VIA ELECTRONIC MAIL

December 28, 2023

Barbara Brown
Voluntary Cleanup Program Section
Land Restoration Program
Maryland Department of the Environment
1800 Washington Blvd., Suite 625
Baltimore, Maryland 21230

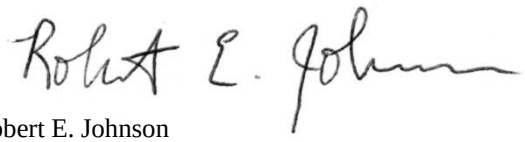
Subject: **Quarterly Status Report No. 28 - Offsite Area**
Former Kop-Flex Facility Site, Hanover, Maryland

Dear Barbara:

On behalf of EMERSUB 16 LLC, a subsidiary of Emerson Electric Co. (Emerson), WSP USA Inc. (WSP) is submitting this quarterly status report describing the response action activities conducted in the Third Quarter of 2023 in the off-property portion of the Former Kop-Flex Facility Site in Hanover, Maryland (Site). In addition to this electronic version, a hard copy of the status report is being submitted to the Maryland Department of Environment (MDE) under separate cover. Overall, information presented on the water quality for the Lower Patapsco aquifer in this report is consistent with previously collected data.

If you have any questions, please do not hesitate to contact me at 703-709-6500.

Kind regards,



Robert E. Johnson
Vice President – Earth & Environment

REJ:esr

Encl.

cc: Mr. Brian Deitz, Site Assessment and Remediation Division, MDE
Ms. Barbara Krupiarz, Land Restoration Program, MDE
Mr. Oduwole Moshood, U.S. Environmental Protection Agency (EPA), Region III
Mr. Stephen Clarke, Emerson Electric Co.
Sheila Harvey, Esquire, Pillsbury Winthrop Shaw Pittman

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WSP USA
Suite 300
13530 Dulles Technology Drive
Herndon, VA 20171

Tel.: +1 703 709-6500
Fax: +1 703 709-8505
wsp.com

QUARTERLY STATUS REPORT NO. 28 – OFFSITE AREA

FORMER KOP-FLEX FACILITY SITE

July 2023 Through September 2023

Site Name:	Former Kop-Flex Facility
Site Address:	7555 Harmans Road Hanover, Maryland 21076
Consultant:	WSP USA Inc.
Address:	13530 Dulles Technology Drive, Suite 300 Herndon, Virginia 20171
Phone No.:	(703) 709-6500
Project Coordinator:	Eric Johnson, WSP USA
Alternate:	Lisa Kelly**,** WSP USA

1.0 OFFSITE ACTIVITIES CONDUCTED DURING JULY 2023 - SEPTEMBER 2023 REPORTING PERIOD

- The two monitoring wells located on the Williams-Scotsman, Inc. (WillScot) property - MW-24D screened in the deep zone of the Lower Patapsco aquifer and MW-45 screened in the shallow zone of the aquifer - were sampled on July 14, 2023, instead of in May as the disposable passive sampling devices (HydraSleeve™) were not deployed until May 22, 2023. Based on discussions with field personnel, it was determined that HydraSleeve™ samplers had not been deployed in these two wells during the prior (November 2022) sampling event. Samplers were immediately placed in these monitoring wells and then allowed to equilibrate until the next site visit in July 2023.

  Each HydraSleeve™ sampler was carefully retrieved from the well and the requisite volume of the water immediately transferred to the appropriate laboratory-supplied containers. Given the size of the deployed HydraSleeve™ samplers and the sample volume required by the analytical methods, the remaining volume of water was insufficient to obtain measurements of the field parameters – temperature, pH, specific conductivity, and turbidity. For future monitoring events, WSP plans to deploy larger HydraSleeve™ samplers in all wells to enable the collection of sufficient water volume for the measurement of field parameters.

- Depth to water measurements and corresponding groundwater elevations for the two monitoring wells sampled in July 2023 are provided in Table 1. The analytical results for the samples collected from the two monitoring wells are summarized in Table 2. A copy of the certified laboratory analytical report for these samples is provided in Enclosure A. Historical groundwater sampling data for the offsite monitoring wells can be found in Table 3. Concentrations of the primary site-related constituents of concern (COCs) in the May and July 2023 samples are shown on Figure 1.

- The analytical data for MW-24D indicate the presence of site-related constituents in the deep zone of the Lower Patapsco aquifer on the WillScot property downgradient (south) of the former Kop-Flex property. Site-related COCs were not detected in the sample from shallow zone well MW-45 located to the east of the former Kop-Flex facility. The total COC concentration in the MW-24D sample (1,192 micrograms per liter [µg/l]) is 10 percent less than the level present in the previous (November 2022) sample (1,322 µg/l). The concentrations of individual COCs, 1,1-dichloroethene, 1,1-dichloroethane (DCA), 1,4-dioxane, and trichloroethene all exceeded the comparative groundwater quality criteria (Table 2).[1] Concentration changes in this well show little, if any, long-term trend and are believed to fluctuate in

[1] All cleanup standards, except for 1,4-dioxane, are equal to the Maryland Generic Numeric Cleanup Standards for Groundwater, Type I and II Aquifers, from the State of Maryland Interim Final Guidance (October 2018). The comparative criterion for 1,4-dioxane is the Maryland Department of the Environment Risk-Based action level of 4.6 µg/l.

response to changes in pumping conditions in the recovery wells screened in the deep zone of the Lower Patapsco aquifer.

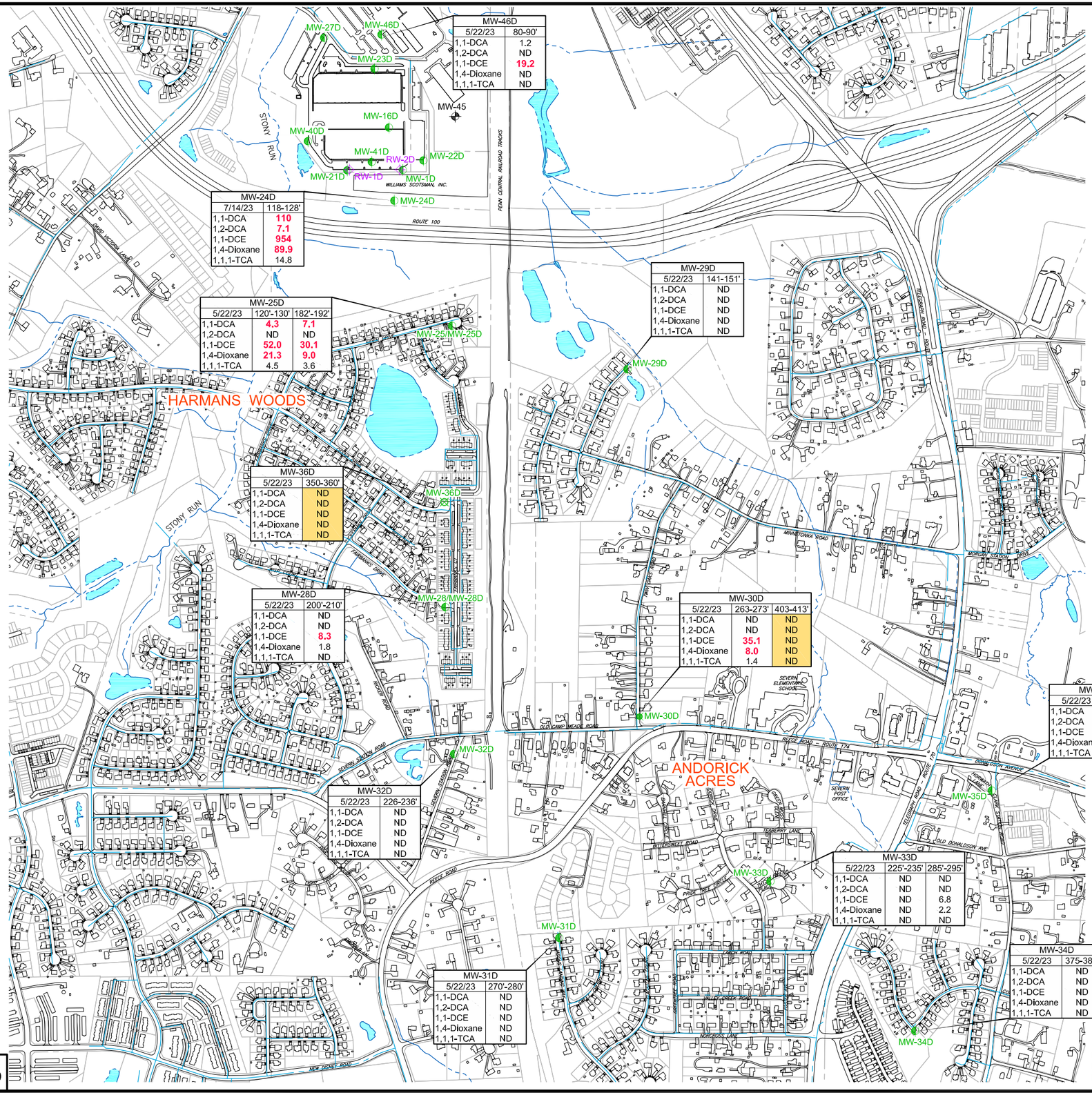
2.0 OFFSITE ACTIVITIES FOR THE NEXT REPORTING PERIOD (OCTOBER 2023 THROUGH DECEMBER 2023)

- Collect a round of water level measurements from the deep offsite monitoring wells in early December 2023.
- Sampling of the offsite groundwater monitoring wells in the deep zone of the Lower Patapsco aquifer and underlying Patuxent aquifer in early December 2023.
- Submit the 2022 Offsite Groundwater Monitoring Report to MDE and the U.S. Environmental Protection Agency (EPA), Region III.

3.0 KEY PERSONNEL/FACILITY CHANGES

There were no changes to either key project personnel or conditions relevant to the performance of the ongoing work in the offsite area.

FIGURE



NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA INC.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

LEGEND

- PROPERTY LINE
- WATER MAIN
- STREAM
- WATER BODY
- SHALLOW UNCONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
- CONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
- PATUXENT AQUIFER MONITORING WELLS
- CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- RECOVERY WELL

MW-28D
5/22/23 | 200'-210'
1,1-DCA ND
1,2-DCA ND
1,1-DCE 8.3
1,4-Dioxane 1.8
1,1,1-TCA ND

- WELL IDENTIFICATION
- DATE OF SAMPLE
- SCREENED INTERVAL (FT-BGS)
- SAMPLE RESULTS IN µg/l (RED INDICATES RESULTS ABOVE MDE CLEANUP STANDARDS)
- CONSTITUENTS
- WELL SCREENED IN THE PATUXENT AQUIFER

ND	NON DETECT
1,1-DCA	1,1-DICHLOROETHANE
1,2-DCA	1,2-DICHLOROETHANE
1,1-DCE	1,1-DICHLOROETHENE
1,1,1-TCA	1,1,1-TRICHLOROETHANE
TCE	TRICHLOROETHENE

Cleanup Levels	µg/l
1,1-DCA	2.8
1,2-DCA	5
1,1-DCE	7
1,4-Dioxane	4.6
1,1,1-TCA	200
TCE	5

NOTE:

ALL CLEANUP STANDARDS, EXCEPT FOR 1,4-DIOXANE, ARE EQUAL TO THE MARYLAND GENERIC NUMERIC CLEANUP STANDARDS FOR GROUNDWATER, TYPE I AND II AQUIFERS, FROM THE STATE OF MARYLAND INTERIM FINAL GUIDANCE (OCTOBER 2018). THE COMPARATIVE CRITERION FOR 1,4-DIOXANE IS THE MARYLAND DEPARTMENT OF THE ENVIRONMENT RISK-BASED ACTION LEVEL OF 4.6 µg/l.

N

0 800 1600

SCALE IN FEET

REFERENCE:
PARCEL INFORMATION OBTAINED FROM ANNE ARUNDEL COUNTY, DEPARTMENT OF PUBLIC WORKS http://gis-world2.aacounty.org/DPWcounter/countermap.html

Drawn By: EGC
Checked: ESR 10/26/2023
Approved: RG
DWG Name: 314V5608.010-045

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND
PREPARED FOR
EMERSUB 16 LLC
ST. LOUIS, MISSOURI

FIGURE 1

GROUNDWATER MONITORING RESULTS
LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER
OFFSITE MONITORING WELLS - MAY AND JULY 2023

WSP USA Inc.
13530 DULLES TECHNOLOGY DR
SUITE 300
HERNDON, VA 20171
TEL: +1 703.709.6500

B

TABLES

Table 1

Historical Groundwater Elevations (2015 through Present)
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC Elevation	3/17/2015		6/15/2015		9/21/2015		1/4/2016		3/21/2016	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	12.84	117.76	12.46	118.14	14.33	116.27	13.48	117.12	12.75	117.85
MW-28S *	Unconfined LPA	150.5	25.56	124.94	25.24	125.26	25.88	124.62	25.35	125.15	25.34	125.16
MW-45	Unconfined LPA	126.7	NM	-	NM	-	NM	-	NM	-	NM	-
MW-24D	Confined LPA	129.1	50.9	78.20	49.29	79.81	NM	-	NM	-	44.38	84.72
MW-25D-130	Confined LPA	130.5	58.7	71.80	57.59	72.91	58.26	72.24	53.95	76.55	51.01	79.49
MW-25D-192	Confined LPA	130.5	59.99	70.51	56.4	74.10	57.23	73.27	53.05	77.45	50.27	80.23
MW-28D	Confined LPA	150.5	93.06	57.44	89.36	61.14	90.34	60.16	84.62	65.88	80.72	69.78
MW-29D	Confined LPA	131.9	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-273	Confined LPA	153.5	NM	-	NM	-	NM	-	NM	-	NM	-
MW-31D	Confined LPA	162.5	114.02	48.48	108.58	53.92	109.51	52.99	102.44	60.06	98.41	64.09
MW-32D	Confined LPA	156.1	NM	-	NM	-	NM	-	NM	-	NM	-
MW-33D-235	Confined LPA	178.6	131.83	46.77	125.66	52.94	127.11	51.49	119.14	59.46	115.25	63.35
MW-33D-295	Confined LPA	178.3	131.52	46.78	125.42	52.88	126.91	51.39	118.90	59.40	114.96	63.34
MW-34D	Confined LPA	183.9	NM	-	NM	-	NM	-	NM	-	NM	-
MW-35D	Confined LPA	177.8	132.01	45.79	126.28	51.52	127.89	49.91	118.96	58.84	114.34	63.46
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-413	Patuxent	153.1	NM	-	NM	-	NM	-	NM	-	NM	-
MW-36D	Patuxent	158.7	NM	-	NM	-	NM	-	NM	-	NM	-

Notes:

LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Well abandoned in August 2019

Table 1

Historical Groundwater Elevations (2015 through Present)
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC Elevation	12/7/2016		5/1/2017		8/31/2017		11/14/2017		2/13/2018		5/31/2018	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	14.61	115.99	14.02	116.58	14.09	116.51	14.6	116.00	14.56	116.04	13.10	117.50
MW-28S *	Unconfined LPA	150.5	26.8	123.70	27.4	123.10	27.2	123.30	27.22	123.28	27.48	123.02	27.42	123.08
MW-45	Unconfined LPA	126.7	NM	-	13.67	113.05	NM	-	NM	-	NM	-	12.98	113.74
MW-24D	Confined LPA	129.1	46.3	82.80	48.35	80.75	48.35	80.75	51.99	77.11	NM		50.94	78.16
MW-25D-130	Confined LPA	130.5	50.27	80.23	53.80	76.70	61.38	69.12	58.46	72.04	58.31	72.19	58.23	72.27
MW-25D-192	Confined LPA	130.5	52.4	78.10	53.11	77.39	60.36	70.14	58.71	71.79	57.49	73.01	57.40	73.10
MW-28D	Confined LPA	150.5	83.35	67.15	82.72	67.78	94.55	55.95	89.03	61.47	67.37	83.13	88.75	61.75
MW-29D	Confined LPA	131.9	NM	-	NM	-	NM	-	NM	-	NM	-	64.94	66.98
MW-30D-273	Confined LPA	153.5	NM	-	NM	-	NM	-	NM	-	NM	-	98.66	54.88
MW-31D	Confined LPA	162.5	114.20	48.30	100.24	62.26	115.67	46.83	107.21	55.29	106.29	56.21	106.80	55.70
MW-32D	Confined LPA	156.1	NM	-	NM	-	NM	-	NM	-	NM	-	97.90	58.24
MW-33D-235	Confined LPA	178.6	114.2	64.40	117.26	61.34	133.39	45.21	124.55	54.05	123.79	54.81	124.00	54.60
MW-33D-295	Confined LPA	178.3	131.50	46.80	117.03	61.27	133.14	45.16	124.36	53.94	123.60	54.70	123.83	54.47
MW-34D	Confined LPA	183.9	NM	-	NM	-	NM	-	NM	-	NM	-	132.70	51.21
MW-35D	Confined LPA	177.8	131.91	45.89	117.28	60.52	133.55	44.25	125.59	52.21	124.02	53.78	124.27	53.53
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-413	Patuxent	153.1	NM	-	NM	-	NM	-	NM	-	NM	-	138.10	15.03
MW-36D	Patuxent	158.7	NM	-	NM	-	NM	-	NM	-	NM	-	141.75	16.96

Notes:

LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Well abandoned in August 2019

Table 1

Historical Groundwater Elevations (2015 through Present)
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC Elevation	8/23/2018		11/8/2018		2/19/2019		5/22/2019		8/6/2019	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	NM	-	11.84	118.76	11.75	118.85	NM	-	NM	-
MW-28S *	Unconfined LPA	150.5	NM	-	24.33	126.17	23.30	127.20	NM	-	NM	-
MW-45	Unconfined LPA	126.7	NM	-	NM	-	11.98	114.74	11.75	114.97	NM	-
MW-24D	Confined LPA	129.1	NM	-	NM	-	48.92	80.18	49.67	79.43	52.37	76.73
MW-25D-130	Confined LPA	130.5	59.53	70.97	58.75	71.75	54.96	75.54	56.23	74.27	60.79	69.71
MW-25D-192	Confined LPA	130.5	58.69	71.81	57.63	72.87	54.20	76.30	55.45	75.05	60.37	70.13
MW-28D	Confined LPA	150.5	90.98	59.52	88.30	62.20	84.78	65.72	86.96	63.54	94.24	56.26
MW-29D	Confined LPA	131.9	66.56	65.36	65.03	66.89	60.64	71.28	62.36	69.56	67.20	64.72
MW-30D-273	Confined LPA	153.5	100.70	52.84	98.14	55.40	93.10	60.44	95.74	57.80	104.75	48.79
MW-31D	Confined LPA	162.5	109.95	52.55	106.27	56.23	102.47	60.03	104.91	57.59	113.35	49.15
MW-32D	Confined LPA	156.1	100.65	55.49	98.97	57.17	93.79	62.35	97.02	59.12	99.43	56.71
MW-33D-235	Confined LPA	178.6	127.52	51.08	125.14	53.46	119.35	59.25	121.72	56.88	132.76	45.84
MW-33D-295	Confined LPA	178.3	127.34	50.96	125.69	52.61	119.10	59.20	NM	NA	131.14	47.16
MW-34D	Confined LPA	183.9	136.42	47.49	131.76	52.15	127.40	56.51	129.93	53.98	141.48	42.43
MW-35D	Confined LPA	177.8	128.19	49.61	123.64	54.16	119.18	58.62	121.65	56.15	127.51	50.29
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	35.47	89.30	38.40	86.37
MW-30D-413	Patuxent	153.1	143.75	9.38	140.62	12.51	130.73	22.40	137.25	15.88	145.27	7.86
MW-36D	Patuxent	158.7	146.32	12.39	143.85	14.86	134.83	23.88	141.30	17.41	147.65	11.06

Notes:

LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Well abandoned in August 2019

Table 1

Historical Groundwater Elevations (2015 through Present)
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC Elevation	11/20/2019		2/12/2020		5/14/2020		11/23/2020		5/10/2021		11/15/2021	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-28S *	Unconfined LPA	150.5	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-45	Unconfined LPA	126.7	14.55	112.17	NM	-	NM	-	NM	-	12.69	114.03	12.69	114.03
MW-24D	Confined LPA	129.1	51.12	77.98	50.10	79.00	48.80	80.30	53.02	76.08	50.01	79.09	49.40	79.70
MW-25D-130	Confined LPA	130.5	59.94	70.56	55.55	74.95	54.95	75.55	60.50	70.00	56.11	74.39	NM	-
MW-25D-192	Confined LPA	130.5	59.02	71.48	54.70	75.80	54.23	76.27	59.50	71.00	55.32	75.18	NM	-
MW-28D	Confined LPA	150.5	91.37	59.13	85.00	65.50	84.36	66.14	92.87	57.63	86.34	64.16	89.34	61.16
MW-29D	Confined LPA	131.9	67.10	64.82	61.28	70.64	60.61	71.31	67.75	64.17	62.15	69.77	64.82	67.10
MW-30D-273	Confined LPA	153.5	101.12	52.42	93.29	60.25	92.60	60.94	103.09	50.45	94.95	58.59	99.70	53.84
MW-31D	Confined LPA	162.5	110.14	52.36	102.73	59.77	NM	-	113.30	49.20	104.32	58.18	108.09	54.41
MW-32D	Confined LPA	156.1	101.56	54.58	92.35	63.79	94.31	61.83	103.76	52.38	95.58	60.56	99.72	56.42
MW-33D-235	Confined LPA	178.6	127.87	50.73	119.72	58.88	119.10	59.50	NM	-	121.30	57.30	125.35	53.25
MW-33D-295	Confined LPA	178.3	127.65	50.65	119.54	58.76	118.84	59.46	130.21	48.09	121.08	57.22	125.15	53.15
MW-34D	Confined LPA	183.9	136.62	47.29	127.75	56.16	127.01	56.90	139.08	44.83	129.41	54.50	133.82	50.09
MW-35D	Confined LPA	177.8	129.89	47.91	119.68	58.12	119.06	58.74	129.67	48.13	121.20	56.60	126.19	51.61
MW-46D	Confined LPA	124.8	37.90	86.87	36.13	88.64	35.73	89.04	37.72	87.05	35.95	88.82	35.95	88.82
MW-30D-413	Patuxent	153.1	143.64	9.49	128.12	25.01	127.25	25.88	142.22	10.91	134.60	18.53	140.69	12.44
MW-36D	Patuxent	158.7	146.75	11.96	132.11	26.60	131.08	27.63	145.25	13.46	137.95	20.76	143.70	15.01

Notes:

LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Well abandoned in August 2019

Table 1

Historical Groundwater Elevations (2015 through Present)
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC Elevation	6/27/2022		11/20/2022		5/22/2023		7/14/2023	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	NM	-	NM	-	NM	-	NM	-
MW-28S *	Unconfined LPA	150.5	NM	-	NM	-	NM	-	NM	-
MW-45	Unconfined LPA	126.7	12.91	113.8	13.54	113.2	NM	-	13.36	113.36
MW-24D	Confined LPA	129.1	51.06	78.0	53.11	76.0	49.42	79.68	52.61	76.49
MW-25D-130	Confined LPA	130.5	60.22	70.3	60.00	70.5	57.68	72.82	NM	-
MW-25D-192	Confined LPA	130.5	59.12	71.4	59.10	71.4	56.72	73.78	NM	-
MW-28D	Confined LPA	150.5	93.51	57.0	90.81	59.7	89.06	61.44	NM	-
MW-29D	Confined LPA	131.9	68.45	63.5	66.70	65.2	65.15	66.77	NM	-
MW-30D-273	Confined LPA	153.5	104.25	49.3	100.23	53.3	98.76	54.78	NM	-
MW-31D	Confined LPA	162.5	114.2	48.3	109.24	53.3	107.82	54.68	NM	-
MW-32D	Confined LPA	156.1	104.98	51.2	100.23	55.9	98.47	57.67	NM	-
MW-33D-235	Confined LPA	178.6	132.13	46.5	126.56	52.0	125.61	52.99	NM	-
MW-33D-295	Confined LPA	178.3	131.85	46.5	126.29	52.0	125.39	52.91	NM	-
MW-34D	Confined LPA	183.9	141.12	42.8	134.82	49.1	134.32	49.59	NM	-
MW-35D	Confined LPA	177.8	132.35	45.5	126.60	51.2	126.53	51.27	NM	-
MW-46D	Confined LPA	124.8	37.13	87.64	38.38	86.4	36.26	88.51	NM	-
MW-30D-413	Patuxent	153.1	145.4	7.7	141.52	11.6	137.89	15.2	NM	-
MW-36D	Patuxent	158.7	148.06	10.7	145.05	13.7	141.29	17.4	NM	-

Notes:

LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Well abandoned in August 2019

Table 2

Offsite Monitoring Well Sample Results
Former Kop-Flex Facility Site
Hanover, Maryland
July 2023

Parameters (a)	Groundwater Quality Standards (µg/L) (b)	Well ID: / Sampling Date:	SHALLOW ZONE LOWER PATAPSCO AQUIFER MW-45 7/14/23	DEEP ZONE LOWER PATAPSCO AQUIFER MW-24D 7/14/23
Chloroethane	**2,100**		1.0 U	1.6
1,1-Dichloroethane	**2.8**		1.0 U	**110**
1,2-Dichloroethane	**5**		1.0 U	**7.1**
1,1-Dichloroethene	**7**		1.0 U	**954**
cis-1,2-Dichloroethene	**70**		1.0 U	4.8
1,4-Dioxane	**4.6** (c)		1.0 U	**89.9**
Tetrachloroethene	**5**		1.0 U	1.1
1,1,1-Trichloroethane	**200**		1.0 U	14.8
1,1,2-Trichloroethane	**5**		1.0 U	1.1
Trichloroethene	**5**		1.0 U	**7.3**
	Total CVOCs & 1,4-Dioxane		*ND*	*1,192*

a/ U = not detected above the method detection limit; CVOC = chlorinated volatile organic compound.
Bolded values indicate an exceedence of the Groundwater Quality Standards
All sample concentrations in micrograms per liter (µg/l)

b/ All cleanup standards, except for 1,4-dioxane, are equal to the Maryland Generic Numeric Cleanup Standards for Groundwater, Type I and II Aquifers, from the State of Maryland Interim Final Guidance (October 2018). Accessed May 27, 2020: https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/www.mde.state.md.us/assets/document/MDE%20

c/ Value represents the MDE risk-based action level.

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
Shallow Zone Lower Patapsco Wells (b)											
MW-25 (c)	3/19/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/24/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/23/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/23/2016	1.0 U	1.0 U	1.0 U	1.5	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/20/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	**11.7**	1.0 U	1.0 U	1.0 U
	2/13/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
MW-28 (c)	3/17/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/5/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/22/2016	1.0 U	1.0 U	1.0 U	6.2	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
MW-45	3/24/2017	1.0 U	1.0 U	1.9	1.0 U	2.3	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/28/2018	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	12/8/2020	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	7/14/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
Deep Zone Lower Patapsco Wells											
MW-24D	3/22/2016	12.5 U	**88.0**	**15.7**	**1,780**	12.5 U	**561.0**	**39.4**	38.6	12.5 U	12.5 U
	12/8/2016	5.0 U	**36.1**	**5.2**	**701**	5.0 U	**192.0**	10.0 U	9.0	5.0 U	5.0 U
	5/2/2017	5.0 U	**40.4**	**5.6**	**830**	5.0 U	**216.0**	10.0 U	10.2	5.0 U	5.0 U
	11/14/2017	5.0 U	**28.1**	3.4	**803**	2.3	**212.0**	**11.7**	10.5	0.5 J	**5.9**
	5/30/2018	4.0 U	**26.6**	4.0 U	**529**	4.0 U	**187.0**	8.0 U	5.5	4.0 U	4.0 U
	11/7/2018	5.0 U	**29.8**	5.0 U	**560**	5.0 U	2.0 U	10.0 U	5.0 U	5.0 U	5.0 U
	5/22/2019	10.0 U	**66.2**	10.0 U	**1,190**	10.0 U	**359.0**	50.0 U	18.0	10.0 U	10.0 U
	11/19/2019	5.0 U	**54.5**	**6.6**	**868**	5.0 U	**155.0**	25.0 U	10.0	5.0 U	6.0 U
	5/12/2020	2.5 U	**25.0**	3.3	**402**	5.0 U	**139.0**	25.0 U	3.7	5.0 U	3.2
	11/23/2020	4.0 U	**73.5**	4.0 U	**505**	4.0 U	**208.0**	20.0 U	4.4	4.0 U	4.0 U
	5/10/2021	6.2	**151.0**	**6.3**	**788**	7.2	**299.0**	25.0 U	10.9	5.0 U	5.0 U
	11/15/2021	10.0 U	**142.0**	10.0 U	**1,300**	10.0 U	**475.0**	25.0 U	16.1	5.0 U	5.0 U
	6/27/2022	3.6	**142.0**	**7.4**	**1,490**	6.9	**165.0**	1.0 U	18.5	1.0	**8.6**
	11/21/2022	2.8	**114.0**	**7.5**	**1,020**	5.5	**148.0**	1.0 U	15.3	1.2	**7.7**
	7/14/2023	1.6	**110.0**	**7.1**	**954**	4.8	**89.9**	1.0 U	14.8	1.1	**7.3**
MW-25D-130	3/19/2015	10.0 U	**38.6**	**10.8**	**854**	10.0 U	**446**	200 U	**8,930**	100 U	100 U
	6/24/2015	1.0 U	**37.1**	**8.9**	**1,030**	4.6	**303**	2.0 U	46.3	1.2	**6.8**
	9/23/2015	10.0 U	**29.7**	10.0 U	**697**	10.0 U	**295**	20.0 U	32.3	10.0 U	**14.2**
	1/7/2016	5.0 U	**33.4**	**9.7**	**800**	5.0 U	**398**	10.0 U	5.0 U	5.0 U	**6.1**
	3/23/2016	5.0 U	**24.5**	**8.0**	**676**	5.0 U	**302**	10.0 U	26.2	5.0 U	**5.0**
	7/19/2016	10.0 U	**39.3**	**10.2**	**1,090**	4.9 J	**367**	14.3 J	37.0	10.0 U	**6.5** J
	9/9/2016	5.0 U	**27.9**	**6.4**	**661**	5.0 U	**241**	**12.0**	25.0	5.0 U	5.0 U
	12/8/2016	1.0 U	**6.7**	1.5	**171**	1.0 U	**13.6**	2.0 U	6.9	1.0 U	1.0 U
	2/21/2017	1.0 U	**7.2**	1.7	**194**	1.0 U	**69.1**	2.0 U	7.0	1.0 U	1.2
	5/2/2017	2.0 U	**6.5**	2.0 U	**174**	2.0 U	**61.0**	4.0 U	5.0	2.0 U	2.0 U
	8/31/2017	2.0 U	**7.4**	1.7	**193**	2.0 U	**57.9**	4.0 U	6.9	2.0 U	2.0 U
	11/14/2017	2.0 U	**5.1**	1.3	**151**	0.57 J	**58.5**	5.0 U	6.4	1.0 U	1.1
	2/13/2018	2.0 U	**6.3**	2.0 U	**154**	2.0 U	**67.1**	5.0 U	6.4	1.0 U	1.0 U
	5/30/2018	2.0 U	**5.0**	1.4	**144**	2.0 U	**53.9**	5.0 U	5.3	1.0 U	1.0 U
	11/8/2018	2.0 U	**4.4**	1.1	**109**	2.0 U	**40.2**	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	**3.7**	1.0 U	**96.2**	1.0 U	**38.4**	5.0 U	4.2	1.0 U	1.0 U
	11/19/2019	1.0 U	2.7	1.0 U	**62.1**	1.0 U	**31.0**	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	**3.3**	1.0 U	**69.1**	1.0 U	**32.6**	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	**3.3**	1.0 U	**76.0**	1.0 U	**32.4**	5.0 U	4.9	1.0 U	1.0 U
	5/10/2021	1.0 U	**3.0**	1.0 U	**50.8**	1.0 U	**30.2**	5.0 U	3.1	1.0 U	1.0 U
	12/27/2021	1.0 U	**3.0**	1.0 U	**45.5**	1.0 U	**29.1**	5.0 U	3.3	1.0 U	1.0 U
	6/27/2022	1.0 U	**4.2**	1.0 U	**65.6**	1.0 U	**15.6**	1.0 U	5.0	1.0 U	1.0 U
	11/21/2022	1.0 U	**5.5**	1.0 U	**80.2**	1.0 U	**16.1**	1.0 U	5.6	1.0 U	1.0 U
	Duplicate 11/21/2022	1.0 U	**5.3**	1.0 U	**76.2**	1.0 U	**19.1**	1.0 U	5.6	1.0 U	1.0 U
	5/22/2023	1.0 U	**4.3**	1.0 U	**52.0**	1.0 U	**21.3**	1.0 U	4.5	1.0 U	1.0 U
	Duplicate 5/22/2023	1.0 U	**5.0**	1.0 U	**60.0**	1.0 U	**21.0**	1.0 U	5.2	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-25D-190	3/19/2015	1.0 U	**11.7**	1.0 U	**53.0**	1.0 U	**49.4**	2.0 U	13.7	1.0 U	1.0 U
	6/25/2015	1.0 U	**11.9**	1.0 U	**59.4**	1.0 U	**39.8**	2.0 U	14.2	1.0 U	1.0 U
	9/22/2015	1.0 U	**13.9**	1.0 U	**51.4**	1.0 U	**45.0**	2.0 U	12.9	1.0 U	1.3
	1/7/2016	1.0 U	**11.7**	1.0 U	**47.2**	1.0 U	**41.7**	2.0 U	12.5	1.0 U	1.0 U
	3/23/2016	1.0 U	**10.3**	1.0 U	**43.3**	1.0 U	**42.2**	2.0 U	11.3	1.0 U	1.0 U
	7/20/2016	1.0 U	**11.7**	0.73 J	**54.9**	1.0 U	**54.4**	2.0 U	11.1	1.0 U	1.0 U
	9/8/2016	1.0 U	**12.9**	1.0 U	**56.8**	1.0 U	**39.3**	2.0 U	12.6	1.0 U	1.0 U
	12/8/2016	1.0 U	**16.1**	1.0 U	**64.6**	1.0 U	**51.3**	2.0 U	13.3	1.0 U	1.0 U
	2/21/2017	1.0 U	**14.0**	1.0 U	**63.3**	1.0 U	**52.1**	2.0 U	11.6	1.0 U	1.0 U
	5/2/2017	1.0 U	**16.9**	1.0 U	**81.0**	1.0 U	**53.1**	2.0 U	13.5	1.0 U	1.0 U
	8/31/2017	1.0 U	**15.7**	1.0 U	**62.5**	1.0 U	**44.3**	2.0 U	13.1	1.0 U	1.0 U
	11/14/2017	5.0 U	**13.6**	0.67 J	**67.2**	1.0 U	**56.7**	5.0 U	13.6	1.0 U	1.0 U
	2/13/2018	5.0 U	**13.7**	1.0 U	**69.2**	1.0 U	**42.7**	5.0 U	11.0	1.0 U	1.0 U
	5/30/2018	5.0 U	**10.8**	1.0 U	**58.3**	1.0 U	**50.8**	5.0 U	7.2	1.0 U	1.0 U
	11/8/2018	5.0 U	**13.7**	1.0 U	**61.0**	1.0 U	**49.3**	5.0 U	9.8	1.0 U	1.0 U
	5/22/2019	1.0 U	**11.8**	1.0 U	**51.7**	1.0 U	**36.7**	5.0 U	8.5	1.0 U	1.0 U
	11/19/2019	1.0 U	**12.6**	1.0 U	**53.2**	1.0 U	**41.1**	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	**12.8**	1.0 U	**58.0**	1.0 U	**41.1**	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	**11.3**	1.0 U	**46.9**	1.0 U	**41.5**	5.0 U	5.8	1.0 U	1.0 U
	5/10/2021	1.0 U	**6.5**	1.0 U	**28.3**	1.0 U	**22.6**	5.0 U	3.2	1.0 U	1.0 U
	12/27/2021	1.0 U	**6.2**	1.0 U	**26.0**	1.0 U	**21.6**	5.0 U	3.4	1.0 U	1.0 U
	6/27/2022	1.0 U	**8.8**	1.0 U	**37.3**	1.0 U	**11.6**	1.0 U	4.7	1.0 U	1.0 U
	11/21/2022	1.0 U	**7.3**	1.0 U	**29.1**	1.0 U	**10.2**	1.0 U	3.7	1.0 U	1.0 U
	5/22/2023	1.0 U	**7.1**	1.0 U	**30.1**	1.0 U	**9.0**	1.0 U	3.6	1.0 U	1.0 U
MW-28D	3/17/2015	1.0 U	1.0 U	1.0 U	**10.6**	1.0 U	**5.0**	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	**12.8**	1.0 U	4.5	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	1.0 U	**14.3**	1.0 U	4.4	2.0 U	1.0 U	1.0 U	1.0 U
	1/5/2016	1.0 U	1.0 U	1.0 U	**11.5**	1.0 U	**5.5**	2.0 U	1.0 U	1.0 U	1.0 U
	3/23/2016	1.0 U	1.0 U	1.0 U	**9.1**	1.0 U	4.0	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	1.0 U	0.25 J	**10.1**	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	**12.0**	1.0 U	**5.0**	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	6.3	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	4.6	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	5.8	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	5.0	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	5.5	1.0 U	3.5	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	5.0 U	1.0 U	1.0 U	4.3	1.0 U	2.8	5.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	5.0 U	1.0 U	1.0 U	6.1	1.0 U	2.4	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	6.9	1.0 U	2.3	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	5.2	1.0 U	3.5	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	6.1	1.0 U	3.9	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	4.0	1.0 U	3.4	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	**7.6**	1.0 U	4.2	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	**10.0**	1.0 U	4.3	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	**8.1**	1.0 U	**5.1**	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	4.0	1.0 U	2.1	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	6.2	1.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	**8.3**	1.0 U	1.8	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-29D	5/21/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 U	1.0 U	1.0 U	1.0 U	1.0 U
MW-30D-273	5/31/2018	5.0 U	1.0 U	1.0 U	**27.4**	1.0 U	**16.4**	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	5.0 U	1.0	1.0 U	**40.7**	1.0 U	**24.5**	5.0 U	1.7	1.0 U	1.0 U
	11/8/2018	5.0 U	1.2	1.0 U	**44.0**	1.0 U	**22.2**	5.0 U	2.1	1.0 U	1.0 U
	2/19/2019	1.0 U	1.1	1.0 U	**47.2**	1.0 U	**23.1**	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.1	1.0 U	**44.2**	1.0 U	**22.7**	5.0 U	2.0	1.0 U	1.0 U
	11/20/2019	1.0 U	1.1	1.0 U	**43.3**	1.0 U	**22.8**	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0	1.0 U	**42.7**	1.0 U	**20.9**	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0	1.0 U	**39.5**	1.0 U	**19.5**	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0	1.0 U	**36.9**	1.0 U	**18.2**	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0	1.0 U	**34.1**	1.0 U	**16.6**	5.0 U	1.4	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	**34.5**	1.0 U	**7.5**	1.0 U	1.3	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	**31.3**	1.0 U	**7.0**	1.0 U	1.2	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	**35.1**	1.0 U	**8.0**	1.0 U	1.4	1.0 U	1.0 U
MW-31D	3/17/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/24/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/31/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/2/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-31D	11/21/2022	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U	1.0 U
MW-32D	5/31/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.2 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 U	1.0 U	1.0 U	1.0 U	1.0 U
MW-33D-235	3/18/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/4/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.3	**12.0**	1.0 U	1.0 U	1.0 U
	2/13/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-33D-295	3/18/2015	1.0 U	1.0 U	1.0 U	4.6	1.0 U	**8.0**	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	3.3	1.0 U	**6.8**	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	1.0 U	4.8	1.0 U	**6.8**	2.0 U	1.0 U	1.0 U	1.0 U
	1/4/2016	1.0 U	1.0 U	1.0 U	3.7	1.0 U	**7.6**	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	1.0 U	3.9	1.0 U	**7.8**	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	1.0 U	0.36 J	3.2	1.0 U	**5.1**	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	3.8	1.0 U	**7.4**	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	5.4	1.0 U	**7.4**	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	4.0	1.0 U	**6.8**	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	5.3	1.0 U	**7.4**	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	5.6	1.0 U	**6.3**	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	3.4	1.0 U	**9.7**	**11.5**	0.49 J	1.0 U	1.0 U
	2/13/2018	5.0 U	1.0 U	1.0 U	4.6	1.0 U	**6.9**	2.0 U	0.49 J	1.0 U	1.0 U
	5/31/2018	5.0 U	1.0 U	1.0 U	4.6	1.0 U	**6.9**	2.0 U	0.49 J	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	4.2	1.0 U	**6.1**	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	4.5	1.0 U	**6.1**	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	3.7	1.0 U	**6.3**	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	4.4	1.0 U	**6.0**	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	3.6	1.0 U	**6.0**	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	4.4	1.0 U	**5.6**	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	4.2	1.0 U	**6.1**	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	5.1	1.0 U	3.0	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	6.0	1.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	6.8	1.0 U	2.2	1.0 U	1.0 U	1.0 U	1.0 U
MW-34D	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.4 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-35D	3/18/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/22/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	4/15/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/31/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.16 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MW-46D	5/30/2018	1.0 U	13.7	1.0 U	**29.4**	1.0 U	**73.5**	2.0 U	1.2	1.0 U	1.0 U
	11/7/2018	1.0 U	22.1	1.2	**99.6**	1.0 U	**96.7**	2.0 U	7.7	1.0 U	1.0 U
	5/21/2019	1.0 U	**26.1**	1.0	**125**	1.0 U	**88.0**	5.0 U	10.2	1.0 U	1.0 U
	11/19/2019	1.0 U	**23.4**	1.4	**114**	1.0	**96.3**	5.0 U	1.0 U	1.0 U	1.0 U
	5/12/2020	1.0 U	**20.7**	1.4	**98**	1.0	**63.0**	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	**18.4**	1.0 U	**124**	1.0 U	**29.8**	5.0 U	6.4	1.0 U	1.0 U
	5/9/2021	1.0 U	**25.7**	1.5	**116**	1.0 U	**99.3**	5.0 U	7.8	1.0 U	1.0 U
	11/15/2021	1.0 U	**19.9**	1.0 U	**87**	1.0 U	**79.9**	5.0 U	4.8	1.0 U	1.0 U
	6/27/2022	1.0 U	**20.7**	1.0 U	**92**	1.0 U	**23.4**	5.0 U	5.7	1.0 U	1.0 U
	11/21/2022	1.0 U	**15.7**	1.0 U	**74.9**	1.0 U	**40.1**	1.0 U	3.6	1.0 U	1.0 U
	5/21/2023	1.0 U	1.2	1.0 U	**19.2**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Confined Patuxent Wells											
MW-30D-413	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.10 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 3

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Sample Date	Chloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Methylene Chloride	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene
Groundwater Quality Standard (µg/L)		NE	2.8 (1)	5	7	70	4.6	5	200	5	5
MW-30D-413	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.4 U	1.0 U	1.0 U	1.0 U	1.0 U
MW-36D	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/23/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/10/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	6/27/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.17 U	1.0 U	1.0 U	1.0 U	1.0 U
	11/21/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	5/22/2023	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5 U	1.0 U	1.0 U	1.0 U	1.0 U

(1) MDE GW Quality Standard changed from 90 µg/L to 2.8 µg/L in October 2018

a/ U = not detected above the method detection limit; J = estimated concentration between the reporting limit and method detection limit.
Bolded values indicate an exceedence of the Groundwater Quality Standards
Dashed line marks change from quarterly to semi-annual sampling frequency at the well.
All sample concentrations in micrograms per liter (µg/l)
NS = well not sampled

b/ Wells screened in this portion of the Lower Patapsco aquifer were removed from the monitoring program after the May 2018 sampling event.

c/ Well decommissioned in August 2019

ENCLOSURE A – LABORATORY ANALYTICAL REPORT FOR SAMPLES FROM GROUNDWATER MONITORING WELLS ON WILLIAMS-SCOTSMAN PROPERTY (JULY 2023)

301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For **WSP USA Inc.**

Project Former KOP-Flex Facility Onsit
Workorder 3313252
Report ID 259848 on 7/27/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jul 15, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Elliott Martynkiewicz - WSP USA Inc.
Eric Johnson - WSP USA INC

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3313252001	MW-45	Ground Water	07/14/2023 10:25	07/15/2023 09:28	CBC	Collected By Client
3313252002	MW-24D	Ground Water	07/14/2023 10:40	07/15/2023 09:28	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.

Detected Results Summary

Client Sample ID	MW-24D	Collected	07/14/2023 10:40
Lab Sample ID	3313252002	Lab Receipt	07/15/2023 09:28

Compound	Result	Units	RDL	Method	Flag
SEMIVOLATILE SIM					
1,4-Dioxane	89.9	ug/L	26.0	SW846 8270E SIM	#
VOLATILE ORGANICS					
1,1,1-Trichloroethane	14.8	ug/L	1.0	SW846 8260D	#
1,1,2-Trichloroethane	1.1	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethane	110	ug/L	1.0	SW846 8260D	#
1,1-Dichloroethene	954	ug/L	50.0	SW846 8260D	#
1,2-Dichloroethane	7.1	ug/L	1.0	SW846 8260D	#
Chloroethane	1.6	ug/L	1.0	SW846 8260D	#
cis-1,2-Dichloroethene	4.8	ug/L	1.0	SW846 8260D	#
Tetrachloroethene	1.1	ug/L	1.0	SW846 8260D	#
Trichloroethene	7.3	ug/L	1.0	SW846 8260D	#

Results

Client Sample ID	MW-45	Collected	07/14/2023 10:25
Lab Sample ID	3313252001	Lab Receipt	07/15/2023 09:28

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	1.0 U	U	ug/L	1.0	SW846 8270E SIM	1	07/25/2023 11:21	S7M	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	58.3%	29 – 112	07/25/2023 11:21	
Fluoranthene-d10	93951-69-0	80.8%	45 – 130	07/25/2023 11:21	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,1,1-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,1,2-Trichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,1-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,1-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2-Dichloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Chloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A

Results

Client Sample ID	MW-45	Collected	07/14/2023 10:25
Lab Sample ID	3313252001	Lab Receipt	07/15/2023 09:28

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Tetrachloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Trichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 19:58	AGL	A
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 19:58	AGL	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.1%	62 – 133	07/20/2023 19:58	
4-Bromofluorobenzene	460-00-4	96.1%	79 – 114	07/20/2023 19:58	
Dibromofluoromethane	1868-53-7	97.9%	78 – 116	07/20/2023 19:58	
Toluene-d8	2037-26-5	93.9%	76 – 127	07/20/2023 19:58	

Results

Client Sample ID	MW-24D	Collected	07/14/2023 10:40
Lab Sample ID	3313252002	Lab Receipt	07/15/2023 09:28

SEMIVOLATILE SIM

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,4-Dioxane	89.9		ug/L	26.0	SW846 8270E SIM	25	07/27/2023 11:21	S7M	C

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2-Methylnapthalene-d10	7297-45-2	51.1%	29 – 112	07/25/2023 11:48	
2-Methylnapthalene-d10	7297-45-2	48.2%	29 – 112	07/27/2023 11:21	
Fluoranthene-d10	93951-69-0	80.7%	45 – 130	07/25/2023 11:48	
Fluoranthene-d10	93951-69-0	79.9%	45 – 130	07/27/2023 11:21	

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,1,1-Trichloroethane	14.8		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,1,2,2-Tetrachloroethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,1,2-Trichloroethane	1.1		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,1-Dichloroethane	110		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,1-Dichloroethene	954		ug/L	50.0	SW846 8260D	50	07/25/2023 19:47	ILY	A
1,1-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2,3-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2,3-Trichloropropane	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2,4-Trichlorobenzene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2-Dibromo-3-chloropropane	7.0 U	U	ug/L	7.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2-Dibromoethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2-Dichloroethane	7.1		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,3-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,3-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
1,4-Dichlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
2,2-Dichloropropane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
2-Butanone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
2-Hexanone	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
4-Methyl-2-Pentanone(MIBK)	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Acetone	10.0 U	U	ug/L	10.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Benzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Bromobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Bromochloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Bromodichloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Bromoform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Bromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Carbon Tetrachloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Chlorobenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Chlorodibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Chloroethane	1.6		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A

Results

Client Sample ID	MW-24D	Collected	07/14/2023 10:40
Lab Sample ID	3313252002	Lab Receipt	07/15/2023 09:28

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroform	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Chloromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
cis-1,2-Dichloroethene	4.8		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
cis-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Dibromomethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Dichlorodifluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Diisopropyl ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Ethylbenzene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Hexachlorobutadiene	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Methyl t-Butyl Ether	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Methylene Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
mp-Xylene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Naphthalene	2.0 U	U	ug/L	2.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
o-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
o-Xylene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
p-Chlorotoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
p-Isopropyltoluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Styrene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Tetrachloroethene	1.1		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Toluene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Total Xylenes	3.0 U	U	ug/L	3.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
trans-1,2-Dichloroethene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
trans-1,3-Dichloropropene	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Trichloroethene	7.3		ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Trichlorofluoromethane	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Vinyl Acetate	5.0 U	U	ug/L	5.0	SW846 8260D	1	07/20/2023 20:22	AGL	A
Vinyl Chloride	1.0 U	U	ug/L	1.0	SW846 8260D	1	07/20/2023 20:22	AGL	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/20/2023 20:22	
1,2-Dichloroethane-d4	17060-07-0	97.1%	62 – 133	07/25/2023 19:47	
4-Bromofluorobenzene	460-00-4	92.1%	79 – 114	07/20/2023 20:22	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	07/25/2023 19:47	
Dibromofluoromethane	1868-53-7	98.1%	78 – 116	07/20/2023 20:22	
Dibromofluoromethane	1868-53-7	98.3%	78 – 116	07/25/2023 19:47	
Toluene-d8	2037-26-5	95.4%	76 – 127	07/20/2023 20:22	
Toluene-d8	2037-26-5	105%	76 – 127	07/25/2023 19:47	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3313252001	MW-45	SW846 8270E SIM	SW846 3510C	
		SW846 8260D	N/A	
3313252002	MW-24D	SW846 8270E SIM	SW846 3510C	
		SW846 8260D	N/A	
		SW846 8260D	N/A	

QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM

QC Batch

QC Batch	1026361	Prep Method	SW846 3510C
Date	07/18/2023 10:00	Analysis Method	SW846 8270E SIM
Tech.	LDC		

Associated Samples

3313252001 3313252002

Method Blank 3696153 (MB) Created on 07/18/2023 08:13 For QC Batch 1026361

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,4-Dioxane	123-91-1	BLK	1.0 U	ug/L	1.0	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	BLK	0.75	1	74.8	29 - 112	
Fluoranthene-d10	93951-69-0	BLK	0.96	1	96.5	45 - 130	

Lab Control Standard 3696154 (LCS) Created on 07/18/2023 08:13 For QC Batch 1026361

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,4-Dioxane	123-91-1	LCS	0.52		1	51.9	22 - 75		U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Methylnapthalene-d10	7297-45-2	LCS	0.69	1	69.5	29 - 112	
Fluoranthene-d10	93951-69-0	LCS	0.88	1	88.1	45 - 130	

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS

QC Batch

QC Batch	1027691	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

Associated Samples

3313252001 3313252002

Matrix Spike 3697459 (MS) 3313459001 (non-Project Sample) For QC Batch 1027691

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3697460 (MSD) 3313459001 (non-Project Sample) For QC Batch 1027691

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	MS	21.90	0	20	109	78 - 121		
1,1,1,2-Tetrachloroethane	630-20-6	MSD	22.10	0	20	110	78 - 121	RPD 0.72 (Max-16)	
1,1,1-Trichloroethane	71-55-6	MS	24.40	0	20	122	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	23.70	0	20	119	66 - 130	RPD 2.79 (Max-20)	
1,1,2,2-Tetrachloroethane	79-34-5	MS	22.10	0	20	111	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	23.30	0	20	116	74 - 135	RPD 5.13 (Max-16)	
1,1,2-Trichloroethane	79-00-5	MS	21.90	0	20	109	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	22.40	0	20	112	82 - 126	RPD 2.56 (Max-15)	
1,1-Dichloroethane	75-34-3	MS	23.60	0	20	118	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	23.20	0	20	116	78 - 124	RPD 1.96 (Max-15)	
1,1-Dichloroethene	75-35-4	MS	28.80	0	20	144*	63 - 128		
1,1-Dichloroethene	75-35-4	MSD	26.30	0	20	132*	63 - 128	RPD 8.93 (Max-21)	
1,1-Dichloropropene	563-58-6	MS	24.40	0	20	122	76 - 126		
1,1-Dichloropropene	563-58-6	MSD	23.80	0	20	119	76 - 126	RPD 2.49 (Max-16)	
1,2,3-Trichlorobenzene	87-61-6	MS	20.70	0	20	104	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	21.30	0	20	106	61 - 126	RPD 2.69 (Max-36)	
1,2,3-Trichloropropane	96-18-4	MS	21.10	0	20	105	75 - 132		
1,2,3-Trichloropropane	96-18-4	MSD	21.70	0	20	109	75 - 132	RPD 3.13 (Max-19)	
1,2,4-Trichlorobenzene	120-82-1	MS	20.50	0	20	102	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	21	0	20	105	67 - 123	RPD 2.60 (Max-22)	
1,2-Dibromo-3-chloropropane	96-12-8	MS	19.30	0	20	96.7	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	20.50	0	20	103	59 - 133	RPD 6.01 (Max-26)	
1,2-Dibromoethane	106-93-4	MS	21	0	20	105	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	21.60	0	20	108	80 - 124	RPD 3.04 (Max-19)	
1,2-Dichlorobenzene	95-50-1	MS	21	0	20	105	82 - 118		
1,2-Dichlorobenzene	95-50-1	MSD	21.40	0	20	107	82 - 118	RPD 1.88 (Max-15)	
1,2-Dichloroethane	107-06-2	MS	21.50	0	20	108	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	21.80	0	20	109	70 - 133	RPD 1.18 (Max-19)	
1,2-Dichloropropane	78-87-5	MS	22.80	0	20	114	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	22.60	0	20	113	81 - 127	RPD 0.84 (Max-15)	
1,3-Dichlorobenzene	541-73-1	MS	20.90	0	20	105	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	21.30	0	20	106	81 - 118	RPD 1.65 (Max-16)	
1,3-Dichloropropane	142-28-9	MS	21.40	0	20	107	82 - 126		
1,3-Dichloropropane	142-28-9	MSD	22.20	0	20	111	82 - 126	RPD 3.43 (Max-15)	
1,4-Dichlorobenzene	106-46-7	MS	21.40	0	20	107	81 - 116		

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,4-Dichlorobenzene	106-46-7	MSD	21.80	0	20	109	81 - 116	RPD 1.88 (Max-15)	
2,2-Dichloropropane	594-20-7	MS	20	0	20	100	64 - 129		
2,2-Dichloropropane	594-20-7	MSD	19.90	0	20	99.6	64 - 129	RPD 0.41 (Max-18)	
2-Butanone	78-93-3	MS	114	0	100	114	50 - 152		
2-Butanone	78-93-3	MSD	116	0	100	116	50 - 152	RPD 1.75 (Max-16)	
2-Hexanone	591-78-6	MS	116	0	100	116	65 - 154		
2-Hexanone	591-78-6	MSD	122	0	100	122	65 - 154	RPD 5.11 (Max-17)	
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	117	0	100	117	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	122	0	100	122	71 - 146	RPD 4.55 (Max-16)	
Acetone	67-64-1	MS	111	4.30	100	106	40 - 151		
Acetone	67-64-1	MSD	113	4.30	100	108	40 - 151	RPD 1.89 (Max-40)	
Benzene	71-43-2	MS	23.70	0	20	118	80 - 124		
Benzene	71-43-2	MSD	23.30	0	20	116	80 - 124	RPD 1.83 (Max-26)	
Bromobenzene	108-86-1	MS	21.30	0	20	107	81 - 119		
Bromobenzene	108-86-1	MSD	21.70	0	20	109	81 - 119	RPD 1.69 (Max-17)	
Bromochloromethane	74-97-5	MS	22.60	0	20	113	73 - 117		
Bromochloromethane	74-97-5	MSD	22.80	0	20	114	73 - 117	RPD 0.96 (Max-19)	
Bromodichloromethane	75-27-4	MS	28	5.70	20	111	79 - 126		
Bromodichloromethane	75-27-4	MSD	28.10	5.70	20	112	79 - 126	RPD 0.13 (Max-16)	
Bromoform	75-25-2	MS	20.30	0	20	101	70 - 123		
Bromoform	75-25-2	MSD	21.30	0	20	107	70 - 123	RPD 4.92 (Max-16)	
Bromomethane	74-83-9	MS	17	0.40	20	83	45 - 148		
Bromomethane	74-83-9	MSD	18.50	0.40	20	90.6	45 - 148	RPD 8.58 (Max-26)	
Carbon Tetrachloride	56-23-5	MS	28.60	0	20	143*	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	27.90	0	20	140*	62 - 132	RPD 2.35 (Max-17)	
Chlorobenzene	108-90-7	MS	21.80	0	20	109	85 - 117		
Chlorobenzene	108-90-7	MSD	21.80	0	20	109	85 - 117	RPD 0.28 (Max-15)	
Chlorodibromomethane	124-48-1	MS	22.80	1.30	20	107	77 - 122		
Chlorodibromomethane	124-48-1	MSD	23.40	1.30	20	111	77 - 122	RPD 2.96 (Max-15)	
Chloroethane	75-00-3	MS	29	0	20	145*	51 - 142		
Chloroethane	75-00-3	MSD	32.50	0	20	162*	51 - 142	RPD 11.40 (Max-24)	
Chloroform	67-66-3	MS	35	12.90	20	111	78 - 122		
Chloroform	67-66-3	MSD	34.70	12.90	20	109	78 - 122	RPD 0.85 (Max-16)	
Chloromethane	74-87-3	MS	32.90	0	20	164*	38 - 156		
Chloromethane	74-87-3	MSD	36.30	0	20	181*	38 - 156	RPD 9.79 (Max-27)	
cis-1,2-Dichloroethene	156-59-2	MS	23.20	0	20	116	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	22.80	0	20	114	78 - 125	RPD 1.90 (Max-21)	
cis-1,3-Dichloropropene	10061-01-5	MS	20.60	0	20	103	81 - 121		
cis-1,3-Dichloropropene	10061-01-5	MSD	21.20	0	20	106	81 - 121	RPD 2.81 (Max-16)	
Dibromomethane	74-95-3	MS	21.80	0	20	109	81 - 125		
Dibromomethane	74-95-3	MSD	22	0	20	110	81 - 125	RPD 0.75 (Max-16)	
Dichlorodifluoromethane	75-71-8	MS	27.80	0	20	139	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	26.30	0	20	131	17 - 166	RPD 5.71 (Max-24)	
Diisopropyl ether	108-20-3	MS	23.30	0	20	116	74 - 131		
Diisopropyl ether	108-20-3	MSD	23.40	0	20	117	74 - 131	RPD 0.49 (Max-15)	
Ethylbenzene	100-41-4	MS	22.80	0	20	114	80 - 124		
Ethylbenzene	100-41-4	MSD	22.70	0	20	113	80 - 124	RPD 0.54 (Max-19)	
Hexachlorobutadiene	87-68-3	MS	22.30	0	20	112	55 - 128		
Hexachlorobutadiene	87-68-3	MSD	22.70	0	20	113	55 - 128	RPD 1.66 (Max-35)	

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Methyl t-Butyl Ether	1634-04-4	MS	22	0	20	110	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	22.30	0	20	111	69 - 115	RPD 1.05 (Max-20)	
Methylene Chloride	75-09-2	MS	23	0	20	115	76 - 121		
Methylene Chloride	75-09-2	MSD	23.10	0	20	116	76 - 121	RPD 0.64 (Max-17)	
mp-Xylene	108383/106423	MS	44.90	0	40	112	79 - 125		
mp-Xylene	108383/106423	MSD	45.10	0	40	113	79 - 125	RPD 0.45 (Max-21)	
Naphthalene	91-20-3	MS	20.70	0	20	104	56 - 134		
Naphthalene	91-20-3	MSD	21.70	0	20	108	56 - 134	RPD 4.41 (Max-40)	
o-Chlorotoluene	95-49-8	MS	22.10	0	20	110	78 - 126		
o-Chlorotoluene	95-49-8	MSD	22.40	0	20	112	78 - 126	RPD 1.62 (Max-17)	
o-Xylene	95-47-6	MS	21.70	0	20	109	79 - 124		
o-Xylene	95-47-6	MSD	21.90	0	20	110	79 - 124	RPD 0.90 (Max-19)	
p-Chlorotoluene	106-43-4	MS	21.70	0	20	109	78 - 125		
p-Chlorotoluene	106-43-4	MSD	22.30	0	20	111	78 - 125	RPD 2.47 (Max-16)	
p-Isopropyltoluene	99-87-6	MS	22.90	0	20	114	72 - 123		
p-Isopropyltoluene	99-87-6	MSD	23	0	20	115	72 - 123	RPD 0.78 (Max-17)	
Styrene	100-42-5	MS	22.70	0	20	113	79 - 123		
Styrene	100-42-5	MSD	23.40	0	20	117	79 - 123	RPD 3.15 (Max-16)	
Tetrachloroethene	127-18-4	MS	19.10	0	20	95.6	72 - 124		
Tetrachloroethene	127-18-4	MSD	19	0	20	94.9	72 - 124	RPD 0.72 (Max-38)	
Toluene	108-88-3	MS	21.80	0	20	109	80 - 125		
Toluene	108-88-3	MSD	22.10	0	20	111	80 - 125	RPD 1.34 (Max-20)	
Total Xylenes	1330-20-7	MS	66.60	0	60	111	79 - 125		
Total Xylenes	1330-20-7	MSD	67	0	60	112	79 - 125	RPD 0.60 (Max-35)	
trans-1,2-Dichloroethene	156-60-5	MS	24.10	0	20	121	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	23.50	0	20	118	71 - 122	RPD 2.53 (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	21.30	0	20	107	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	21.90	0	20	110	78 - 126	RPD 2.79 (Max-18)	
Trichloroethene	79-01-6	MS	22.50	0	20	113	77 - 124		
Trichloroethene	79-01-6	MSD	22	0	20	110	77 - 124	RPD 2.51 (Max-18)	
Trichlorofluoromethane	75-69-4	MS	21.20	0	20	106	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	20.50	0	20	103	38 - 123	RPD 3.14 (Max-23)	
Vinyl Acetate	108-05-4	MS	18.30	0	20	91.4	58 - 136		
Vinyl Acetate	108-05-4	MSD	19.30	0	20	96.3	58 - 136	RPD 5.19 (Max-17)	
Vinyl Chloride	75-01-4	MS	26.70	0	20	133	27 - 138		
Vinyl Chloride	75-01-4	MSD	25.70	0	20	128	27 - 138	RPD 3.86 (Max-40)	

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	30.50	30	102	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	30	30	100	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	28.60	30	95.4	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	31.20	30	104	79 - 114	
Dibromofluoromethane	1868-53-7	MS	29.50	30	98.2	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	29	30	96.5	78 - 116	
Toluene-d8	2037-26-5	MS	29.30	30	97.6	76 - 127	
Toluene-d8	2037-26-5	MSD	29.20	30	97.2	76 - 127	

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

Method Blank 3697298 (MB) Created on 07/20/2023 10:05 For QC Batch 1027691

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	BLK	1.0 U	ug/L	1.0	U
1,1,1-Trichloroethane	71-55-6	BLK	1.0 U	ug/L	1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	BLK	1.0 U	ug/L	1.0	U
1,1,2-Trichloroethane	79-00-5	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethane	75-34-3	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethene	75-35-4	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloropropene	563-58-6	BLK	1.0 U	ug/L	1.0	U
1,2,3-Trichlorobenzene	87-61-6	BLK	2.0 U	ug/L	2.0	U
1,2,3-Trichloropropane	96-18-4	BLK	2.0 U	ug/L	2.0	U
1,2,4-Trichlorobenzene	120-82-1	BLK	2.0 U	ug/L	2.0	U
1,2-Dibromo-3-chloropropane	96-12-8	BLK	7.0 U	ug/L	7.0	U
1,2-Dibromoethane	106-93-4	BLK	1.0 U	ug/L	1.0	U
1,2-Dichlorobenzene	95-50-1	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloroethane	107-06-2	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloropropane	78-87-5	BLK	1.0 U	ug/L	1.0	U
1,3-Dichlorobenzene	541-73-1	BLK	1.0 U	ug/L	1.0	U
1,3-Dichloropropane	142-28-9	BLK	1.0 U	ug/L	1.0	U
1,4-Dichlorobenzene	106-46-7	BLK	1.0 U	ug/L	1.0	U
2,2-Dichloropropane	594-20-7	BLK	1.0 U	ug/L	1.0	U
2-Butanone	78-93-3	BLK	10.0 U	ug/L	10.0	U
2-Hexanone	591-78-6	BLK	5.0 U	ug/L	5.0	U
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	5.0 U	ug/L	5.0	U
Acetone	67-64-1	BLK	10.0 U	ug/L	10.0	U
Benzene	71-43-2	BLK	1.0 U	ug/L	1.0	U
Bromobenzene	108-86-1	BLK	1.0 U	ug/L	1.0	U
Bromochloromethane	74-97-5	BLK	1.0 U	ug/L	1.0	U
Bromodichloromethane	75-27-4	BLK	1.0 U	ug/L	1.0	U
Bromoform	75-25-2	BLK	1.0 U	ug/L	1.0	U
Bromomethane	74-83-9	BLK	1.0 U	ug/L	1.0	U
Carbon Tetrachloride	56-23-5	BLK	1.0 U	ug/L	1.0	U
Chlorobenzene	108-90-7	BLK	1.0 U	ug/L	1.0	U
Chlorodibromomethane	124-48-1	BLK	1.0 U	ug/L	1.0	U
Chloroethane	75-00-3	BLK	1.0 U	ug/L	1.0	U
Chloroform	67-66-3	BLK	1.0 U	ug/L	1.0	U
Chloromethane	74-87-3	BLK	1.0 U	ug/L	1.0	U
cis-1,2-Dichloroethene	156-59-2	BLK	1.0 U	ug/L	1.0	U
cis-1,3-Dichloropropene	10061-01-5	BLK	1.0 U	ug/L	1.0	U
Dibromomethane	74-95-3	BLK	1.0 U	ug/L	1.0	U
Dichlorodifluoromethane	75-71-8	BLK	1.0 U	ug/L	1.0	U
Diisopropyl ether	108-20-3	BLK	1.0 U	ug/L	1.0	U
Ethylbenzene	100-41-4	BLK	1.0 U	ug/L	1.0	U
Hexachlorobutadiene	87-68-3	BLK	5.0 U	ug/L	5.0	U
Methyl t-Butyl Ether	1634-04-4	BLK	1.0 U	ug/L	1.0	U
Methylene Chloride	75-09-2	BLK	1.0 U	ug/L	1.0	U
mp-Xylene	108383/106423	BLK	2.0 U	ug/L	2.0	U

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Naphthalene	91-20-3	BLK	2.0 U	ug/L	2.0	U
o-Chlorotoluene	95-49-8	BLK	1.0 U	ug/L	1.0	U
o-Xylene	95-47-6	BLK	1.0 U	ug/L	1.0	U
p-Chlorotoluene	106-43-4	BLK	1.0 U	ug/L	1.0	U
p-Isopropyltoluene	99-87-6	BLK	1.0 U	ug/L	1.0	U
Styrene	100-42-5	BLK	1.0 U	ug/L	1.0	U
Tetrachloroethene	127-18-4	BLK	1.0 U	ug/L	1.0	U
Toluene	108-88-3	BLK	1.0 U	ug/L	1.0	U
Total Xylenes	1330-20-7	BLK	3.0 U	ug/L	3.0	U
trans-1,2-Dichloroethene	156-60-5	BLK	1.0 U	ug/L	1.0	U
trans-1,3-Dichloropropene	10061-02-6	BLK	1.0 U	ug/L	1.0	U
Trichloroethene	79-01-6	BLK	1.0 U	ug/L	1.0	U
Trichlorofluoromethane	75-69-4	BLK	1.0 U	ug/L	1.0	U
Vinyl Acetate	108-05-4	BLK	5.0 U	ug/L	5.0	U
Vinyl Chloride	75-01-4	BLK	1.0 U	ug/L	1.0	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	30.90	30	103	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	30.80	30	103	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	30.50	30	102	78 - 116	
Toluene-d8	2037-26-5	BLK	31.30	30	104	76 - 127	

Lab Control Standard 3697299 (LCS) Created on 07/20/2023 10:05 For QC Batch 1027691

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	LCS	20.40		20	102	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	21.50		20	107	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	21.20		20	106	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	20.20		20	101	82 - 126		
1,1-Dichloroethane	75-34-3	LCS	21.60		20	108	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	23.70		20	118	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	21.50		20	108	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	20.80		20	104	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	20.90		20	104	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	20.60		20	103	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	19.40		20	97.2	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	20.20		20	101	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	20.30		20	101	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	20.30		20	102	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	21.10		20	106	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	19.90		20	99.5	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	20.20		20	101	82 - 126		

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,4-Dichlorobenzene	106-46-7	LCS	20.50		20	103	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	23		20	115	64 - 129		
2-Butanone	78-93-3	LCS	110		100	110	50 - 152		
2-Hexanone	591-78-6	LCS	111		100	111	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	112		100	112	71 - 146		
Acetone	67-64-1	LCS	103		100	103	40 - 151		
Benzene	71-43-2	LCS	21.40		20	107	80 - 124		
Bromobenzene	108-86-1	LCS	20.40		20	102	81 - 119		
Bromochloromethane	74-97-5	LCS	21.40		20	107	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.90		20	105	79 - 126		
Bromoform	75-25-2	LCS	20.40		20	102	70 - 123		
Bromomethane	74-83-9	LCS	21		20	105	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	25		20	125	62 - 132		
Chlorobenzene	108-90-7	LCS	19.90		20	99.5	85 - 117		
Chlorodibromomethane	124-48-1	LCS	20.20		20	101	77 - 122		
Chloroethane	75-00-3	LCS	15.30		20	76.5	51 - 142		
Chloroform	67-66-3	LCS	21.20		20	106	78 - 122		
Chloromethane	74-87-3	LCS	25.80		20	129	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	21.70		20	109	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.60		20	103	81 - 121		
Dibromomethane	74-95-3	LCS	20.50		20	102	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	23.60		20	118	17 - 166		
Diisopropyl ether	108-20-3	LCS	22.20		20	111	74 - 131		
Ethylbenzene	100-41-4	LCS	20.30		20	102	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	21.30		20	106	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	21.50		20	107	69 - 115		
Methylene Chloride	75-09-2	LCS	21.90		20	109	76 - 121		
mp-Xylene	108383/106423	LCS	40.70		40	102	79 - 125		
Naphthalene	91-20-3	LCS	21.30		20	107	56 - 134		
o-Chlorotoluene	95-49-8	LCS	20.70		20	104	78 - 126		
o-Xylene	95-47-6	LCS	19.90		20	99.3	79 - 124		
p-Chlorotoluene	106-43-4	LCS	20.70		20	104	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	21.20		20	106	72 - 123		
Styrene	100-42-5	LCS	21.70		20	108	79 - 123		
Tetrachloroethene	127-18-4	LCS	18.20		20	91.2	72 - 124		
Toluene	108-88-3	LCS	19.90		20	99.4	80 - 125		
Total Xylenes	1330-20-7	LCS	60.60		60	101	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	22.60		20	113	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21		20	105	78 - 126		
Trichloroethene	79-01-6	LCS	20.20		20	101	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	17.80		20	88.9	38 - 123		
Vinyl Acetate	108-05-4	LCS	21.30		20	106	58 - 136		
Vinyl Chloride	75-01-4	LCS	24.30		20	121	27 - 138		

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	31.70	30	106	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	30.40	30	101	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	31.10	30	104	78 - 116	
Toluene-d8	2037-26-5	LCS	30.70	30	102	76 - 127	

QC Batch

QC Batch	1030151	Prep Method	N/A
Date	N/A	Analysis Method	SW846 8260D
Tech.			

Associated Samples

3313252002

Matrix Spike 3699334 (MS) 3313728006 (non-Project Sample) For QC Batch 1030151

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3699335 (MSD) 3313728006 (non-Project Sample) For QC Batch 1030151

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	MS	22	0	20	110	78 - 121		
1,1,1,2-Tetrachloroethane	630-20-6	MSD	22.10	0	20	111	78 - 121	RPD 0.66 (Max-16)	
1,1,1-Trichloroethane	71-55-6	MS	23.50	0	20	117	66 - 130		
1,1,1-Trichloroethane	71-55-6	MSD	22.40	0	20	112	66 - 130	RPD 4.64 (Max-20)	
1,1,2,2-Tetrachloroethane	79-34-5	MS	21.70	0	20	108	74 - 135		
1,1,2,2-Tetrachloroethane	79-34-5	MSD	22.20	0	20	111	74 - 135	RPD 2.23 (Max-16)	
1,1,2-Trichloroethane	79-00-5	MS	22.10	0	20	110	82 - 126		
1,1,2-Trichloroethane	79-00-5	MSD	21.80	0	20	109	82 - 126	RPD 1.34 (Max-15)	
1,1-Dichloroethane	75-34-3	MS	22.20	0	20	111	78 - 124		
1,1-Dichloroethane	75-34-3	MSD	21	0	20	105	78 - 124	RPD 5.50 (Max-15)	
1,1-Dichloroethene	75-35-4	MS	24.20	0	20	121	63 - 128		
1,1-Dichloroethene	75-35-4	MSD	22.20	0	20	111	63 - 128	RPD 8.49 (Max-21)	
1,1-Dichloropropene	563-58-6	MS	24.20	0	20	121	76 - 126		
1,1-Dichloropropene	563-58-6	MSD	22.60	0	20	113	76 - 126	RPD 6.83 (Max-16)	
1,2,3-Trichlorobenzene	87-61-6	MS	21.40	0	20	107	61 - 126		
1,2,3-Trichlorobenzene	87-61-6	MSD	25.40	0	20	127*	61 - 126	RPD 17.20 (Max-36)	
1,2,3-Trichloropropane	96-18-4	MS	21.60	0	20	108	75 - 132		
1,2,3-Trichloropropane	96-18-4	MSD	22	0	20	110	75 - 132	RPD 1.89 (Max-19)	
1,2,4-Trichlorobenzene	120-82-1	MS	20.20	0	20	101	67 - 123		
1,2,4-Trichlorobenzene	120-82-1	MSD	21.30	0	20	106	67 - 123	RPD 5.43 (Max-22)	
1,2-Dibromo-3-chloropropane	96-12-8	MS	17.40	0	20	86.9	59 - 133		
1,2-Dibromo-3-chloropropane	96-12-8	MSD	18.30	0	20	91.3	59 - 133	RPD 5.02 (Max-26)	
1,2-Dibromoethane	106-93-4	MS	21.70	0	20	109	80 - 124		
1,2-Dibromoethane	106-93-4	MSD	22.20	0	20	111	80 - 124	RPD 2.18 (Max-19)	
1,2-Dichlorobenzene	95-50-1	MS	21.60	0	20	108	82 - 118		

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,2-Dichlorobenzene	95-50-1	MSD	21.90	0	20	110	82 - 118	RPD 1.25 (Max-15)	
1,2-Dichloroethane	107-06-2	MS	20.80	0	20	104	70 - 133		
1,2-Dichloroethane	107-06-2	MSD	20.60	0	20	103	70 - 133	RPD 0.64 (Max-19)	
1,2-Dichloropropane	78-87-5	MS	21.70	0	20	108	81 - 127		
1,2-Dichloropropane	78-87-5	MSD	22.30	0	20	111	81 - 127	RPD 2.73 (Max-15)	
1,3-Dichlorobenzene	541-73-1	MS	21.70	0	20	109	81 - 118		
1,3-Dichlorobenzene	541-73-1	MSD	21.80	0	20	109	81 - 118	RPD 0.26 (Max-16)	
1,3-Dichloropropane	142-28-9	MS	21.10	0	20	105	82 - 126		
1,3-Dichloropropane	142-28-9	MSD	21.40	0	20	107	82 - 126	RPD 1.69 (Max-15)	
1,4-Dichlorobenzene	106-46-7	MS	21.80	0	20	109	81 - 116		
1,4-Dichlorobenzene	106-46-7	MSD	21.70	0	20	109	81 - 116	RPD 0.07 (Max-15)	
2,2-Dichloropropane	594-20-7	MS	21.30	0	20	106	64 - 129		
2,2-Dichloropropane	594-20-7	MSD	20.10	0	20	100	64 - 129	RPD 5.85 (Max-18)	
2-Butanone	78-93-3	MS	114	2.20	100	111	50 - 152		
2-Butanone	78-93-3	MSD	118	2.20	100	116	50 - 152	RPD 3.78 (Max-16)	
2-Hexanone	591-78-6	MS	104	0	100	104	65 - 154		
2-Hexanone	591-78-6	MSD	111	0	100	111	65 - 154	RPD 6.98 (Max-17)	
4-Methyl-2-Pentanone(MIBK)	108-10-1	MS	117	0	100	117	71 - 146		
4-Methyl-2-Pentanone(MIBK)	108-10-1	MSD	122	0	100	122	71 - 146	RPD 4.22 (Max-16)	
Acetone	67-64-1	MS	135	32.60	100	103	40 - 151		
Acetone	67-64-1	MSD	144	32.60	100	111	40 - 151	RPD 6.09 (Max-40)	
Benzene	71-43-2	MS	22	0	20	110	80 - 124		
Benzene	71-43-2	MSD	21.20	0	20	106	80 - 124	RPD 3.94 (Max-26)	
Bromobenzene	108-86-1	MS	21.50	0	20	107	81 - 119		
Bromobenzene	108-86-1	MSD	21.50	0	20	108	81 - 119	RPD 0.20 (Max-17)	
Bromochloromethane	74-97-5	MS	22.90	0	20	114	73 - 117		
Bromochloromethane	74-97-5	MSD	22.90	0	20	114	73 - 117	RPD 0.13 (Max-19)	
Bromodichloromethane	75-27-4	MS	23.10	0	20	116	79 - 126		
Bromodichloromethane	75-27-4	MSD	21.60	0	20	108	79 - 126	RPD 6.98 (Max-16)	
Bromoform	75-25-2	MS	17.70	0	20	88.4	70 - 123		
Bromoform	75-25-2	MSD	18.10	0	20	90.3	70 - 123	RPD 2.18 (Max-16)	
Bromomethane	74-83-9	MS	16.20	0.45	20	78.9	45 - 148		
Bromomethane	74-83-9	MSD	23.30	0.45	20	114	45 - 148	RPD 35.90* (Max-26)	
Carbon Tetrachloride	56-23-5	MS	24.40	0	20	122	62 - 132		
Carbon Tetrachloride	56-23-5	MSD	23.10	0	20	116	62 - 132	RPD 5.46 (Max-17)	
Chlorobenzene	108-90-7	MS	21.70	0	20	109	85 - 117		
Chlorobenzene	108-90-7	MSD	21.30	0	20	106	85 - 117	RPD 2.17 (Max-15)	
Chlorodibromomethane	124-48-1	MS	21.50	0	20	108	77 - 122		
Chlorodibromomethane	124-48-1	MSD	22.10	0	20	110	77 - 122	RPD 2.52 (Max-15)	
Chloroethane	75-00-3	MS	18.80	0	20	94	51 - 142		
Chloroethane	75-00-3	MSD	16.80	0	20	84	51 - 142	RPD 11.20 (Max-24)	
Chloroform	67-66-3	MS	21.30	0	20	106	78 - 122		
Chloroform	67-66-3	MSD	22	0	20	110	78 - 122	RPD 3.44 (Max-16)	
Chloromethane	74-87-3	MS	25.30	0	20	127	38 - 156		
Chloromethane	74-87-3	MSD	22.20	0	20	111	38 - 156	RPD 13 (Max-27)	
cis-1,2-Dichloroethene	156-59-2	MS	22.80	0	20	114	78 - 125		
cis-1,2-Dichloroethene	156-59-2	MSD	21.80	0	20	109	78 - 125	RPD 4.57 (Max-21)	
cis-1,3-Dichloropropene	10061-01-5	MS	21.90	0	20	110	81 - 121		
cis-1,3-Dichloropropene	10061-01-5	MSD	21.50	0	20	108	81 - 121	RPD 1.79 (Max-16)	

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Dibromomethane	74-95-3	MS	22.20	0	20	111	81 - 125		
Dibromomethane	74-95-3	MSD	22.70	0	20	114	81 - 125	RPD 2.48 (Max-16)	
Dichlorodifluoromethane	75-71-8	MS	27.90	0	20	140	17 - 166		
Dichlorodifluoromethane	75-71-8	MSD	25.60	0	20	128	17 - 166	RPD 8.78 (Max-24)	
Diisopropyl ether	108-20-3	MS	22.20	0	20	111	74 - 131		
Diisopropyl ether	108-20-3	MSD	22.90	0	20	115	74 - 131	RPD 3.04 (Max-15)	
Ethylbenzene	100-41-4	MS	22.30	0	20	111	80 - 124		
Ethylbenzene	100-41-4	MSD	22.20	0	20	111	80 - 124	RPD 0.52 (Max-19)	
Hexachlorobutadiene	87-68-3	MS	26.90	0	20	135*	55 - 128		
Hexachlorobutadiene	87-68-3	MSD	24.30	0	20	122	55 - 128	RPD 10.20 (Max-35)	
Methyl t-Butyl Ether	1634-04-4	MS	21.50	0	20	108	69 - 115		
Methyl t-Butyl Ether	1634-04-4	MSD	21.70	0	20	108	69 - 115	RPD 0.76 (Max-20)	
Methylene Chloride	75-09-2	MS	22.40	0	20	112	76 - 121		
Methylene Chloride	75-09-2	MSD	22	0	20	110	76 - 121	RPD 2.10 (Max-17)	
mp-Xylene	108383/106423	MS	44.30	0	40	111	79 - 125		
mp-Xylene	108383/106423	MSD	44.40	0	40	111	79 - 125	RPD 0.14 (Max-21)	
Naphthalene	91-20-3	MS	17.10	0	20	85.7	56 - 134		
Naphthalene	91-20-3	MSD	21.10	0	20	106	56 - 134	RPD 20.80 (Max-40)	
o-Chlorotoluene	95-49-8	MS	22	0	20	110	78 - 126		
o-Chlorotoluene	95-49-8	MSD	21.90	0	20	110	78 - 126	RPD 0.19 (Max-17)	
o-Xylene	95-47-6	MS	21.80	0	20	109	79 - 124		
o-Xylene	95-47-6	MSD	21.90	0	20	109	79 - 124	RPD 0.25 (Max-19)	
p-Chlorotoluene	106-43-4	MS	21.80	0	20	109	78 - 125		
p-Chlorotoluene	106-43-4	MSD	21.70	0	20	109	78 - 125	RPD 0.24 (Max-16)	
p-Isopropyltoluene	99-87-6	MS	21.70	0	20	109	72 - 123		
p-Isopropyltoluene	99-87-6	MSD	22.20	0	20	111	72 - 123	RPD 2.14 (Max-17)	
Styrene	100-42-5	MS	22.60	0	20	113	79 - 123		
Styrene	100-42-5	MSD	20.90	0	20	105	79 - 123	RPD 7.66 (Max-16)	
Tetrachloroethene	127-18-4	MS	20.40	0	20	102	72 - 124		
Tetrachloroethene	127-18-4	MSD	19.90	0	20	99.3	72 - 124	RPD 2.49 (Max-38)	
Toluene	108-88-3	MS	22	0	20	110	80 - 125		
Toluene	108-88-3	MSD	21.20	0	20	106	80 - 125	RPD 3.83 (Max-20)	
Total Xylenes	1330-20-7	MS	66.10	0	60	110	79 - 125		
Total Xylenes	1330-20-7	MSD	66.20	0	60	110	79 - 125	RPD 0.18 (Max-35)	
trans-1,2-Dichloroethene	156-60-5	MS	23.30	0	20	116	71 - 122		
trans-1,2-Dichloroethene	156-60-5	MSD	21.40	0	20	107	71 - 122	RPD 8.45 (Max-22)	
trans-1,3-Dichloropropene	10061-02-6	MS	21.80	0	20	109	78 - 126		
trans-1,3-Dichloropropene	10061-02-6	MSD	22	0	20	110	78 - 126	RPD 0.69 (Max-18)	
Trichloroethene	79-01-6	MS	21.20	0	20	106	77 - 124		
Trichloroethene	79-01-6	MSD	19.80	0	20	99	77 - 124	RPD 6.76 (Max-18)	
Trichlorofluoromethane	75-69-4	MS	22.10	0	20	111	38 - 123		
Trichlorofluoromethane	75-69-4	MSD	20.40	0	20	102	38 - 123	RPD 8.07 (Max-23)	
Vinyl Acetate	108-05-4	MS	17	0	20	85	58 - 136		
Vinyl Acetate	108-05-4	MSD	16.70	0	20	83.3	58 - 136	RPD 2.01 (Max-17)	
Vinyl Chloride	75-01-4	MS	24.70	0	20	124	27 - 138		
Vinyl Chloride	75-01-4	MSD	22.50	0	20	112	27 - 138	RPD 9.60 (Max-40)	

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	MS	30.60	30	102	62 - 133	
1,2-Dichloroethane-d4	17060-07-0	MSD	29.90	30	99.6	62 - 133	
4-Bromofluorobenzene	460-00-4	MS	29.70	30	99.2	79 - 114	
4-Bromofluorobenzene	460-00-4	MSD	29.60	30	98.6	79 - 114	
Dibromofluoromethane	1868-53-7	MS	30.50	30	102	78 - 116	
Dibromofluoromethane	1868-53-7	MSD	29.30	30	97.8	78 - 116	
Toluene-d8	2037-26-5	MS	29	30	96.5	76 - 127	
Toluene-d8	2037-26-5	MSD	28.80	30	96.1	76 - 127	

Method Blank 3699332 (MB) Created on 07/25/2023 14:54 For QC Batch 1030151

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	BLK	1.0 U	ug/L	1.0	U
1,1,1-Trichloroethane	71-55-6	BLK	1.0 U	ug/L	1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	BLK	1.0 U	ug/L	1.0	U
1,1,2-Trichloroethane	79-00-5	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethane	75-34-3	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloroethene	75-35-4	BLK	1.0 U	ug/L	1.0	U
1,1-Dichloropropene	563-58-6	BLK	1.0 U	ug/L	1.0	U
1,2,3-Trichlorobenzene	87-61-6	BLK	2.0 U	ug/L	2.0	U
1,2,3-Trichloropropane	96-18-4	BLK	2.0 U	ug/L	2.0	U
1,2,4-Trichlorobenzene	120-82-1	BLK	2.0 U	ug/L	2.0	U
1,2-Dibromo-3-chloropropane	96-12-8	BLK	7.0 U	ug/L	7.0	U
1,2-Dibromoethane	106-93-4	BLK	1.0 U	ug/L	1.0	U
1,2-Dichlorobenzene	95-50-1	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloroethane	107-06-2	BLK	1.0 U	ug/L	1.0	U
1,2-Dichloropropane	78-87-5	BLK	1.0 U	ug/L	1.0	U
1,3-Dichlorobenzene	541-73-1	BLK	1.0 U	ug/L	1.0	U
1,3-Dichloropropane	142-28-9	BLK	1.0 U	ug/L	1.0	U
1,4-Dichlorobenzene	106-46-7	BLK	1.0 U	ug/L	1.0	U
2,2-Dichloropropane	594-20-7	BLK	1.0 U	ug/L	1.0	U
2-Butanone	78-93-3	BLK	10.0 U	ug/L	10.0	U
2-Hexanone	591-78-6	BLK	5.0 U	ug/L	5.0	U
4-Methyl-2-Pentanone(MIBK)	108-10-1	BLK	5.0 U	ug/L	5.0	U
Acetone	67-64-1	BLK	10.0 U	ug/L	10.0	U
Benzene	71-43-2	BLK	1.0 U	ug/L	1.0	U
Bromobenzene	108-86-1	BLK	1.0 U	ug/L	1.0	U
Bromochloromethane	74-97-5	BLK	1.0 U	ug/L	1.0	U
Bromodichloromethane	75-27-4	BLK	1.0 U	ug/L	1.0	U
Bromoform	75-25-2	BLK	1.0 U	ug/L	1.0	U
Bromomethane	74-83-9	BLK	1.0 U	ug/L	1.0	U
Carbon Tetrachloride	56-23-5	BLK	1.0 U	ug/L	1.0	U
Chlorobenzene	108-90-7	BLK	1.0 U	ug/L	1.0	U
Chlorodibromomethane	124-48-1	BLK	1.0 U	ug/L	1.0	U

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Chloroethane	75-00-3	BLK	1.0 U	ug/L	1.0	U
Chloroform	67-66-3	BLK	1.0 U	ug/L	1.0	U
Chloromethane	74-87-3	BLK	1.0 U	ug/L	1.0	U
cis-1,2-Dichloroethene	156-59-2	BLK	1.0 U	ug/L	1.0	U
cis-1,3-Dichloropropene	10061-01-5	BLK	1.0 U	ug/L	1.0	U
Dibromomethane	74-95-3	BLK	1.0 U	ug/L	1.0	U
Dichlorodifluoromethane	75-71-8	BLK	1.0 U	ug/L	1.0	U
Diisopropyl ether	108-20-3	BLK	1.0 U	ug/L	1.0	U
Ethylbenzene	100-41-4	BLK	1.0 U	ug/L	1.0	U
Hexachlorobutadiene	87-68-3	BLK	5.0 U	ug/L	5.0	U
Methyl t-Butyl Ether	1634-04-4	BLK	1.0 U	ug/L	1.0	U
Methylene Chloride	75-09-2	BLK	1.0 U	ug/L	1.0	U
mp-Xylene	108383/106423	BLK	2.0 U	ug/L	2.0	U
Naphthalene	91-20-3	BLK	2.0 U	ug/L	2.0	U
o-Chlorotoluene	95-49-8	BLK	1.0 U	ug/L	1.0	U
o-Xylene	95-47-6	BLK	1.0 U	ug/L	1.0	U
p-Chlorotoluene	106-43-4	BLK	1.0 U	ug/L	1.0	U
p-Isopropyltoluene	99-87-6	BLK	1.0 U	ug/L	1.0	U
Styrene	100-42-5	BLK	1.0 U	ug/L	1.0	U
Tetrachloroethene	127-18-4	BLK	1.0 U	ug/L	1.0	U
Toluene	108-88-3	BLK	1.0 U	ug/L	1.0	U
Total Xylenes	1330-20-7	BLK	3.0 U	ug/L	3.0	U
trans-1,2-Dichloroethene	156-60-5	BLK	1.0 U	ug/L	1.0	U
trans-1,3-Dichloropropene	10061-02-6	BLK	1.0 U	ug/L	1.0	U
Trichloroethene	79-01-6	BLK	1.0 U	ug/L	1.0	U
Trichlorofluoromethane	75-69-4	BLK	1.0 U	ug/L	1.0	U
Vinyl Acetate	108-05-4	BLK	5.0 U	ug/L	5.0	U
Vinyl Chloride	75-01-4	BLK	1.0 U	ug/L	1.0	U

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	BLK	29.50	30	98.2	62 - 133	
4-Bromofluorobenzene	460-00-4	BLK	31.90	30	106	79 - 114	
Dibromofluoromethane	1868-53-7	BLK	29.50	30	98.3	78 - 116	
Toluene-d8	2037-26-5	BLK	31	30	103	76 - 127	

Lab Control Standard 3699333 (LCS) Created on 07/25/2023 14:54 For QC Batch 1030151

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1,1,2-Tetrachloroethane	630-20-6	LCS	21.10		20	106	78 - 121		
1,1,1-Trichloroethane	71-55-6	LCS	21		20	105	66 - 130		
1,1,2,2-Tetrachloroethane	79-34-5	LCS	21.20		20	106	74 - 135		
1,1,2-Trichloroethane	79-00-5	LCS	21.10		20	106	82 - 126		

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,1-Dichloroethane	75-34-3	LCS	19.90		20	99.3	78 - 124		
1,1-Dichloroethene	75-35-4	LCS	21.10		20	105	63 - 128		
1,1-Dichloropropene	563-58-6	LCS	20.20		20	101	76 - 126		
1,2,3-Trichlorobenzene	87-61-6	LCS	29.90		20	150*	61 - 126		
1,2,3-Trichloropropane	96-18-4	LCS	21.40		20	107	75 - 132		
1,2,4-Trichlorobenzene	120-82-1	LCS	22.50		20	112	67 - 123		
1,2-Dibromo-3-chloropropane	96-12-8	LCS	18.60		20	93.1	59 - 133		
1,2-Dibromoethane	106-93-4	LCS	21.50		20	108	80 - 124		
1,2-Dichlorobenzene	95-50-1	LCS	21.10		20	105	82 - 118		
1,2-Dichloroethane	107-06-2	LCS	19.10		20	95.7	70 - 133		
1,2-Dichloropropane	78-87-5	LCS	19.90		20	99.3	81 - 127		
1,3-Dichlorobenzene	541-73-1	LCS	21		20	105	81 - 118		
1,3-Dichloropropane	142-28-9	LCS	20.70		20	103	82 - 126		
1,4-Dichlorobenzene	106-46-7	LCS	21		20	105	81 - 116		
2,2-Dichloropropane	594-20-7	LCS	19.90		20	99.6	64 - 129		
2-Butanone	78-93-3	LCS	114		100	114	50 - 152		
2-Hexanone	591-78-6	LCS	105		100	105	65 - 154		
4-Methyl-2-Pentanone(MIBK)	108-10-1	LCS	115		100	115	71 - 146		
Acetone	67-64-1	LCS	104		100	104	40 - 151		
Benzene	71-43-2	LCS	20		20	100	80 - 124		
Bromobenzene	108-86-1	LCS	20.60		20	103	81 - 119		
Bromochloromethane	74-97-5	LCS	21.40		20	107	73 - 117		
Bromodichloromethane	75-27-4	LCS	20.10		20	101	79 - 126		
Bromoform	75-25-2	LCS	17.30		20	86.4	70 - 123		
Bromomethane	74-83-9	LCS	21.20		20	106	45 - 148		
Carbon Tetrachloride	56-23-5	LCS	19.50		20	97.5	62 - 132		
Chlorobenzene	108-90-7	LCS	20.50		20	103	85 - 117		
Chlorodibromomethane	124-48-1	LCS	21.10		20	106	77 - 122		
Chloroethane	75-00-3	LCS	16.40		20	81.9	51 - 142		
Chloroform	67-66-3	LCS	20.30		20	101	78 - 122		
Chloromethane	74-87-3	LCS	19.90		20	99.3	38 - 156		
cis-1,2-Dichloroethene	156-59-2	LCS	20.30		20	102	78 - 125		
cis-1,3-Dichloropropene	10061-01-5	LCS	20.20		20	101	81 - 121		
Dibromomethane	74-95-3	LCS	21		20	105	81 - 125		
Dichlorodifluoromethane	75-71-8	LCS	24.50		20	123	17 - 166		
Diisopropyl ether	108-20-3	LCS	20.10		20	101	74 - 131		
Ethylbenzene	100-41-4	LCS	20.80		20	104	80 - 124		
Hexachlorobutadiene	87-68-3	LCS	27.70		20	138*	55 - 128		
Methyl t-Butyl Ether	1634-04-4	LCS	22.10		20	111	69 - 115		
Methylene Chloride	75-09-2	LCS	21.10		20	106	76 - 121		
mp-Xylene	108383/106423	LCS	42.40		40	106	79 - 125		
Naphthalene	91-20-3	LCS	23.70		20	118	56 - 134		
o-Chlorotoluene	95-49-8	LCS	20.90		20	105	78 - 126		
o-Xylene	95-47-6	LCS	20.90		20	105	79 - 124		
p-Chlorotoluene	106-43-4	LCS	20.90		20	104	78 - 125		
p-Isopropyltoluene	99-87-6	LCS	21.80		20	109	72 - 123		
Styrene	100-42-5	LCS	21.30		20	107	79 - 123		

QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

Compound	CAS No		Result (ug/L)	Orig. Result (ug/L)	Spk Added (ug/L)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Tetrachloroethene	127-18-4	LCS	21.70		20	109	72 - 124		
Toluene	108-88-3	LCS	20.30		20	102	80 - 125		
Total Xylenes	1330-20-7	LCS	63.30		60	106	79 - 125		
trans-1,2-Dichloroethene	156-60-5	LCS	20.40		20	102	71 - 122		
trans-1,3-Dichloropropene	10061-02-6	LCS	21.80		20	109	78 - 126		
Trichloroethene	79-01-6	LCS	16.40		20	82.2	77 - 124		
Trichlorofluoromethane	75-69-4	LCS	19.20		20	96	38 - 123		
Vinyl Acetate	108-05-4	LCS	17.10		20	85.3	58 - 136		
Vinyl Chloride	75-01-4	LCS	21.40		20	107	27 - 138		

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	LCS	30.20	30	101	62 - 133	
4-Bromofluorobenzene	460-00-4	LCS	29.90	30	99.6	79 - 114	
Dibromofluoromethane	1868-53-7	LCS	29.40	30	98.1	78 - 116	
Toluene-d8	2037-26-5	LCS	30.90	30	103	76 - 127	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3313252001	MW-45	SW846 3510C	1026361	07/18/2023 10:00	LDC	SW846 8270E SIM	1030076
		N/A	N/A	N/A		SW846 8260D	1027691
3313252002	MW-24D	SW846 3510C	1026361	07/18/2023 10:00	LDC	SW846 8270E SIM	1030076
		N/A	N/A	N/A		SW846 8260D	1027691
		N/A	N/A	N/A		SW846 8260D	1030151

CHAIN-OF-CUSTODY REC

3313252

Logged By: KSB
PM: SJB

No. 008232

wsp

WSP USA Office Address	13530 Dulles Technology Dr Herndon VA
Project Name	Kop-Flex Offsite
WSP USA Contact Name	Eric Johnson
Project Location	Hanover MD
WSP USA Contact E-mail	Eric.Johnson@wsp.com
Project Number & Task	31405608.01 \$ /02.03
WSP USA Contact Phone	(703) 709-6500
Sampler(s) Name(s)	Elliott Martyniewicz, Tushar Khaire
Sampler(s) Signature(s)	
Laboratory Name & Location	ALS Middletown PA
Laboratory Project Manager	Susan Scherer

Requested Turn-Around-Time: [X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ____ HR

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	VOCs SW846 8270D	1,4-Dioxane (SW846 8270E SIM)	Sample Comments
MW-45	GW			7/14/23	1025	4	X	X	
MW-24D	GW			7/14/23	1040	4	X	X	

2x G/HCl per sample
2x B/UNP
no g/c
KSB 7.15.23

Temp By: KSB | WO Temp (°C): 2 | Therm ID: 570

Receipt Info Completed By: KSB

Cooler Custody Seal Intact	Y N (NA)
Sample Custody Seal Intact	Y N (NA)
Received on Ice	(Y) N NA
Cooler & Samples Intact	(Y) N
Correct Containers Provided	(Y) N
Sample Label/COC Agree	(Y) N
Adequate Sample Volumes	(Y) N
CR6 Samples Filtered	Y N (NA)
OP Samples Filtered	Y N (NA)
VOA Trip Blank	Y (N) NA
NJ≤ 4 Days?	Y N
Rad Screen (uCi)	
Courier/Tracking #:	8094 7936 8139
SDWA Compliance	Y (N)
PWSID	
WV Containers 0-6°C	Y N (NA)

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
	7/14/23	1330	Fedex				
Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Number of Packages	Custody Seal Number(s)
Fedex			ALS	7.15.23	928		

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)