December 9, 2020 Reference No. 11212053

Mr. Brian Sadowski
Project Manager
Division of Environmental Remediation, Region 9
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

Dear Mr. Sadowski:

Re: Interim Data Report - Fall 2020 Groundwater Sampling Event
Carborundum-Abrasive Division Site, Wheatfield, New York (Site No. 932007)

In accordance with the Site Management Plan (SMP), GHD, on behalf of Saint-Gobain Corporation (SGC), is presenting this Interim Data Report providing the results of the groundwater sampling event conducted from October 26 through November 2, 2020 at the Carborundum-Abrasive Division Site located at 6600 Walmore Road in Wheatfield, New York (Site). This Interim Data Report includes the validated laboratory results, an overburden potentiometric surface contour map, and a brief comparison of the sampling results to the historical data set.

On October 26, 2020, depth to water and well depth were measured in wells OW2-81, OW3-81, OW4-81, and OW5-81 prior to the start of purging activities. Table 1 below presents these field measurements and the calculated groundwater elevations. An overburden potentiometric surface map is provided as Figure 1. Groundwater was generally flowing from southwest to northeast across the Site at the time of water level measurement.

Table 1 Water Levels and Well Depths - October 26, 2020

Location	Top of Riser Elevation (ft. AMSL)	Depth to Water (ft. BTOR)	Well Depth (ft. BTOR)	Groundwater Elevation (ft. AMSL)
OW2-81	588.50	8.60	14.14	579.90
OW3-81	587.59	10.88	19.68	576.71
OW4-81	587.74	10.84	19.04	576.90
OW5-81	587.52	10.51	17.45	577.01
Notes:				
ft. AMSL - Feet above mean sea level				
ft. BTOR - Feet below top of riser				

Following collection of all water levels, the wells were redeveloped and purged dry utilizing clean, dedicated 5/8-inch high density polyethylene (HDPE) rigid tubing and a stainless steel foot valve. Potable water was added where needed to aid in the redevelopment. Purge water was containerized in a 55-gallon drum and transported to the Saint-Gobain Abrasives facility for storage pending off-Site disposal

by Saint-Gobain. Final well depths following redevelopment were 14.14 ft. BTOR (OW2-81), 19.68 ft. BTOR (OW3-81), 19.01 ft. BTOR (OW4-81), and 17.38 ft. BTOR (OW5-81).

Following completion of the purging activities on October 26, the wells were allowed to recharge. Water levels in the recovering wells were checked on October 27, October 28, October 30, and November 2, 2020. Upon the identification of sufficient recharge volume, groundwater samples were collected from wells OW2-81 (October 27), OW3-81 (November 2), OW4-81 (October 27), and OW5-81 (November 2), and catch basin A-9 (October 27) using a peristaltic pump and clean, dedicated polyethylene tubing. All tubing was removed following sampling. One field duplicate sample and one matrix spike/matrix spike duplicate (MS/MSD) sample were collected from OW4-81. Insufficient volume remained in the wells following sampling to collect measurements for field water quality parameters in the sample water. It should be noted that field quality parameters measured by the previous consultant were on stagnant water purged prior to well recharge and sampling, and are, thus, not representative of the formation water actually sampled. The groundwater samples were submitted to Alpha Analytical in Westborough, Massachusetts for analysis of phenolic compounds via United States Environmental Protection Agency (USEPA) SW-846 Method 8270. The laboratory analytical data package is included as Attachment A. A GHD chemist performed a data validation on the laboratory analytical results and concluded that the data are acceptable without qualification. The data validation memorandum is included as Attachment B.

The attached Table 2 following the text presents the analytical results from the Fall 2020 sampling event as well as the results from historical sampling events at the Site. During the Fall 2020 sampling event, total phenolic compounds slightly exceeded the New York State Department of Environmental Conservation (NYSDEC) Class GA Groundwater Standard of 1 part per billion (ppb) in OW2-81 (2.2 ppb, estimated) and in OW3-81 (2.5 ppb, estimated). These two wells are located on the Niagara Frontier Transportation Authority (NFTA) property.

Additional details regarding the Fall 2020 sampling event will be included in the Periodic Review Report for reporting year 2020. The next groundwater sampling event will be conducted in March/April 2021. Please reach out to Maggie Popek at (716) 205-1973 if you have any questions regarding this Interim Data Report.

Sincerely,

GHD

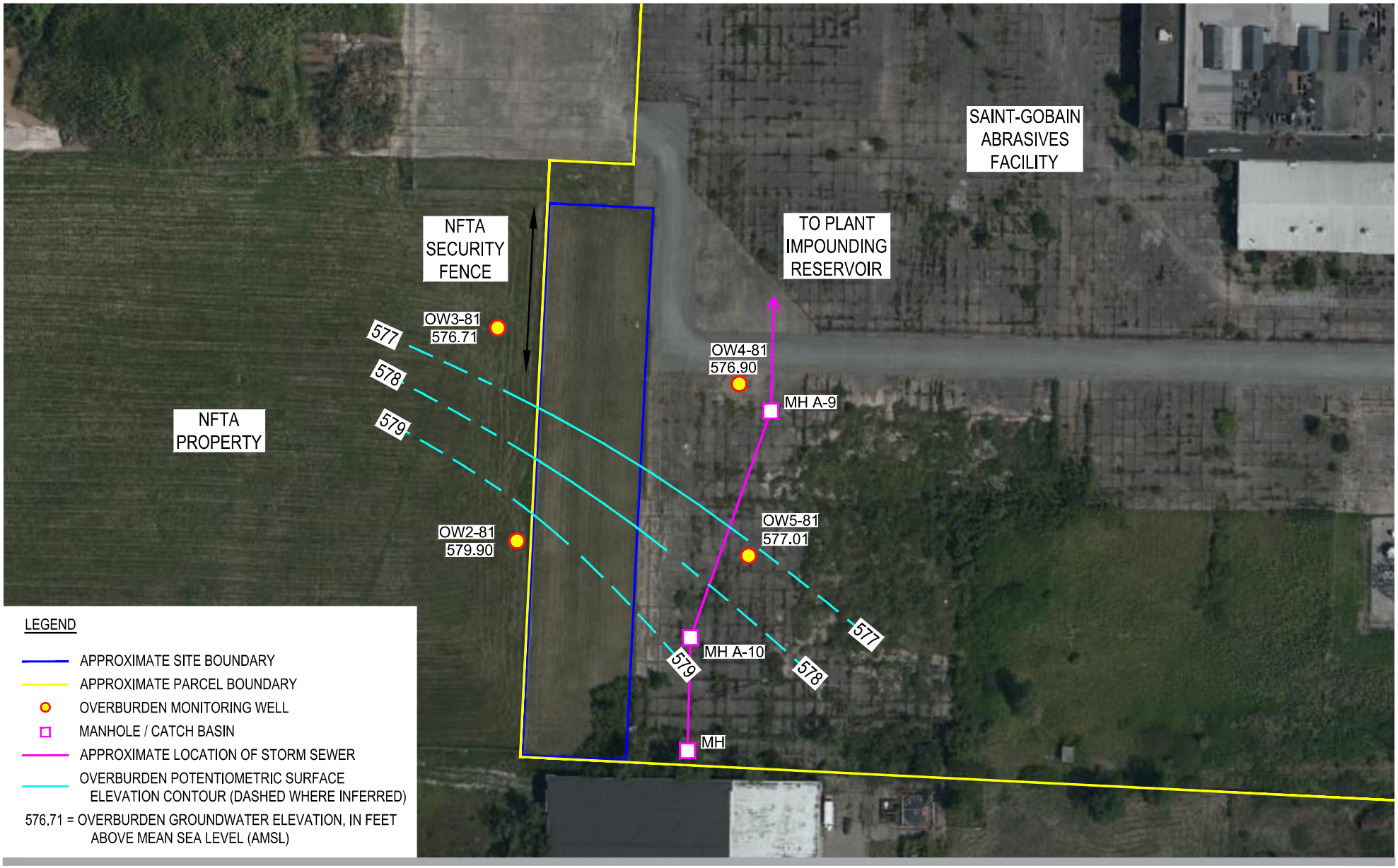
Margaret A. Popek

Margaret A. Popek
Geologist

MP/adh/1

Encl.

cc: Jim Smith (SGC)
Rich Snyder, P.E. (GHD)
Dennis Hoyt (GHD)



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GHD

CARBORUNDUM - ABRASIVE DIVISION SITE
NYSDEC SITE No. 932007 - 6600 WALMORE ROAD
WHEATFIELD, NEW YORK

OVERBURDEN POTENTIOMETRIC SURFACE MAP - OCTOBER 26, 2020

Project No. **11212053**
Report No. **Sadowski-01**
Date **NOV 2020**

FIGURE 1

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Plot Date: 3 December 2020 - 1:16 PM

Table 2

Historical Groundwater Sampling Results
Carborundum - Abrasive Division Site
NYSDEC Site No. 932007
Wheatfield, New York

Parameter	Groundwater Standard	OW2-81 6/2/1989	9/13/1990	4/30/1991	4/15/1993	4/21/1995	4/4/1996	8/7/2001	11/21/2003	7/19/2005	7/18/2007	9/16/2009	7/20/2011	8/16/2013	7/10/2015	8/7/2017	10/27/2020
pH (SU)		7.00	6.88	6.52	7.19	7.57	7.57	7.11	7.12	7.26	7.23	8.01	7.84	7.11	11.13	7.89	---
Conductivity (µmhos/cm)		---	---	2900	2128	2557	4115	2370	3828	3279	2970	3497	3852	3760	1565	3520	---
Turbidity (NTU)		---	---	---	---	420	60	9	42	45	67	29	157	31.9	297	21.8	---
Total Phenolics (4AAP) (µg/l)	1*	40	160	70	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.2	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	1.4 J
2-Chlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<5.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.48
2-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.49
4-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	0.82 J
2-Nitrophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.85
2,4-Dimethylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<3.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<1.8
2,4-Dichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<10	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.41
4-Chloro-3-methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.35
2,4,6-Trichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.61
2,4,5-Trichlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<10	<1.6	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.77
2,4-Dinitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<9.6	<50	<50	<47	<47	<47	<47	<50	<6.6
4-Nitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<2.8	<50	<50	<47	<47	<47	<47	<50	<0.67
4,6-Dinitro-2-methylphenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<3.0	<50	<50	<47	<47	<47	<47	<50	<1.8
Pentachlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<50	<2.2	<50	<50	<47	<47	<47	<47	<50	<0.01

Parameter	Groundwater Standard	OW3-81 6/2/1989	9/13/1990	4/30/1991	4/15/1993	4/21/1995	4/4/1996	8/7/2001	11/21/2003	7/19/2005	7/18/2007	9/16/2009	7/20/2011	8/16/2013	7/10/2015	8/7/2017	11/2/2020
pH (SU)		7.05	7.05	7.07	6.89	7.76	7.18	7.32	7.02	6.83	6.78	9.91	6.92	7.00	7.23	6.81	---
Conductivity (µmhos/cm)		---	---	2069	1490	3547	2705	2540	2950	2754	3397	2296	3160	3150	1839	1212	---
Turbidity (NTU)		---	---	---	---	270	400	24	25	50	29	366	1064	250	332	139	---
Total Phenolics (4AAP) (µg/l)	1*	<5	50	<6	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenol (µg/l)	1*	---	---	<10	32	<10	<5	<10	<2.2	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	2.5 J
2-Chlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<5.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.48
2-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.49
4-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.48
2-Nitrophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.85
2,4-Dimethylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<3.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<1.8
2,4-Dichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<10	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.41
4-Chloro-3-methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.35
2,4,6-Trichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.61
2,4,5-Trichlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<10	<1.6	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.77
2,4-Dinitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<9.6	<50	<50	<47	<47	<47	<47	<50	<6.6
4-Nitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<2.8	<50	<50	<47	<47	<47	<47	<50	<0.67
4,6-Dinitro-2-methylphenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<3.0	<50	<50	<47	<47	<47	<47	<50	<1.8
Pentachlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<50	<2.2	<50	<50	<47	<47	<47	<47	<50	<0.01

Table 2

Historical Groundwater Sampling Results
Carborundum - Abrasive Division Site
NYSDEC Site No. 932007
Wheatfield, New York

Parameter	Groundwater Standard	OW4-81 6/2/1989	9/13/1990	4/30/1991	4/15/1993	4/21/1995	4/4/1996	8/7/2001	11/21/2003	7/19/2005	7/18/2007	9/16/2009	7/20/2011	8/16/2013	7/10/2015	8/7/2017	10/27/2020
pH (SU)		7.29	6.83	7.03	7.08	7.63	8.67	7.64	7.36	11.87	11.26	8.69	11.2	10.88	10.97	9.97	---
Conductivity (µmhos/cm)		---	---	2153	1495	2458	2232	3023	2698	2566	3612	2500	2360	1946	1333	2280	---
Turbidity (NTU)		---	---	---	---	130	90	22	13.5	85	57	10.7	47	over range	145	109	---
Total Phenolics (4AAP) (µg/l)	1*	70	65	20	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.2	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.57 / <0.57
2-Chlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<5.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.48 / <0.48
2-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.49 / <0.49
4-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.48 / <0.48
2-Nitrophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.85 / <0.85
2,4-Dimethylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<3.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<1.8 / <1.8
2,4-Dichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<10	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.41 / <0.41
4-Chloro-3-methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.35 / <0.35
2,4,6-Trichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.61 / <0.61
2,4,5-Trichlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<10	<1.6	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.77 / <0.77
2,4-Dinitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<9.6	<50	<50	<47	<47	<47	<47	<50	<6.6 / <6.6
4-Nitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<2.8	<50	<50	<47	<47	<47	<47	<50	<0.67 / <0.67
4,6-Dinitro-2-methylphenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<3.0	<50	<50	<47	<47	<47	<47	<50	<1.8 / <1.8
Pentachlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<50	<2.2	<50	<50	<47	<47	<47	<47	<50	<0.01 / <0.01

Parameter	Groundwater Standard	OW5-81 6/2/1989	9/13/1990	4/30/1991	4/15/1993	4/21/1995	4/4/1996	8/7/2001	11/21/2003	7/19/2005	7/18/2007	9/16/2009	7/20/2011	8/16/2013	7/10/2015	8/7/2017	11/2/2020
pH (SU)		7.25	6.47	6.32	6.74	7.67	7.20	6.83	6.53	5.83	6.27	4.58	6.13	6.01	6.67	6.97	---
Conductivity (µmhos/cm)		---	---	2841	1854	3134	3188	2915	4415	3196	4225	4949	5632	6270	2000	8410	---
Turbidity (NTU)		---	---	---	---	340	60	12	21	6	2	250	over range	over range	137	664	---
Total Phenolics (4AAP) (µg/l)	1*	50	35	<6	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.2	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<0.78
2-Chlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<5.4	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<0.66
2-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	---	<0.68
4-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	---	<0.66
2-Nitrophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<1.2
2,4-Dimethylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<3.4	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<2.4
2,4-Dichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<10	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<0.56
4-Chloro-3-methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<0.48
2,4,6-Trichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	---	<0.84
2,4,5-Trichlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<10	<1.6	<10	<10	<9.4	<9.4	<9.4	<9.4	---	<1.1
2,4-Dinitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<9.6	<50	<50	<47	<47	<47	<47	---	<9.2
4-Nitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<2.8	<50	<50	<47	<47	<47	<47	---	<0.92
4,6-Dinitro-2-methylphenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<3.0	<50	<50	<47	<47	<47	<47	---	<2.5
Pentachlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<50	<2.2	<50	<50	<47	<47	<47	<47	---	<0.02

Table 2

Historical Groundwater Sampling Results
Carborundum - Abrasive Division Site
NYSDEC Site No. 932007
Wheatfield, New York

Parameter	Groundwater Standard	MH A-9 6/2/1989	9/13/1990	4/30/1991	4/15/1993	4/21/1995	4/4/1996	8/7/2001	11/21/2003	7/19/2005	7/18/2007	9/16/2009	7/20/2011	8/16/2013	7/10/2015	8/7/2017	10/27/2020
pH (SU)		7.58	7.08	7.31	7.37	7.79	7.28	8.13	7.03	7.35	7.88	6.97	8.10	6.87	8.25	6.63	---
Conductivity (µmhos/cm)		---	---	453	313	346	676	84	606	779	990	476	622	664	498	614	---
Turbidity (NTU)		---	---	---	---	280	60	35	3	17	12	4.7	2.11	2.79	8.00	1.59	---
Total Phenolics (4AAP) (µg/l)	1*	10	70	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.2	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.57
2-Chlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<5.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.48
2-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.49
4-Methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	--	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.48
2-Nitrophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.85
2,4-Dimethylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<3.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<1.8
2,4-Dichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<10	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.41
4-Chloro-3-methylphenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.8	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.35
2,4,6-Trichlorophenol (µg/l)	1*	---	---	<10	<10	<10	<5	<10	<2.4	<10	<5	<9.4	<9.4	<9.4	<9.4	<10	<0.61
2,4,5-Trichlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<10	<1.6	<10	<10	<9.4	<9.4	<9.4	<9.4	<10	<0.77
2,4-Dinitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<9.6	<50	<50	<47	<47	<47	<47	<50	<6.6
4-Nitrophenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<2.8	<50	<50	<47	<47	<47	<47	<50	<0.67
4,6-Dinitro-2-methylphenol (µg/l)	1*	---	---	<50	<50	<50	<10	<50	<3.0	<50	<50	<47	<47	<47	<47	<50	<1.8
Pentachlorophenol (µg/l)	1*	---	---	<50	<50	<50	<5	<50	<2.2	<50	<50	<47	<47	<47	<47	<50	<0.01

Notes:

---	- Not provided/not analyzed
SU	- Standard unit
µmhos/cm	- Micro ohms per centimeter
NTU	- Nephelometric turbidity unit
µg/L	- Micrograms per liter
*	- Applies to the sum of phenolic compounds (total phenols)
	- Exceeds NYSDEC Class GA Groundwater Standard
NYSDEC	- New York State Department of Environmental Conservation

Attachment A
Laboratory Analytical Reports

ANALYTICAL REPORT

Lab Number:	L2047079
Client:	GHD Services, Inc. 2055 Niagara Falls Boulevard Niagara Falls, NY 14304
ATTN:	Kathleen Willy
Phone:	(716) 297-6150
Project Name:	SAINT GOBAIN GW SAMPLING
Project Number:	11212053-03
Report Date:	11/04/20

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03

Lab Number: L2047079
Report Date: 11/04/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2047079-01	WG-11212053-102720-DT-01	WATER	WALMORE RD NIAGARA FALLS	10/27/20 15:15	10/28/20
L2047079-02	WG-11212053-102720-DT-02	WATER	WALMORE RD NIAGARA FALLS	10/27/20 16:10	10/28/20
L2047079-03	WG-11212053-102720-DT-03	WATER	WALMORE RD NIAGARA FALLS	10/27/20 16:10	10/28/20
L2047079-04	WG-11212053-102720-DT-04	WATER	WALMORE RD NIAGARA FALLS	10/27/20 16:35	10/28/20

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047079
Project Number:	11212053-03	**Report Date:**	11/04/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047079
Project Number:	11212053-03	**Report Date:**	11/04/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 11/04/20

ORGANICS

SEMIVOLATILES

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-01
Client ID: WG-11212053-102720-DT-01
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 15:15
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 11/02/20 12:14
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	1.4	J	ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	0.82	J	ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	54		10-120
4-Terphenyl-d14	78		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-01
Client ID: WG-11212053-102720-DT-01
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 15:15
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/20 13:27
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		21-120
Phenol-d6	52		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	72		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-02
Client ID: WG-11212053-102720-DT-02
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 16:10
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 11/02/20 11:04
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	51		10-120
4-Terphenyl-d14	67		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-02
Client ID: WG-11212053-102720-DT-02
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 16:10
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/20 13:48
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	95		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	67		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-03
Client ID: WG-11212053-102720-DT-03
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 16:10
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 11/02/20 13:00
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		21-120
Phenol-d6	57		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	89		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-03
Client ID: WG-11212053-102720-DT-03
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 16:10
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/20 14:08
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		21-120
Phenol-d6	57		10-120
Nitrobenzene-d5	111		23-120
2-Fluorobiphenyl	80		15-120
2,4,6-Tribromophenol	89		10-120
4-Terphenyl-d14	83		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-04
Client ID: WG-11212053-102720-DT-04
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 16:35
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 11/02/20 13:23
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	38		10-120
4-Terphenyl-d14	70		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

SAMPLE RESULTS

Lab ID: L2047079-04
Client ID: WG-11212053-102720-DT-04
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 10/27/20 16:35
Date Received: 10/28/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/20 14:29
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	61		15-120
2,4,6-Tribromophenol	44		10-120
4-Terphenyl-d14	64		41-149

Project Name: SAINT GOBAIN GW SAMPLING **Lab Number:** L2047079

Project Number: 11212053-03 **Report Date:** 11/04/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 11/02/20 08:22
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1429080-1					
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		21-120
Phenol-d6	44		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	45		10-120
4-Terphenyl-d14	74		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/20 10:43
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 11/01/20 19:29

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-04 Batch: WG1429081-1					
Pentachlorophenol	ND		ug/l	0.80	0.01

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	42		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	58		15-120
2,4,6-Tribromophenol	48		10-120
4-Terphenyl-d14	70		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: SAINT GOBAIN GW SAMPLING

Project Number: 11212053-03

Lab Number: L2047079

Report Date: 11/04/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1429080-2 WG1429080-3								
2,4,6-Trichlorophenol	67		80		30-130	18		30
p-Chloro-m-cresol	72		83		23-97	14		30
2-Chlorophenol	72		81		27-123	12		30
2,4-Dichlorophenol	74		84		30-130	13		30
2,4-Dimethylphenol	67		73		30-130	9		30
2-Nitrophenol	71		80		30-130	12		30
4-Nitrophenol	60		69		10-80	14		30
2,4-Dinitrophenol	72		84		20-130	15		30
4,6-Dinitro-o-cresol	71		82		20-164	14		30
Phenol	53		60		12-110	12		30
2-Methylphenol	72		79		30-130	9		30
3-Methylphenol/4-Methylphenol	72		81		30-130	12		30
2,4,5-Trichlorophenol	70		81		30-130	15		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	65		72		21-120
Phenol-d6	56		64		10-120
Nitrobenzene-d5	76		86		23-120
2-Fluorobiphenyl	70		80		15-120
2,4,6-Tribromophenol	99		111		10-120
4-Terphenyl-d14	75		83		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: SAINT GOBAIN GW SAMPLING

Project Number: 11212053-03

Lab Number: L2047079

Report Date: 11/04/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1429081-2 WG1429081-3								
Pentachlorophenol	133		137		40-140	3		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	75		72		21-120
Phenol-d6	65		63		10-120
Nitrobenzene-d5	120		115		23-120
2-Fluorobiphenyl	93		85		15-120
2,4,6-Tribromophenol	89		91		10-120
4-Terphenyl-d14	87		83		41-149

Matrix Spike Analysis

Batch Quality Control

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1429080-4 WG1429080-5 QC Sample: L2047079-02 Client ID: WG-11212053-102720-DT-02												
2,4,6-Trichlorophenol	ND	18.2	11	61		12	66		30-130	9		30
p-Chloro-m-cresol	ND	18.2	12	66		12	66		23-97	0		30
2-Chlorophenol	ND	18.2	12	66		12	66		27-123	0		30
2,4-Dichlorophenol	ND	18.2	12	66		12	66		30-130	0		30
2,4-Dimethylphenol	ND	18.2	12	66		11	61		30-130	9		30
2-Nitrophenol	ND	18.2	12	66		12	66		30-130	0		30
4-Nitrophenol	ND	18.2	10	55		11	61		10-80	10		30
2,4-Dinitrophenol	ND	18.2	14.J	77		14.J	77		20-130	0		30
4,6-Dinitro-o-cresol	ND	18.2	12	66		12	66		20-164	0		30
Phenol	ND	18.2	9.3	51		9.4	52		12-110	1		30
2-Methylphenol	ND	18.2	12	66		12	66		30-130	0		30
3-Methylphenol/4-Methylphenol	ND	18.2	12	66		12	66		30-130	0		30
2,4,5-Trichlorophenol	ND	18.2	11	61		12	66		30-130	9		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	86		92		10-120
2-Fluorobiphenyl	63		65		15-120
2-Fluorophenol	63		63		21-120
4-Terphenyl-d14	68		69		41-149
Nitrobenzene-d5	71		70		23-120
Phenol-d6	55		55		10-120

Matrix Spike Analysis

Batch Quality Control

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047079
Report Date: 11/04/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1429081-4 WG1429081-5 QC Sample: L2047079-02 Client ID: WG-11212053-102720-DT-02												
Pentachlorophenol	ND	18.2	16	88		17	94		40-140	6		40

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	100		109		10-120
2-Fluorobiphenyl	66		70		15-120
2-Fluorophenol	64		67		21-120
4-Terphenyl-d14	68		73		41-149
Nitrobenzene-d5	97		102		23-120
Phenol-d6	60		63		10-120

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03

Lab Number: L2047079
Report Date: 11/04/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2047079-01A	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-01B	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-02A	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-02A1	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-02A2	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-02B	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-02B1	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-02B2	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-03A	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-03B	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-04A	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047079-04B	Amber 250ml unpreserved	A	7	7	5.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047079
Project Number:	11212053-03	**Report Date:**	11/04/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047079
Project Number:	11212053-03	**Report Date:**	11/04/20

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: DU Report with 'J' Qualifiers

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047079
Project Number:	11212053-03	**Report Date:**	11/04/20

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047079
Project Number:	11212053-03	**Report Date:**	11/04/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY RECORD

L2047079

COC NO.: 58967

Address: 2055 Niagara Falls Blvd NF NY 14304 PAGE 1 OF 1

Phone: 716-297-6150 Fax:

Project No/ Phase/Task Code: 11212053-03	Laboratory Name: Alpha	Lab Location: Westborough, MA	SSOW ID:
Project Name: Saint Gobain GW Sampling	Lab Contact:		Cooler No:
Project Location: Walmore Rd Niagara Falls			Carrier: Lab Courier
GHD Chemistry Contact: Kathy Willy			Airbill No:
Sampler(s): D. Tyran			Total # of Containers: 14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	Analysis Requested (See Back of COC for Definitions): NYTCL-8270												Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)																				
1	WG-11212053-102720-DT-01	10-27-20	1515	WG	G	N	X												2	X	DUP
2	WG-11212053-102720-DT-02	10-27-20	1610	WG	G	N	X												8	X	MS/MSD
3	WG-11212053-102720-DT-03	10-27-20	1610	WG	G	N	X												2		
4	WG-11212053-102720-DT-04	10-27-20	1635	WG	G	N	X												2		DUP
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

Notes/ Special Requirements:

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	D. Tyran	GHD	10/27/20	1719		VAL	10/28/20	1230
2.		VAL	10/28/20	1350			10/29/20	0170
3.								

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

GHD Form: COC-10B (20110804)

ANALYTICAL REPORT

Lab Number:	L2047869
Client:	GHD Services, Inc. 2055 Niagara Falls Boulevard Niagara Falls, NY 14304
ATTN:	Kathleen Willy
Phone:	(716) 297-6150
Project Name:	SAINT GOBAIN GW SAMPLING
Project Number:	11212053-03
Report Date:	11/09/20

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03

Lab Number: L2047869
Report Date: 11/09/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2047869-01	WG-11212053-110220-DT-05	WATER	WALMORE RD NIAGARA FALLS	11/02/20 12:25	11/02/20
L2047869-02	WG-11212053-110220-DT-06	WATER	WALMORE RD NIAGARA FALLS	11/02/20 12:50	11/02/20

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047869
Project Number:	11212053-03	**Report Date:**	11/09/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047869
Project Number:	11212053-03	**Report Date:**	11/09/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

L2047869-02: The sample has elevated detection limits due to limited sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 11/09/20

ORGANICS

SEMIVOLATILES

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047869
Report Date: 11/09/20

SAMPLE RESULTS

Lab ID: L2047869-01
Client ID: WG-11212053-110220-DT-05
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 11/02/20 12:25
Date Received: 11/02/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 11/04/20 18:19
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 11/04/20 05:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	2.5	J	ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	55		10-120
4-Terphenyl-d14	58		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047869
Report Date: 11/09/20

SAMPLE RESULTS

Lab ID: L2047869-01
Client ID: WG-11212053-110220-DT-05
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 11/02/20 12:25
Date Received: 11/02/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/05/20 13:02
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 11/04/20 05:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	0.80	0.01	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		21-120
Phenol-d6	50		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	58		10-120
4-Terphenyl-d14	55		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047869
Report Date: 11/09/20

SAMPLE RESULTS

Lab ID: L2047869-02
Client ID: WG-11212053-110220-DT-06
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 11/02/20 12:50
Date Received: 11/02/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 11/04/20 18:42
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 11/04/20 05:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	6.9	0.84	1
p-Chloro-m-cresol	ND		ug/l	2.8	0.48	1
2-Chlorophenol	ND		ug/l	2.8	0.66	1
2,4-Dichlorophenol	ND		ug/l	6.9	0.56	1
2,4-Dimethylphenol	ND		ug/l	6.9	2.4	1
2-Nitrophenol	ND		ug/l	14	1.2	1
4-Nitrophenol	ND		ug/l	14	0.92	1
2,4-Dinitrophenol	ND		ug/l	28	9.2	1
4,6-Dinitro-o-cresol	ND		ug/l	14	2.5	1
Phenol	ND		ug/l	6.9	0.78	1
2-Methylphenol	ND		ug/l	6.9	0.68	1
3-Methylphenol/4-Methylphenol	ND		ug/l	6.9	0.66	1
2,4,5-Trichlorophenol	ND		ug/l	6.9	1.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	54		10-120
Nitrobenzene-d5	59		23-120
2-Fluorobiphenyl	58		15-120
2,4,6-Tribromophenol	56		10-120
4-Terphenyl-d14	60		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047869
Report Date: 11/09/20

SAMPLE RESULTS

Lab ID: L2047869-02
Client ID: WG-11212053-110220-DT-06
Sample Location: WALMORE RD NIAGARA FALLS

Date Collected: 11/02/20 12:50
Date Received: 11/02/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/05/20 13:23
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 11/04/20 05:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Pentachlorophenol	ND		ug/l	1.1	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		21-120
Phenol-d6	55		10-120
Nitrobenzene-d5	85		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	53		10-120
4-Terphenyl-d14	54		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047869
Report Date: 11/09/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 11/04/20 17:09
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 11/04/20 05:38

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1430119-1					
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	48		10-120
Nitrobenzene-d5	61		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	52		10-120
4-Terphenyl-d14	62		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03
Lab Number: L2047869
Report Date: 11/09/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 11/05/20 12:42
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 11/04/20 05:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1430120-1					
Pentachlorophenol	ND		ug/l	0.80	0.01

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	56		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: SAINT GOBAIN GW SAMPLING

Project Number: 11212053-03

Lab Number: L2047869

Report Date: 11/09/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1430119-2 WG1430119-3								
2,4,6-Trichlorophenol	59		64		30-130	8		30
p-Chloro-m-cresol	61		65		23-97	6		30
2-Chlorophenol	63		65		27-123	3		30
2,4-Dichlorophenol	63		65		30-130	3		30
2,4-Dimethylphenol	58		64		30-130	10		30
2-Nitrophenol	60		62		30-130	3		30
4-Nitrophenol	46		50		10-80	8		30
2,4-Dinitrophenol	64		65		20-130	2		30
4,6-Dinitro-o-cresol	59		62		20-164	5		30
Phenol	46		50		12-110	8		30
2-Methylphenol	60		63		30-130	5		30
3-Methylphenol/4-Methylphenol	60		64		30-130	6		30
2,4,5-Trichlorophenol	61		65		30-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	54		56		21-120
Phenol-d6	46		50		10-120
Nitrobenzene-d5	60		61		23-120
2-Fluorobiphenyl	58		60		15-120
2,4,6-Tribromophenol	80		83		10-120
4-Terphenyl-d14	58		58		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03

Lab Number: L2047869
Report Date: 11/09/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1430120-2 WG1430120-3								
Pentachlorophenol	93		82		40-140	13		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	57		53		21-120
Phenol-d6	54		50		10-120
Nitrobenzene-d5	89		84		23-120
2-Fluorobiphenyl	61		58		15-120
2,4,6-Tribromophenol	64		55		10-120
4-Terphenyl-d14	56		52		41-149

Project Name: SAINT GOBAIN GW SAMPLING
Project Number: 11212053-03

Lab Number: L2047869
Report Date: 11/09/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2047869-01A	Amber 250ml unpreserved	A	7	7	2.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047869-01B	Amber 250ml unpreserved	A	7	7	2.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2047869-02A	Amber 250ml unpreserved	A	7	7	2.6	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047869
Project Number:	11212053-03	**Report Date:**	11/09/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047869
Project Number:	11212053-03	**Report Date:**	11/09/20

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: DU Report with 'J' Qualifiers

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047869
Project Number:	11212053-03	**Report Date:**	11/09/20

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SAINT GOBAIN GW SAMPLING	**Lab Number:**	L2047869
Project Number:	11212053-03	**Report Date:**	11/09/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2047869

CHAIN OF CUSTODY RECORD

COC NO.: 60253

Address: 2055 Niagara Falls Blvd NY 14304
Phone: 716-297-6150 PAGE 1 OF 1 Fax:

Project No/ Phase/Task Code: 11212053-03	Laboratory Name: Alpha	Lab Location: Westborough MA	SSOW ID:
Project Name: Saint Gobain GW Sampling	Lab Contact:		Cooler No:
Project Location: Walmore Rd Niagara Falls			Carrier: Lab Courier
GHD Chemistry Contact: Kathy Willy			Airbill No:
Sampler(s): D. Tyran			Total # of Containers: 3

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd//yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	NYTCL 8270	Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)									
1	WG-11212053-110220-DT-05	11-2-20	1225	WG	G	N	X	2		
2	WG-11212053-110220-DT-06	11-2-20	1250	WG	G	N	X	1		
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

DST

TAT Required in business days (use separate COCs for different TATs):

☐ ☐1 Day ☐2 Days ☐3 Days ☐1 Week ☒2 Week

Notes/ Special Requirements:

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	D. Tyran	GHD	11-2-20	1313		AAL	11/2/20	1315
2.			11/2/20	1425			11/3/20	01:15
3.								

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper

Attachment B
Data Validation Memorandum

Memorandum

December 1, 2020

To:	Maggie Popek	Ref. No.:	11212053
From:	Kathy Willy/adh/1	Tel:	716-205-1942
cc:	Dennis Hoyt		

Subject: **Analytical Results and Reduced Validation**
Groundwater Sampling
Saint-Gobain Abrasives, Inc.
Wheatfield, New York
October-November 2020

1. Introduction

This document details a reduced validation of analytical results for water samples collected in support of the Groundwater Sampling Event at the Saint-Gobain Abrasives site in Wheatfield, New York during October and November 2020. Samples were submitted to Alpha Analytical located in Westborough, Massachusetts. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS), and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled:

i) "National Functional Guidelines for Superfund Organic Methods Data Review", United States Environmental Protection Agency (USEPA) 540-R-2016-002, September 2016

This item will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the method employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for semi-volatile organic compound (SVOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All assessed surrogate recoveries met the laboratory criteria.

5. Laboratory Control Sample Analyses

LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analytes of concern

and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD sample was spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of one field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with this duplicate sample must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value for water samples.

All field duplicate results were within agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without specific qualification.

Table 1

Sample Collection and Analysis Summary
Groundwater Sampling
Saint-Gobain Abrasives, Inc.
Wheatfield, New York
October-November 2020

					Analysis/Parameters	
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Select SVOCs**	**Comments**
WG-11212053-102720-DT-04	CATCH BASIN A-9	Groundwater	10/27/2020	16:35	x	
WG-11212053-102720-DT-01	OW2-81	Groundwater	10/27/2020	15:15	x	
WG-11212053-110220-DT-05	OW3-81	Groundwater	11/02/2020	12:25	x	
WG-11212053-102720-DT-02	OW4-81	Groundwater	10/27/2020	16:10	x	Matrix Spike/Matrix Spike Duplicate
WG-11212053-102720-DT-03	OW4-81	Groundwater	10/27/2020	16:10	x	Field duplicate of sample WG-11212053-102720-DT-02
WG-11212053-110220-DT-06	OW5-81	Groundwater	11/02/2020	12:50	x	

Notes:

SVOCs - Semi-volatile Organic Compounds

Table 2

Analytical Results Summary
Groundwater Sampling
Saint-Gobain Abrasives, Inc.
Wheatfield, New York
October-November 2020

Location ID:		CATCH BASIN A-9	OW2-81	OW3-81
Sample Name:		WG-11212053-102720-DT-04	WG-11212053-102720-DT-01	WG-11212053-110220-DT-05
Sample Date:		10/27/2020	10/27/2020	11/02/2020
Parameters	**Unit**			
SVOCs				
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	µg/L	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U
2,4-Dimethylphenol	µg/L	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	µg/L	20 U	20 U	20 U
2-Chlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2-Methylphenol	µg/L	5.0 U	5.0 U	5.0 U
2-Nitrophenol	µg/L	10 U	10 U	10 U
3&4-Methylphenol	µg/L	5.0 U	0.82 J	5.0 U
4,6-Dinitro-2-methylphenol	µg/L	10 U	10 U	10 U
4-Chloro-3-methylphenol	µg/L	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	10 U	10 U	10 U
Phenol	µg/L	5.0 U	1.4 J	2.5 J
SVOCs, SIM				
Pentachlorophenol	µg/L	0.80 U	0.80 U	0.80 U

Table 2

Analytical Results Summary
Groundwater Sampling
Saint-Gobain Abrasives, Inc.
Wheatfield, New York
October-November 2020

Location ID:		OW4-81	OW4-81	OW5-81
Sample Name:		WG-11212053-102720-DT-02	WG-11212053-102720-DT-03	WG-11212053-110220-DT-06
Sample Date:		10/27/2020	10/27/2020 Duplicate	11/02/2020
Parameters	**Unit**			
SVOCs				
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	6.9 U
2,4,6-Trichlorophenol	µg/L	5.0 U	5.0 U	6.9 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	6.9 U
2,4-Dimethylphenol	µg/L	5.0 U	5.0 U	6.9 U
2,4-Dinitrophenol	µg/L	20 U	20 U	28 U
2-Chlorophenol	µg/L	2.0 U	2.0 U	2.8 U
2-Methylphenol	µg/L	5.0 U	5.0 U	6.9 U
2-Nitrophenol	µg/L	10 U	10 U	14 U
3&4-Methylphenol	µg/L	5.0 U	5.0 U	6.9 U
4,6-Dinitro-2-methylphenol	µg/L	10 U	10 U	14 U
4-Chloro-3-methylphenol	µg/L	2.0 U	2.0 U	2.8 U
4-Nitrophenol	µg/L	10 U	10 U	14 U
Phenol	µg/L	5.0 U	5.0 U	6.9 U
SVOCs, SIM				
Pentachlorophenol	µg/L	0.80 U	0.80 U	1.1 U

Notes:

SVOCs - Semi-volatile Organic Compounds
SIM - Selective Ion Monitoring
J - Estimated concentration
U - Not detected at the associated reporting lim

Table 3

Analytical Methods
Groundwater Sampling
Saint-Gobain Abrasives, Inc.
Wheatfield, New York
October-November 2020

			Holding Time	
Parameters	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Select Semi-volatile Organic Compounds (SVOC)	SW-846 8270C, 8270C SIM	Water	7	40

Notes:

Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
SIM - Selective Ion Monitoring