Perfluorohexanoic acid	307-24-4	1,200	3.6	18	10
14473	Perfluorononanoic acid	375-95-1	5.3 J	3.6	18	10
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	3.8 J	3.6	18	10
14473	Perfluorooctanoic acid	335-67-1	11,000	27	90	100
14473	Perfluoropentanoic acid	2706-90-3	650	18	54	10
14473	Perfluorotetradecanoic acid	376-06-7	2.7 U	2.7	9.0	10
14473	Perfluorotridecanoic acid	72629-94-8	2.7 U	2.7	9.0	10
14473	Perfluoroundecanoic acid	2058-94-8	3.6 U	3.6	18	10

Reporting limits were raised due to interference from the sample matrix.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 03:58	Joshua P Trost	10
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 05:00	Joshua P Trost	100
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: GZ-3 Grab Groundwater SGPP

Project Name: SGPP-Merrimack NH

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 14:30
SDG#: GOA19-03

Golder Associates
ELLE Sample #: WW 9636398
ELLE Group #: 1949637
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l		ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	9.0	U	9.0	27	10
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA	2355-31-9	9.0	U	9.0	27	10
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic Acid	375-73-5	5.9	J	2.7	9.0	10
14473	Perfluorobutanoic acid	375-22-4	310		18	54	10
14473	Perfluorodecanoic acid	335-76-2	9.0	U	9.0	18	10
14473	Perfluorododecanoic acid	307-55-1	2.7	U	2.7	9.0	10
14473	Perfluoroheptanoic acid	375-85-9	1,100		27	90	100
14473	Perfluorohexanesulfonic Acid	355-46-4	80		3.6	18	10
14473	Perfluorohexanoic acid	307-24-4	740		3.6	18	10
14473	Perfluorononanoic acid	375-95-1	3.6	U	3.6	18	10
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	4.1	J	3.6	18	10
14473	Perfluorooctanoic acid	335-67-1	19,000		27	90	100
14473	Perfluoropentanoic acid	2706-90-3	590		18	54	10
14473	Perfluorotetradecanoic acid	376-06-7	2.7	U	2.7	9.0	10
14473	Perfluorotridecanoic acid	72629-94-8	2.7	U	2.7	9.0	10
14473	Perfluoroundecanoic acid	2058-94-8	3.6	U	3.6	18	10

Reporting limits were raised due to interference from the sample matrix.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 04:13	Joshua P Trost	10
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 05:16	Joshua P Trost	100
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **Dup-1 Grab Groundwater SGPP**

Project Name: **SGPP-Merrimack NH**

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 10:35
SDG#: GOA19-04FD

Golder Associates
ELLE Sample #: WW 9636399
ELLE Group #: 1949637
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	0.90 U	0.90	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	0.90 U	0.90	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	16	0.27	0.90	1
14473	Perfluorobutanoic acid	375-22-4	180	1.8	5.4	1
14473	Perfluorodecanoic acid	335-76-2	0.90 U	0.90	1.8	1
14473	Perfluorododecanoic acid	307-55-1	0.27 U	0.27	0.90	1
14473	Perfluoroheptanoic acid	375-85-9	1,200	27	90	100
14473	Perfluorohexanesulfonic Acid	355-46-4	52	0.36	1.8	1
14473	Perfluorohexanoic acid	307-24-4	1,400	3.6	18	10
14473	Perfluorononanoic acid	375-95-1	23	0.36	1.8	1
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	25	0.36	1.8	1
14473	Perfluorooctanoic acid	335-67-1	5,900	27	90	100
14473	Perfluoropentanoic acid	2706-90-3	570	18	54	10
14473	Perfluorotetradecanoic acid	376-06-7	0.27 U	0.27	0.90	1
14473	Perfluorotridecanoic acid	72629-94-8	0.27 U	0.27	0.90	1
14473	Perfluoroundecanoic acid	2058-94-8	0.36 U	0.36	1.8	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 02:25	Joshua P Trost	1
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 04:29	Joshua P Trost	10
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 05:31	Joshua P Trost	100
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **EB-1 Grab Water SGPP**

Project Name: **SGPP-Merrimack NH**

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 14:45
SDG#: GOA19-05EB

Golder Associates
ELLE Sample #: WW 9636400
ELLE Group #: 1949637
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	0.91 U	0.91	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	0.91 U	0.91	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	0.27 U	0.27	0.91	1
14473	Perfluorobutanoic acid	375-22-4	1.8 U	1.8	5.5	1
14473	Perfluorodecanoic acid	335-76-2	0.91 U	0.91	1.8	1
14473	Perfluorododecanoic acid	307-55-1	0.27 U	0.27	0.91	1
14473	Perfluoroheptanoic acid	375-85-9	0.27 U	0.27	0.91	1
14473	Perfluorohexanesulfonic Acid	355-46-4	0.36 U	0.36	1.8	1
14473	Perfluorohexanoic acid	307-24-4	0.36 U	0.36	1.8	1
14473	Perfluorononanoic acid	375-95-1	0.36 U	0.36	1.8	1
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	0.36 U	0.36	1.8	1
14473	Perfluorooctanoic acid	335-67-1	0.27 U	0.27	0.91	1
14473	Perfluoropentanoic acid	2706-90-3	1.8 U	1.8	5.5	1
14473	Perfluorotetradecanoic acid	376-06-7	0.27 U	0.27	0.91	1
14473	Perfluorotridecanoic acid	72629-94-8	0.27 U	0.27	0.91	1
14473	Perfluoroundecanoic acid	2058-94-8	0.36 U	0.36	1.8	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 02:40	Joshua P Trost	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **FB-1 Grab Water SGPP**

Project Name: **SGPP-Merrimack NH**

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 14:10
SDG#: GOA19-06FB

Golder Associates
ELLE Sample #: **WW 9636401**
ELLE Group #: **1949637**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	0.90 U	0.90	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	0.90 U	0.90	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	0.27 U	0.27	0.90	1
14473	Perfluorobutanoic acid	375-22-4	1.8 U	1.8	5.4	1
14473	Perfluorodecanoic acid	335-76-2	0.90 U	0.90	1.8	1
14473	Perfluorododecanoic acid	307-55-1	0.27 U	0.27	0.90	1
14473	Perfluoroheptanoic acid	375-85-9	0.27 U	0.27	0.90	1
14473	Perfluorohexanesulfonic Acid	355-46-4	0.36 U	0.36	1.8	1
14473	Perfluorohexanoic acid	307-24-4	0.36 U	0.36	1.8	1
14473	Perfluorononanoic acid	375-95-1	0.36 U	0.36	1.8	1
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	0.36 U	0.36	1.8	1
14473	Perfluorooctanoic acid	335-67-1	0.27 U	0.27	0.90	1
14473	Perfluoropentanoic acid	2706-90-3	1.8 U	1.8	5.4	1
14473	Perfluorotetradecanoic acid	376-06-7	0.27 U	0.27	0.90	1
14473	Perfluorotridecanoic acid	72629-94-8	0.27 U	0.27	0.90	1
14473	Perfluoroundecanoic acid	2058-94-8	0.36 U	0.36	1.8	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 02:56	Joshua P Trost	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **TB-1 Grab Water SGPP**

Project Name: **SGPP-Merrimack NH**

Submittal Date/Time: 05/31/2018 10:10
Collection Date/Time: 05/30/2018 14:55
SDG#: GOA19-07TB

Golder Associates
ELLE Sample #: WW 9636402
ELLE Group #: 1949637
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	NEtFOSAA	2991-50-6	0.91 U	0.91	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	0.91 U	0.91	2.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic Acid	375-73-5	0.27 U	0.27	0.91	1
14473	Perfluorobutanoic acid	375-22-4	1.8 U	1.8	5.4	1
14473	Perfluorodecanoic acid	335-76-2	0.91 U	0.91	1.8	1
14473	Perfluorododecanoic acid	307-55-1	0.27 U	0.27	0.91	1
14473	Perfluoroheptanoic acid	375-85-9	0.27 U	0.27	0.91	1
14473	Perfluorohexanesulfonic Acid	355-46-4	0.36 U	0.36	1.8	1
14473	Perfluorohexanoic acid	307-24-4	0.36 U	0.36	1.8	1
14473	Perfluorononanoic acid	375-95-1	0.36 U	0.36	1.8	1
14473	Perfluoro-Octanesulfonic Acid	1763-23-1	0.36 U	0.36	1.8	1
14473	Perfluorooctanoic acid	335-67-1	0.27 U	0.27	0.91	1
14473	Perfluoropentanoic acid	2706-90-3	1.8 U	1.8	5.4	1
14473	Perfluorotetradecanoic acid	376-06-7	0.27 U	0.27	0.91	1
14473	Perfluorotridecanoic acid	72629-94-8	0.27 U	0.27	0.91	1
14473	Perfluoroundecanoic acid	2058-94-8	0.36 U	0.36	1.8	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	16 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18155013	06/14/2018 03:11	Joshua P Trost	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18155013	06/04/2018 17:15	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Golder Associates
Reported: 06/18/2018 16:05

Group Number: 1949637

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 ng/l	MDL** ng/l	LOQ ng/l
Batch number: 18155013	Sample number(s): 9636396-9636402		
NEtFOSAA	1.0 U	1.0	3.0
NMeFOSAA	1.0 U	1.0	3.0
Perfluorobutanesulfonic Acid	0.30 U	0.30	1.0
Perfluorobutanoic acid	2.0 U	2.0	6.0
Perfluorodecanoic acid	1.0 U	1.0	2.0
Perfluorododecanoic acid	0.30 U	0.30	1.0
Perfluoroheptanoic acid	0.30 U	0.30	1.0
Perfluorohexanesulfonic Acid	0.40 U	0.40	2.0
Perfluorohexanoic acid	0.40 U	0.40	2.0
Perfluorononanoic acid	0.40 U	0.40	2.0
Perfluoro-Octanesulfonic Acid	0.40 U	0.40	2.0
Perfluorooctanoic acid	0.30 U	0.30	1.0
Perfluoropentanoic acid	2.0 U	2.0	6.0
Perfluorotetradecanoic acid	0.30 U	0.30	1.0
Perfluorotridecanoic acid	0.30 U	0.30	1.0
Perfluoroundecanoic acid	0.40 U	0.40	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18155013	Sample number(s): 9636396-9636402								
NEtFOSAA	5.44	5.40	5.44	5.57	99	102	55-169	3	30
NMeFOSAA	5.44	5.75	5.44	5.47	106	100	62-167	5	30
Perfluorobutanesulfonic Acid	4.81	4.48	4.81	4.59	93	95	73-128	2	30
Perfluorobutanoic acid	5.44	5.54	5.44	5.51	102	101	74-142	1	30
Perfluorodecanoic acid	5.44	5.30	5.44	5.78	98	106	69-148	9	30
Perfluorododecanoic acid	5.44	5.42	5.44	5.63	100	104	75-136	4	30
Perfluoroheptanoic acid	5.44	5.02	5.44	4.86	92	89	76-140	3	30
Perfluorohexanesulfonic Acid	5.14	4.86	5.14	5.18	94	101	71-131	6	30
Perfluorohexanoic acid	5.44	5.74	5.44	5.83	105	107	75-135	2	30
Perfluorononanoic acid	5.44	5.41	5.44	5.59	99	103	72-148	3	30
Perfluoro-Octanesulfonic Acid	5.20	5.15	5.20	5.08	99	98	67-138	1	30
Perfluorooctanoic acid	5.44	5.61	5.44	5.91	103	109	72-138	5	30
Perfluoropentanoic acid	5.44	5.59	5.44	5.82	103	107	74-134	4	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: Golder Associates
Reported: 06/18/2018 16:05

Group Number: 1949637

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorotetradecanoic acid	5.44	5.52	5.44	5.68	102	104	74-135	3	30
Perfluorotridecanoic acid	5.44	5.48	5.44	5.75	101	106	61-145	5	30
Perfluoroundecanoic acid	5.44	5.35	5.44	5.30	98	97	75-146	1	30

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: 16 PFAS Compounds
Batch number: 18155013

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
9636396	73	79	119	87	99	84
9636397	91	98	107	114	107	98
9636398	92	98	109	114	117	116
9636399	82	90	133	95	108	99
9636400	81	86	92	83	82	82
9636401	74	79	85	75	70	74
9636402	73	77	81	75	74	76
Blank	84	92	95	87	84	84
LCS	83	90	93	80	81	80
LCSD	84	86	94	82	78	86
Limits:	33-123	39-135	26-148	31-128	34-126	35-126

	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	d3-NMeFOSAA	13C7-PFUnDA
9636396	53	75	83	76	59	76
9636397	84	90	91	96	81	91
9636398	79	95	98	93	82	91
9636399	60	86	98	85	70	81
9636400	85	82	101	85	69	78
9636401	76	75	90	76	62	73
9636402	75	75	99	74	65	73
Blank	84	83	97	89	74	88
LCS	82	81	93	84	70	78
LCSD	81	84	89	81	66	80
Limits:	43-112	43-115	32-134	40-115	17-120	30-128

	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
9636396	69	75	66
9636397	88	90	79

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Golder Associates
Reported: 06/18/2018 16:05

Group Number: 1949637

Surrogate Quality Control (continued)

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

Analysis Name: 16 PFAS Compounds
Batch number: 18155013

	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
9636398	98	91	79
9636399	78	84	72
9636400	82	82	72
9636401	69	74	63
9636402	69	71	64
Blank	81	92	79
LCS	77	84	71
LCSD	73	78	68
Limits:	21-135	28-127	26-119

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

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Acct. # 10253 Group # 1949637 Sample # 9636396-402

COC # 549581

Client Information

Client: Golder Associates

Acct. #:

Project Name/#: SL-PP / 1668623

PWSID #:

Project Manager: Jim Peace

P.O. #:

Sampler: Scott Drew

Quote #:

State where samples were collected: NH

For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Tissue ☐ Sediment ☐ Water: Potable ☐ Ground ☒ Surface ☐ NPDES ☐ Other: ____

Analysis Requested

Preservation Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Remarks

*site specific list

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PFAS (16 compound list)*
GZ-1	5/30/18	1035	X		2	X
GZ-2		1235	X		2	X
GZ-3		1430	X		2	X
Dup-1		1035	X		2	X
EB-1		1445	X		2	X
FB-1		1410	X		2	X
TB-1		1455	X		2	X

Turnaround Time (TAT) Requested (please circle)

Standard Rush

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

Date results are needed:

E-mail address: jpeace@golder.com RBennett@golder.com scott_drew@golder.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	5/30/18	1700			
			[signature]	5-31-18	1010

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 217832

Group Number(s): 1949637

Client: GOLDER ASSOCIATES

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	05/31/2018 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NH		

Arrival Condition Summary

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

Unpacked by Suegeily Mendez (14058) at 12:02 on 05/31/2018

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	DT42-02	0.9	DT	Wet	Y	Loose	N

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Explanation of Symbols and Abbreviations

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

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

<	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.
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.

ATTACHMENT B

SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	Saint-Gobain Performance Plastics	Project Number:	166-8623
Sample ID:	62-1	Sample Source:	GW
Golder Personnel Present:	S. Dew, L. Lopez		

PURGING INFORMATION (IF APPLICABLE)

Purge Date:	5/30/2018	Time (24 hr):	905	Elapsed hours/min:	see back
Purging Device:	C	Dedicated?:	no ~~Yes~~		
Casing Vol (Gal.):	—	Tubing Vol. (L)	—	Vol Purged (L):	see back
Material:	1/4" OD HDPE tubing				
(A) Air-Lift Pump; (B) Bladder Pump, (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailer; (F) Foot Valve; (G) Other.					

Sampling Date:	5/30/2018	Time (24 hr):	1035	Matrix:	GW
Sampling Device	C	Dedicated?:	Yes	Filtered?:	No
Material:	1/4" OD HDPE tubing			Sample Type:	Grab
(A) Air-Lift Pump; (B) Bladder Pump, (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailer; (F) Foot Valve; (G) Other.					
Analytical Parameters:	PFAS				

WELL INFORMATION (IF APPLICABLE)

Reference Point:	TPVC	Land Elevation (ft):	-	
Ref. Elevation (ft):	-	Historical Well Depth (ft):	19 feet	Common casing vol. factors
Depth to Water (ft):	-	Sounded Well Depth (ft):	-	1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
Screen Interval:	8.5-18.5'	Stickup (ft):	Flush	0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Pump Intake:	13.5'	Well Diameter (in):	2.00	Casing Vol.= 0.163 * r^2
GW Elevation (ft):	-	Tubing Diameter (in)	0.25	WL - 1500, 10.30'

FINAL FIELD MEASUREMENTS

PLEASE CHECK UNITS VS. METER!!!

Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	9.79	pH	(S.U.)	6.26
Spec Cond	(uS/cm)	855	ORP	(mV)	-11.8
Dissolved Oxygen	(mg/L)	1.11	Eh	(mV)	-
Flow Rate	(mL/min)	300	Turbidity	(NTU)	3.62
			Drawdown	(Ft)	-

COMMENTS / CALCULATIONS

Weather: Sunny, 70s

Sample Description:

Sampled @ 1035

Insect Repellant Used Today? Yes/No

Sampler Signature: [signature] Date: 5/30/2018

GOLDER

PURGING AND STABILIZATION INFORMATION

Sample ID:	G2-1
Initial DTW (ft):	-
Final DTW(ft):	-

FIELD MEASUREMENTS

Elapsed Time	Volume Purged	Flow Rate	Temp	Specific Cond.	DO	pH	ORP	Turb	DTW	
(Time)	(mL)	(mL/min)	(°C)	(uS/cm)	(mg/L)	(S.U.)	(mV)	(NTU)	(ft)	
Stabilization Criteria:		± 10%	± 3%	± 3%	± 10%**	± 0.1 SU	± 10 mV	± 10%*	<0.3 FT	
905		350	9.09	825	0.67	6.24	-11.9	91.6	-	
910		300	9.62	855	0.67	6.20	-3.3	63.0	-	
915		300	9.65	878	0.63	6.22	-8.7	35.6	-	
920		300	9.54	875	0.64	6.23	-12.0	24.0	-	
925		300	9.56	861	0.73	6.25	-16.2	20.3	-	
930		300	9.59	861	0.79	6.27	-18.2	10.4	-	
935		300	9.56	863	0.88	6.26	-18.2	14.6	-	
940		300	9.53	865	1.02	6.28	-20.2	10.2	-	
945		300	9.66	853	1.08	6.27	-20.2	6.94	-	
950		300	9.56	858	1.17	6.27	-16.2	5.71	-	
955		300	9.60	862	1.32	6.26	-13.8	5.02	-	
1000		300	9.60	860	1.32	6.27	-16.1	6.35	-	
1005		300	9.61	862	0.69	6.26	-15.8	3.87	-	
1010		300	9.69	855	0.85	6.27	-14.8	4.53	-	
1015		300	9.68	857	0.58	6.26	-14.1	4.58	-	
1020		300	9.79	853	1.24	6.27	-13.2	3.65	-	
1025		300	9.79	855	1.11	6.26	-11.8	3.62	-	
1035 —	Sampled								-	
									-	
									-	
									-	
									-	
									-	
									-	
									-	

Comments: Depth to water and sounded well depth measurements are not collected during PFAS sampling.

the facility grounds were being sprayed w/ pesticide/herbicide

* ± 10% or 1.00, whichever is greater ** ± 10% or <0.5 for three consecutive readings

Sampler Signature: [signature] Date: 5/30/2016

GOLDER

SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	Saint-Gobain Performance Plastics	Project Number:	166-8623
Sample ID:	62-2	Sample Source:	GW
Golder Personnel Present:	S. Drew, L. Lampe		

PURGING INFORMATION (IF APPLICABLE)

Purge Date:	5/30/2018	Time (24 hr):	1135	Elapsed hours/min:	See back
Purging Device:	C	Dedicated?:	NO ~~Yes~~		
Casing Vol (Gal.):	—	Tubing Vol. (L)	—	Vol Purged (L):	See back
Material:	1/4" OD HDPE tubing				
(A) Air-Lift Pump; (B) Bladder Pump, (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailer; (F) Foot Valve; (G) Other.					

Sampling Date:	5/30/2018	Time (24 hr):	1235	Matrix:	GW
Sampling Device	C	Dedicated?:	Yes	Filtered?:	No
Material:	1/4" OD HDPE tubing			Sample Type:	Grab
(A) Air-Lift Pump; (B) Bladder Pump, (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailer; (F) Foot Valve; (G) Other.					
Analytical Parameters:	PFAS				

WELL INFORMATION (IF APPLICABLE)

Reference Point:	TPVC	Land Elevation (ft):	-	
Ref. Elevation (ft):	-	Historical Well Depth (ft):	19	Common casing vol. factors
Depth to Water (ft):	-	Sounded Well Depth (ft):	-	1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
Screen Interval:	7-17'	Stickup (ft):	Flush	0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Pump Intake:	12	Well Diameter (in):	2.00	Casing Vol. = 0.163 * r^2
GW Elevation (ft):	-	Tubing Diameter (in)	0.25	W.L. 1505, 9.36'

FINAL FIELD MEASUREMENTS

PLEASE CHECK UNITS VS. METER!!!

Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	10.92	pH	(S.U.)	4.84
Spec Cond	(uS/cm)	27	ORP	(mV)	305.5
Dissolved Oxygen	(mg/L)	8.37	Eh	(mV)	-
Flow Rate	(mL/min)	300	Turbidity	(NTU)	0.23
			Drawdown	(Ft)	-

COMMENTS / CALCULATIONS

Weather: Sunny, 70s

Sample Description:

Insect Repellant Used Today? Yes/No

Sampler Signature: [signature] Date: 5/30/2018

GOLDER

PURGING AND STABILIZATION INFORMATION

Sample ID:	62-2
Initial DTW (ft):	-
Final DTW(ft):	-

FIELD MEASUREMENTS

Elapsed Time	Volume Purged	Flow Rate	Temp	Specific Cond.	DO	pH	ORP	Turb	DTW	
(Time)	(L)	(mL/min)	(°C)	(uS/cm)	(mg/L)	(S.U.)	(mV)	(NTU)	(ft)	
Stabilization Criteria:		± 10%	± 3%	± 3%	± 10%**	± 0.1 SU	± 10 mV	± 10%*	<0.3 FT	
1135		300	11.76	32	9.64	4.62	850.1	5.08	-	
1140		300	11.07	28	9.15	4.55	276.4	2.79	-	
1145		300	11.00	29	8.98	4.72	276.4	0.80	-	
1150		300	11.02	28	8.84	4.78	278.9	0.83	-	
1155		300	11.04	28	8.87	4.80	282.9	0.76	-	
1200		300	10.94	28	8.71	4.82	288.2	0.53	-	
1205		300	11.13	28	8.99	4.83	291.6	0.29	-	
1210		300	10.92	28	8.72	4.83	294.7	0.29	-	
1215		300	10.86	28	8.68	4.83	298.6	0.57	-	
1220		300	10.83	28	8.56	4.84	300.8	0.31	-	
1225		300	10.96	28	8.49	4.85	303.2	0.22	-	
1230		300	10.92	27	8.37	4.84	305.5	0.23	-	
1235 — Sampled									-	
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Comments: Depth to water and sounded well depth measurements are not collected during PFAS sampling.

* ± 10% or 1.00, whichever is greater ** ± 10% or <0.5 for three consecutive readings

Sampler Signature: [signature] Date: 5/30/2018

GOLDER

SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	Saint-Gobain Performance Plastics	Project Number:	166-8623
Sample ID:	62-3	Sample Source:	GW
Golder Personnel Present:	S. Drew, L. Lampo		

PURGING INFORMATION (IF APPLICABLE)

Purge Date:	5/30/2018	Time (24 hr):	1430	Elapsed hours/min:	see back
Purging Device:	C	Dedicated?:	no ~~Yes~~		
Casing Vol (Gal.):	—	Tubing Vol. (L)	—	Vol Purged (L):	see back
Material:	1/4" OD HDPE tubing				
(A) Air-Lift Pump; (B) Bladder Pump, (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailer; (F) Foot Valve; (G) Other.					

Sampling Date:	5/30/2018	Time (24 hr):	1330	Matrix:	GW
Sampling Device	C	Dedicated?:	Yes	Filtered?:	No
Material:	1/4" OD HDPE tubing			Sample Type:	Grab
(A) Air-Lift Pump; (B) Bladder Pump, (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailer; (F) Foot Valve; (G) Other.					
Analytical Parameters:	PFAS				

WELL INFORMATION (IF APPLICABLE)

Reference Point:	TPVC	Land Elevation (ft):	-	
Ref. Elevation (ft):	-	Historical Well Depth (ft):	17	Common casing vol. factors
Depth to Water (ft):	-	Sounded Well Depth (ft):	-	1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
Screen Interval:	7-17'	Stickup (ft):	Flush	0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Pump Intake:	12	Well Diameter (in):	2.00	Casing Vol.= 0.163 * r^2
GW Elevation (ft):	-	Tubing Diameter (in)	0.25	

W.L. 15.10, 7.81'

FINAL FIELD MEASUREMENTS

PLEASE CHECK UNITS VS. METER!!!

Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	11.35	pH	(S.U.)	5.39
Spec Cond	(uS/cm)	27	ORP	(mV)	282.8
Dissolved Oxygen	(mg/L)	6.60	Eh	(mV)	-
Flow Rate	(mL/min)	250	Turbidity	(NTU)	0.14
			Drawdown	(Ft)	-

COMMENTS / CALCULATIONS

Weather: Sunny, 70s

Sample Description:

Insect Repellant Used Today? Yes/No

Sampler Signature: [signature] Date: 5/30/2018

GOLDER

PURGING AND STABILIZATION INFORMATION

Sample ID:	62-3
Initial DTW (ft):	-
Final DTW(ft):	-

FIELD MEASUREMENTS

Elapsed Time	Volume Purged	Flow Rate	Temp	Specific Cond.	DO	pH	ORP	Turb	DTW	
(Time)	(L)	(mL/min)	(°C)	(uS/cm)	(mg/L)	(S.U.)	(mV)	(NTU)	(ft)	
Stabilization Criteria:		± 10%	± 3%	± 3%	± 10%**	± 0.1 SU	± 10 mV	± 10%*	<0.3 FT	
1330		250	12.05	37	8.07	5.46	260.0	1.26	-	
1335		250	11.35	29	7.26	5.40	259.9	1.10	-	
1340		250	11.35	28	6.85	5.33	267.4	0.34	-	
1345		250	11.19	26	6.75	5.35	270.8	0.20	-	
1350		250	11.15	27	6.66	5.37	274.1	0.17	-	
1355		250	11.19	27	6.70	5.38	277.0	0.16	-	
1400		250	11.16	26	6.67	5.39	278.9	0.21	-	
1405		250	11.08	26	6.81	5.39	280.2	0.14	-	
1410		250	11.17	26	6.71	5.40	281.7	0.16	-	
1415		250	11.21	26	6.74	5.39	281.9	0.18	-	
1420		250	11.24	26	6.61	5.40	282.4	0.15	-	
1425		250	11.35	27	6.60	5.39	282.8	0.14	-	
1430 →	sample									
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Comments: Depth to water and sounded well depth measurements are not collected during PFAS sampling.

* ± 10% or 1.00, whichever is greater ** ± 10% or <0.5 for three consecutive readings

Sampler Signature: [signature] Date: 5/30/2018

GOLDER