Kennedy Jenks

17 March 2023

Mr. Andy Smith
Washington State Department of Ecology
PO Box 47775
Olympia, Washington 98504-7775

Subject: 2023 Long-Term Groundwater Monitoring Report
Former Strebor Property, Cleanup Site ID 2615, Facility/Site ID 34822454
Tetra Pak Vancouver
Vancouver, Washington
Ecology VCP File No. SW0377
KJ 2165020*22

Dear Mr. Smith:

This letter report summarizes the results of the 2023 long-term groundwater monitoring event conducted by Blaine Tech Services (BTS) on 31 January 2023 at the former Strebor property (Site). The Site is located at 3125 Thompson Avenue in Vancouver, Washington (see Figure 1).

Investigation and cleanup activities have been conducted at the Site under the Voluntary Cleanup Program (VCP) (VCP No. SW0377) through the Washington State Department of Ecology (Ecology). Cleanup activities consisted of impacted soil removal and an engineered asphalt cap and cover. A restrictive covenant was recorded for the Site on 7 August 2012, and in December 2012, Ecology determined that no further remedial action (NFA) is necessary at the Site (Ecology 2012). Ecology's NFA determination was based on characterization of the Site, establishment of cleanup standards, selection, and implementation of the cleanup action, post cleanup institutional and engineering controls, and long-term groundwater monitoring. Post-cleanup controls and monitoring included compliance with institutional and engineered controls (e.g., restrictions on the use of groundwater and maintenance of the asphalt cap) and performance of confirmational monitoring.

The purpose of long-term groundwater monitoring at the Site is to confirm the effectiveness of the implemented remedy and to assess that the remedy remains protective of groundwater. Groundwater monitoring was implemented in first quarter 2009 and is ongoing in general accordance with the *Long-Term Groundwater Monitoring Plan* (Long-Term Monitoring Plan; Kennedy/Jenks Consultants, Inc. 2009). Under the long-term monitoring plan, groundwater monitoring events are conducted every 18 months. Seven monitoring wells (MW-1 through MW-3 and MW-5 through MW-8) are part of the long-term monitoring plan. Monitoring well locations are shown on Figure 2.

Monitoring well MW-3 was originally installed as a stickup well located in a parking and truck loading area of the parking lot (Figure 2). In the past, a vehicle collided with MW-3, bending the well casing. In 2018, Tetra Pak converted MW-3 to a flush-mount well to reduce the risk of future vehicle collisions. Due to the modifications, the top of casing elevation is not currently available.

The MW-3 well modifications and a potential well obstruction were previously noted during the 2019 and 2021 sampling events. During the 2021 sampling event, a closed-circuit television (CCTV) survey of well MW-3 was performed to assess the current condition of well MW-3 following conversion to a flush mounted well. The CCTV survey confirmed that the well casing is damaged approximately 42.5 feet below ground surface. Due to this obstruction, standard groundwater sampling equipment cannot be used to access or sample well MW-3. Due to the damaged casing, Tetra Pak proposed that sampling of well MW-3 be discontinued, and the well be decommissioned in accordance with WAC 173-160-460. The remaining wells will continue to be monitored in accordance with the Long-Term Monitoring Plan. Neither pentachlorophenol nor isomers of tetrachlorophenol and trichlorophenol have been reported above laboratory reporting limits in well MW-3 since December 2006.

2023 Field Activities

Activities completed during the 2023 groundwater monitoring event were conducted in general accordance with the Long-Term Monitoring Plan. These activities consisted of:

- Measuring depths to groundwater on 31 January 2023 in monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, and MW-8. Depth to groundwater measured at monitoring well MW-3 could not be converted to groundwater elevation as the casing had been modified and the current top of casing elevation was not available. Monitoring well MW-1 was dry during the 2023 sampling event.
- Collecting groundwater samples from five monitoring wells using low flow methodology with a bladder pump (MW-2, MW-5, MW-6, MW-7, and MW-8) on 31 January 2023. Insufficient water was available in monitoring well MW-1 for sampling. The groundwater samples were collected following purging the wells and stabilization of temperature, pH, conductivity, and dissolved oxygen in the purge water.
- Submitting groundwater samples to PACE Analytical Laboratories (PACE) in Mt. Juliet Tennessee, for analysis of pentachlorophenol and all isomers of tetrachlorophenol and trichlorophenol using U.S. Environmental Protection Agency (EPA) Method 8270D.

Groundwater Elevations

Groundwater was measured at depths between 4.99 (monitoring well MW-2) and 5.17 feet (monitoring well MW-8) above mean sea level (MSL). The results of groundwater level measurements are summarized in Table 1 and shown on Figure 2. The groundwater elevations in the monitoring wells were within 0.18 foot of each other, indicating the gradient is relatively shallow, consistent with historical groundwater gradients. For this reason, groundwater elevation contours are not plotted on Figure 2. Though the gradient is shallow, to the extent that a groundwater flow direction exists at the Site, water levels measured in 2023 indicate that the direction of flow is generally to the west.

Groundwater Sampling Results

Groundwater analytical results from the January 2023 event and previous sampling events are summarized in Table 2. A copy of the laboratory analytical report from the January 2023 event is included in Attachment A. Copies of field forms (e.g., purge and sample forms) are included in Attachment B.

Based on the analytical results for the January 2023 sampling event, pentachlorophenol, tetrachlorophenol, and trichlorophenol compounds were not detected above the laboratory reporting limits in the samples collected. These compounds were also not detected in samples collected during the previous four sampling events.

Data Quality

A duplicate groundwater sample (DUP-1) was collected from monitoring well MW-5 for analysis of pentachlorophenol, tetrachlorophenol, and trichlorophenol. These constituents were not detected above the laboratory reporting limits in the primary or duplicate sample.

Analysis of 2,3,5,6 tetrachlorophenol was not originally completed by the laboratory. By the time lab report results were provided and the deficiency identified, the sample hold time for analysis extraction had passed. Samples collected from monitoring wells MW-2, MW-5, MW-6, and MW-7 were analyzed for 2,3,5,6 tetrachlorophenol outside of hold time. Insufficient sample volume remained from the sample collected from MW-8 to conduct the analysis. 2,3,5,6 tetrachlorophenol results are included in Table 2 with appropriate data flags indicating that the samples were extracted outside of hold time.

Kennedy/Jenks Consultants, Inc. reviewed the laboratory quality control data included with the laboratory report and found that, except for the 2,3,5,6 tetrachlorophenol data, no laboratory data quality issues associated with the 31 January 2023 sampling event. A data validation report is included in Attachment A.

Conclusion

Groundwater monitoring results indicate that the remedial actions at the Site continue to be effective at protecting groundwater quality at the Site and constituents of concern (COCs) have not been detected above laboratory reporting limits since 2010. Ecology's 5-year review was conducted in late 2017 for the Site and concluded that "remedial actions conducted at the Site continue to be protective of the human health and the environment" (Ecology 2018). Tetra Pak requests that Ecology evaluate a reduction in sampling frequency to once every 5 years during the next 5-year review, expected to occur in 2023.

Future Sampling Activities

The next long-term groundwater monitoring event is scheduled for third quarter 2024. This event will consist of sampling monitoring wells MW-1, MW-2, MW-5, MW-6, and MW-8 for analysis of pentachlorophenol, tetrachlorophenol, and trichlorophenol by EPA Method 8270D, unless an alternative schedule is approved by Ecology. Sampling will not occur at monitoring well MW-3.

Please feel free to call Shaelyn Thomas at (503) 423-4033 with any questions regarding this report.

Very truly yours,

Kennedy/Jenks Consultants, Inc

Shaelyn Thomas
Project Manager

Michael Juszynski
Principal

Attachments:

Table 1 Water Level Measurements
Table 2 Summary of SVOC Groundwater Analytical Results
Figure 1 Site Vicinity Map
Figure 2 Groundwater Elevation Map – January 31, 2023

Attachment A Laboratory Analytical and Data Validation Reports
Attachment B Groundwater Sampling and Purge Forms

cc: Larry Price, Tetra Pak
Robert B. Lowry, Kell Alterman & Runstein, LLP

References

Kennedy/Jenks Consultants, Inc. 2009. Long-Term Groundwater Monitoring Plan, Former Strebor Site. 9 January 2009.

Washington State Department of Ecology. 2007. Opinion under WAC 173-340-515(5) on Remedial Action(s) for the Tetra Pak Hazardous Waste Site. Washington State Department of Ecology. 5 April 2007.

Washington State Department of Ecology. 2012. No Further Action at the Following Site: Site Name: Tetra Pak; Site Address: 3125 Thompson Avenue, Vancouver; Facility/Site No.; 34822454; Cleanup Site ID No.: 2615; VCP Project No.: SW0377. Washington State Department of Ecology. 27 December 2012.

Washington State Department of Ecology. 2018. Periodic Review Report Draft: Tetra Pak, Facility Site ID# 34822454, Cleanup Site ID#: 2615. Washington State Department of Ecology. July 2018.

Tables

Table 1: Water Level Measurements

Well	Date	TOC Elevation (ft msl)[a]	Depth to Water (ft)[b]	Water Elevation (ft msl)[c]
MW-1	02/19/02	54.40	48.62	5.78
	02/27/02		47.73	6.67
	03/25/02		48.78	5.62
	04/18/02		43.55	10.85
	05/28/02		45.70	8.70
	08/19/02		49.45	4.95
	11/18/02		49.64	4.76
	02/25/03		48.23	6.17
	06/15/06		42.38	12.02
	07/06/06		48.27	6.13
	12/28/06		45.36	9.04
	09/23/08		DRY	DRY
	01/06/09		45.04	9.36
	04/28/09		45.01	9.39
	02/16/10		48.60	5.80
	07/13/10		47.46	6.94
	03/19/12		44.01	10.39
	09/30/13		49.50	4.90
	07/28/15		DRY	DRY
	01/31/17		47.72	6.68
	07/17/19		49.09	5.31
	07/07/21		DRY	DRY
	01/31/23		DRY	DRY
MW-2	10/08/01	51.44	48.10	3.34
	02/19/02		45.73	5.71
	02/27/02		44.72	6.72
	03/25/02		45.80	5.64
	04/18/02		40.55	10.89
	05/28/02		42.78	8.66
	08/19/02		46.55	4.89
	11/18/02		46.73	4.71
	02/25/03		45.32	6.12
	06/15/06		39.47	11.97
	07/06/06		45.35	6.09
	12/28/06		42.37	9.07
	09/23/08		48.04	3.40
	01/06/09		42.09	9.35
	04/28/09		42.07	9.37
	02/16/10		45.71	5.73
	07/13/10		44.56	6.88
	03/19/12		41.07	10.37
	09/30/13		46.55	4.89
	07/28/15		47.22	4.22
	01/31/17		44.82	6.62
	07/17/19		46.21	5.23
	07/07/21		45.93	5.51
	01/31/23		46.45	4.99
MW-3	10/08/01	53.38	50.28	3.10
	02/19/02		47.53	5.85
	02/27/02		46.70	6.68
	03/25/02		47.79	5.59
	04/18/02		42.78	10.60
	05/28/02		44.68	8.70
	08/19/02		48.43	4.95
	11/18/02		48.63	4.75

Well	Date	TOC Elevation (ft msl)[a]	Depth to Water (ft)[b]	Water Elevation (ft msl)[c]
MW-3 (cont)	02/24/03		47.23	6.15
	06/15/06		41.32	12.06
	07/06/06		47.28	6.10
	12/28/06		44.37	9.01
	09/23/08		49.97	3.41
	01/06/09		44.01	9.37
	04/28/09		43.99	9.39
	02/16/10		47.61	5.77
	07/13/10		46.45	6.93
	03/19/12		43.00	10.38
	09/30/13		48.49	4.89
	07/28/15		49.10	4.28
	01/31/17		46.43	6.95
	07/17/19		NM	NM
	07/07/21		NM	NM
	01/31/23		NM	NM
MW-5	10/08/01	51.17	48.05	3.12
	02/19/02		45.52	5.65
	02/27/02		44.42	6.75
	03/25/02		45.50	5.67
	04/18/02		40.24	10.93
	05/28/02		42.46	8.71
	08/19/02		46.25	4.92
	11/18/02		46.42	4.75
	02/25/03		45.02	6.15
	06/15/06		39.19	11.98
	07/06/06		45.02	6.15
	12/28/06		42.07	9.10
	09/23/08		47.75	3.42
	01/06/09		41.76	9.41
	04/28/09		41.74	9.43
	02/16/10		45.39	5.78
	07/13/10		44.26	6.91
	03/19/12		40.77	10.40
	09/30/13		46.28	4.89
	07/28/15		46.80	4.37
	01/31/17		44.52	5.27
	07/17/19		45.90	5.27
	07/07/21		45.57	5.60
	01/31/23		46.15	5.02
MW-6	04/18/02	49.94	38.92	11.02
	05/28/02		41.45	8.49
	08/19/02		44.92	5.02
	11/18/02		45.10	4.84
	02/24/03		43.73	6.21
	06/15/06		37.78	12.16
	07/06/06		43.75	6.19
	12/28/06		40.81	9.13
	09/23/08		46.44	3.50
	01/06/09		40.50	9.44
	04/28/09		40.44	9.50
	02/16/10		45.05	4.89
	07/13/10		42.91	7.03
	03/19/12		39.55	10.39
	09/30/13		44.96	4.98
	07/28/15		45.60	4.34
	01/31/17		43.17	6.77

Table 1: Water Level Measurements

Well	Date	TOC Elevation (ft msl)[a]	Depth to Water (ft)[b]	Water Elevation (ft msl)[c]
	07/17/19		44.57	5.37
	07/07/21		44.24	5.70
	01/31/23		44.78	5.16
MW-7	08/07/02	49.76	44.39	5.37
	08/19/02		44.80	4.96
	11/18/02		44.97	4.79
	02/25/03		43.55	6.21
	09/23/08		46.31	3.45
	01/06/09		40.31	9.45
	04/28/09		40.28	9.48
	02/16/10		43.95	5.81
	07/13/10		42.77	6.99
	03/19/12		39.29	10.47
	09/30/13		44.84	4.92
	07/28/15		NM[d]	NM
	01/31/17		NM	NM
	07/17/19		44.41	5.35
	07/07/21		44.14	5.62
	01/31/23		44.67	5.09
MW-8	02/25/03	48.42	42.18	6.24
	06/15/06		36.35	12.07
	07/06/06		42.22	6.20
	12/28/06		39.32	9.10
	09/23/08		44.95	3.47
	01/06/09		38.98	9.44
	04/28/09		38.96	9.46
	02/16/10		42.64	5.78
	07/13/10		41.40	7.02
	03/19/12		37.96	10.46
	09/30/13		43.45	4.97
	07/28/15		44.10	4.32
	01/31/17		41.68	6.74
	07/17/19		43.04	5.38
	07/07/21		42.79	5.63
	01/31/23		43.25	5.17

Notes:

(a) Top of casing (TOC) elevations reported in feet (ft) above mean sea level (msl).
(b) Depth to water measured in feet below TOC.
(c) Water elevation calculated as the difference between the TOC elevation and the depth to water.
(d) NM = Not measured

Table 2: Summary of SVOC Groundwater Analytical Results

Kennedy Jenks

Monitoring Well Number	Date Sampled	Semivolatile Organic Compounds (µg/l)[a,b] Pentachloro-phenol µg/l	2,3,4,6 Tetrachloro-phenol µg/l	2,3,5,6 Tetrachloro-phenol µg/l	2,4,5 Trichloro-phenol µg/l	2,4,6 Trichloro-phenol µg/l	Monitoring Well Number	Date Sampled
MW-1	04/19/02	<0.8[c]	NA[d]	NA	NA	NA	MW-1	04/19/02
	08/21/02	**1.48**	NA	NA	<0.8	<0.8		08/21/02
	11/19/02	**1.67**	NA	NA	<1.6	<1.6		11/19/02
	02/25/03	<0.19	NA	NA	<0.19	<0.19		02/25/03
	07/06/06	**1.2**	<0.10	**0.078 J**[e]	<0.051	<0.083		07/06/06
	12/28/06	0.68	**0.033 J**	**0.044 J**	<0.0083	<0.0097		12/28/06
	01/06/09	<0.33	<0.33	<0.19	<0.19	<0.29		01/06/09
	04/28/09	<0.36	<0.36	<0.20	<0.20	<0.30		04/28/09
	07/13/10	**0.78 B / 1.3 B**[f, g]	**0.046 J / 0.071 J**	**0.019 J / 0.034 J**	<0.0094 / <0.010	<0.013 / <0.014		07/13/10
	03/19/12	<0.943	<0.377	<0.377	<0.472	<0.472		03/19/12
	09/30/13	NS[h]	NS	NS	NS	NS		09/30/13
	07/28/15	NS	NS	NS	NS	NS		07/28/15
	01/31/17	NS	NS	NS	NS	NS		01/31/17
	07/17/19	NS	NS	NS	NS	NS		07/17/19
	07/07/21	NS	NS	NS	NS	NS		07/07/21
	01/31/23	NS	NS	NS	NS	NS		01/31/23
MW-2	04/18/02	<0.8	NA	NA	NA	NA	MW-2	04/18/02
	08/21/02	<0.8	NA	NA	<0.8	<0.8		08/21/02
	11/19/02	<0.8	NA	NA	<0.8	<0.8		11/19/02
	02/25/03	<0.19	NA	NA	<0.19	<0.19		02/25/03
	07/06/06	<0.11	<0.11	<0.056	<0.055	<0.089		07/06/06
	12/28/06	**0.15 J**	<0.0089	<0.019	<0.0091	<0.011		12/28/06
	01/06/09	<0.33	<0.33	<0.19	<0.19	<0.29		01/06/09
	07/13/10	**0.055 J B**	<0.0083	<0.012	<0.0096	<0.014		07/13/10
	03/19/12	<0.935	<0.374	<0.374	<0.467	<0.467		03/19/12
	09/30/13	<0.472	<0.189	<0.189	<0.189	<0.189		09/30/13
	07/28/15	<0.476	<0.190	<0.190	<0.190	<0.190		07/28/15
	01/31/17	<0.200	<0.100	<0.100	<0.100	<0.100		01/31/17
	07/17/19	<0.0943	<0.0472	<0.0472	<0.0472	<0.0472		07/17/19
	07/07/21	<0.0962/<0.400	<0.0481/<0.200	<0.0481/<0.200	<0.0481/<0.200	<0.0481/<0.200		07/07/21
	01/31/23	<0.313	<0.231	<10.0 R[n]	<0.109	<0.100		01/31/23
MW-3	04/18/02	<0.8	NA	NA	NA	NA	MW-3	04/18/02
	08/20/02	<0.8	NA	NA	<0.8	<0.8		08/20/02
	11/18/02	<0.8	NA	NA	<1.6	<1.6		11/18/02
	02/24/03	**0.254**	NA	NA	<0.189	<0.189		02/24/03
	07/06/06	<0.11	<0.11	<0.055	<0.054	<0.087		07/06/06
	12/28/06	**0.13 J**	<0.0081	<0.018	<0.0083	<0.0098		12/28/06
	01/06/09	<0.34	<0.34	<0.19	<0.19	<0.29		01/06/09
	07/13/10	<0.011	<0.0083	<0.012	<0.0096	<0.014		07/13/10
	03/19/12	<0.943	<0.377	<0.377	<0.472	<0.472		03/19/12
	09/30/13	<0.472/<0.476[f]	<0.189/<0.190	<0.189/<0.190	<0.189/<0.190	<0.189/<0.190		09/30/13
	07/28/15	<0.476	<0.190	<0.190	<0.190	<0.190		07/28/15
	01/31/17	<0.190	<0.0952	<0.0952	<0.0952	<0.0952		01/31/17
	07/17/19	NS	NS	NS	NS	NS		07/17/19
	07/07/21	NS	NS	NS	NS	NS		07/07/21
	01/31/23	NS	NS	NS	NS	NS		01/31/23
MW-5	04/19/02	<0.8	NA	NA	NA	NA	MW-5	04/19/02
	08/21/02	<0.8	NA	NA	<0.8	<0.8		08/21/02
	11/19/02	<0.8	NA	NA	<1.6	<1.6		11/19/02
	02/25/03	<0.189	NA	NA	<0.189	<0.189		02/25/03
	07/06/06	<0.11	<0.11	<0.053	<0.052	<0.083		07/06/06
	12/28/06	<0.013	<0.0081	<0.018	<0.0083	<0.0098		12/28/06
	01/06/09	<0.33	<0.33	<0.19	<0.19	<0.29		01/06/09
	07/13/10	<0.011	<0.0082	<0.012	<0.0094	<0.013		07/13/10
	03/19/12	<0.935/<0.935[f]	<0.374/<0.374	<0.374/<0.374	<0.467/<0.467	<0.467/<0.467		03/19/12
	09/30/13	<0.472	<0.189	<0.189	<0.189	<0.189		09/30/13
	07/28/15	<0.476	<0.190	<0.190	<0.190	<0.190		07/28/15
	01/31/17	<0.204/<0.202[f]	<0.102/<0.101	<0.102/<0.101	<0.102/<0.101	<0.102/<0.101		01/31/17
	07/17/19	<0.115	<0.0575	<0.0575	<0.0575	<0.0575		07/17/19
	07/07/21	<0.0962	<0.0481	<0.0481	<0.0481	<0.0481		07/07/21
	01/31/23	<0.313/<0.313[f]	<0.231/<0.231[f]	<10.0 R/<10.0 R[f](n)	<0.109/<0.109[f]	<0.100/<0.100[f]		01/31/23

Table 2: Summary of SVOC Groundwater Analytical Results

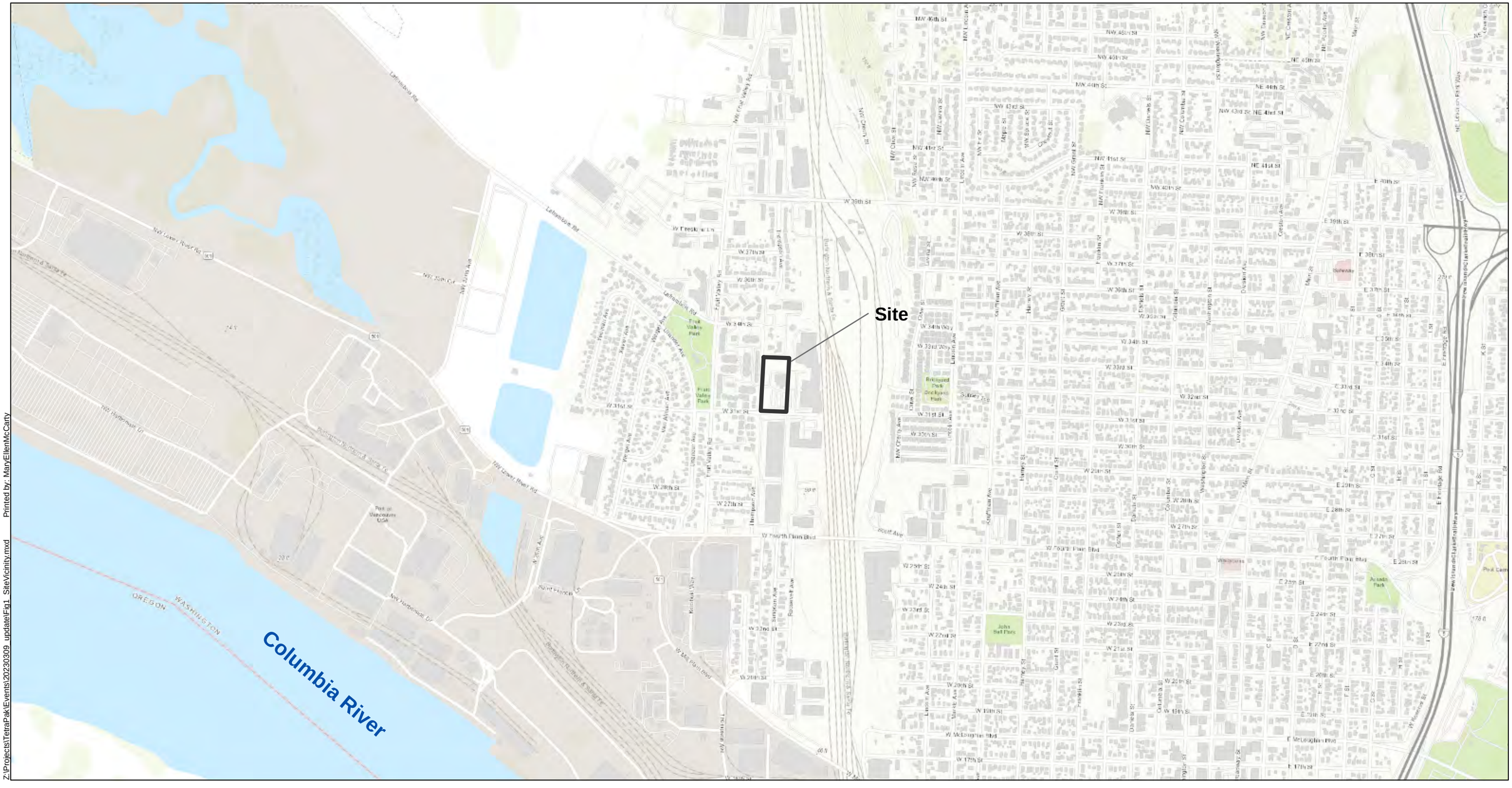
Monitoring Well Number	Date Sampled	Semivolatile Organic Compounds (µg/l)[a,b] Pentachloro-phenol µg/l	2,3,4,6 Tetrachloro-phenol µg/l	2,3,5,6 Tetrachloro-phenol µg/l	2,4,5 Trichloro-phenol µg/l	2,4,6 Trichloro-phenol µg/l	Monitoring Well Number	Date Sampled
MW-6	04/18/02	<0.8	NA	NA	NA	NA	MW-6	04/18/02
	08/20/02	<0.813	NA	NA	<0.813	<0.813		08/20/02
	11/18/02	<0.8	NA	NA	<1.6	<1.6		11/18/02
	02/24/03	<0.19	NA	NA	<0.19	<0.19		02/24/03
	07/06/06	**0.16 J**	<0.12	<0.059	<0.058	<0.092		07/06/06
	12/28/06	**0.21 J**	<0.0083	<0.018	<0.0085	<0.01		12/28/06
	01/06/09	<0.33	<0.33	<0.19	<0.19	<0.29		01/06/09
	07/13/10	**0.074 J B**	<0.0082	<0.012	<0.0094	<0.013		07/13/10
	03/19/12	<0.935	<0.374	<0.374	<0.472	<0.472		03/19/12
	09/30/13	<0.472	<0.189	<0.189	<0.189	<0.189		09/30/13
	07/28/15	<0.476	<0.190	<0.190	<0.190	<0.190		07/28/15
	01/31/17	<0.200	<0.100	<0.100	<0.100	<0.100		01/31/17
	07/17/19	<0.128	<0.0641	<0.0641	<0.0641	<0.0641		07/17/19
	07/07/21	<0.0952	<0.0476	<0.0476	<0.0476	<0.0476		07/07/21
	01/31/23	<0.313	<0.231	<10.0 R[n]	<0.109	<0.100		01/31/23
MW-7	08/07/02	**0.412 J**	NA	NA	<0.8	<0.8	MW-7	08/07/02
	08/20/02	**0.347 J**	NA	NA	<0.8	<0.8		08/20/02
	11/19/02	**7.58**	NA	NA	<1.6	<1.6		11/19/02
	02/25/03	<0.191	NA	NA	<0.191	<0.191		02/25/03
	01/06/09	<0.34	<0.34	<0.19	<0.19	<0.29		01/06/09
	09/30/13	<0.481	<0.192	<0.192	<0.192	<0.192		09/30/13
	07/17/19	<0.103/<0.105	<0.0515/<0.0526	<0.0515/<0.0526	<0.0515/<0.0526	<0.0515/<0.0526		07/17/19
	07/07/21	<0.0952	<0.0476	<0.0476	<0.0476	<0.0476		07/07/21
	01/31/23	<0.313	<0.231	<10.0 R[n]	<0.109	<0.100		01/31/23
MW-8	02/25/03	<0.189	NA	NA	<0.189	<0.189	MW-8	02/25/03
	07/06/06	<0.11	<0.11	<0.055	<0.054	<0.087		07/06/06
	12/28/06	**0.16 J**	<0.0081	<0.018	<0.0083	<0.0098		12/28/06
	01/06/09	<0.34	<0.34	<0.19	<0.19	<0.29		01/06/09
	07/13/10	<0.011	<0.0083	<0.012	<0.0096	<0.014		07/13/10
	03/19/12	<0.935	<0.374	<0.374	<0.472	<0.472		03/19/12
	09/30/13	<0.476	<0.190	<0.190	<0.190	<0.190		09/30/13
	07/28/15	<0.476/<0.476[f]	<0.190/<0.190	<0.190/<0.190	<0.190/<0.190	<0.190/<0.190		07/28/15
	01/31/17	<0.227	<0.114	<0.114	<0.114	<0.114		01/31/17
	07/17/19	<0.0943	<0.0472	<0.0472	<0.0472	<0.0472		07/17/19
	07/07/21	<0.0952	0.0476	0.0476	0.0476	0.0476		07/07/21
	01/31/23	<0.313	<0.231	NA	<0.109	<0.100		01/31/23
MTCA Method B Cleanup Level[i]		0.22	NL[j]	NL	NL	4	MTCA Method B Cleanup Level[i]	

Notes:

(a) Results are reported in micrograms per liter (µg/l).
(b) Samples were analyzed for selected semivolatile organic compounds by US Environmental Protection Agency (EPA) Method 8270D.
(c) "<" denotes analyte was not detected above the indicated detection limit.
(d) NA = not analyzed
(e) J denotes positively identified, but numerical value is an estimated quantity.
(f) Second value is result from a field duplicate sample.
(g) B = pentachlorophenol identified in the laboratory blank sample at an estimated concentration of 0.0735 µg/l.
(h) NS = Not sampled, insufficient water available for sampling
(i) Model Toxics Control Act (MTCA) Method B Groundwater CLARC (dated July 2015), the pentachlorophenal Method B cleanup level prior to 2011 was
(j) NL = Not listed in the CLARC Information System
(k) K denotes estimated maximum possible concentration
(l) J denotes estimated value below laboratory reporting limit.
(m) Dioxin concentrations are reported in picograms per liter (pg/L)
(n) R denotes rejected value due to samples extracted outside of hold time.
Bold values indicate analyte was detected above the indicated laboratory detection limit.
Highlighted values indicate detection above MTCA Method B screening value.

Figures

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Z:\Projects\TetraPak\Events\20230309_updated\Fig1_SiteVicinity.mxd Printed by: MaryEllenMcCarty

Legend

Property Boundary

Notes
1. All locations are approximate

N

0 500 1,000

Scale: Feet

Kennedy Jenks

Tetra Pak Materials LP
Vancouver, Washington
2165020*22
Figure 1
Site Vicinity Map

March 2023

Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

Z:\Projects\TetraPak\Events\20230309_updateFig2_GWElevations.mxd Printed by: MaryEllenMcCarty

Legend

- MW-5 / 5.27 ← Monitoring Well ID; Groundwater Elevation (ft msl)
- NM ← Groundwater Elevation Not Measured

Notes
1. All locations are approximate

N

0 25 50
Scale: Feet

Kennedy Jenks

Tetra Pak Materials LP
Vancouver, Washington
2165020*22
Figure 2
Groundwater Elevations
31 January, 2023
March 2023

Attachment A

Laboratory Analytical and Data Validation Reports

ANALYTICAL REPORT

February 06, 2023

Kennedy Jenks - Portland, OR

Sample Delivery Group:	L1581698
Samples Received:	02/02/2023
Project Number:	
Description:	

Report To: Shaelyn Thomas
421 SW 6th Avenue
Suite 1000
Portland, OR 97204

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

MW-2 L1581698-01 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 10:54 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1999823	1	02/04/23 06:08	02/05/23 00:23	ADF	Mt. Juliet, TN

MW-5 L1581698-02 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 10:10 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1999823	1	02/04/23 06:08	02/05/23 00:44	ADF	Mt. Juliet, TN

MW-6 L1581698-03 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 12:08 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1999823	1	02/04/23 06:08	02/05/23 01:05	ADF	Mt. Juliet, TN

MW-7 L1581698-04 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 11:31 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1999823	1	02/04/23 06:08	02/05/23 01:26	ADF	Mt. Juliet, TN

MW-8 L1581698-05 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 13:02 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1999823	1	02/04/23 06:08	02/05/23 01:47	ADF	Mt. Juliet, TN

DUP-1 L1581698-06 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 12:00 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1999823	1	02/04/23 06:08	02/05/23 02:08	ADF	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/05/2023 00:23	WG1999823
Acenaphthylene	U		0.0921	1.00	1	02/05/2023 00:23	WG1999823
Anthracene	U		0.0804	1.00	1	02/05/2023 00:23	WG1999823
Benzo(a)anthracene	U		0.199	1.00	1	02/05/2023 00:23	WG1999823
Benzo(b)fluoranthene	U		0.130	1.00	1	02/05/2023 00:23	WG1999823
Benzo(k)fluoranthene	U		0.120	1.00	1	02/05/2023 00:23	WG1999823
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/05/2023 00:23	WG1999823
Benzo(a)pyrene	U		0.0381	1.00	1	02/05/2023 00:23	WG1999823
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/05/2023 00:23	WG1999823
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/05/2023 00:23	WG1999823
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/05/2023 00:23	WG1999823
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/05/2023 00:23	WG1999823
2-Chloronaphthalene	U		0.0648	1.00	1	02/05/2023 00:23	WG1999823
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/05/2023 00:23	WG1999823
Chrysene	U		0.130	1.00	1	02/05/2023 00:23	WG1999823
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/05/2023 00:23	WG1999823
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/05/2023 00:23	WG1999823
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/05/2023 00:23	WG1999823
2,6-Dinitrotoluene	U		0.250	10.0	1	02/05/2023 00:23	WG1999823
Fluoranthene	U		0.102	1.00	1	02/05/2023 00:23	WG1999823
Fluorene	U		0.0844	1.00	1	02/05/2023 00:23	WG1999823
Hexachlorobenzene	U		0.0755	1.00	1	02/05/2023 00:23	WG1999823
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/05/2023 00:23	WG1999823
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/05/2023 00:23	WG1999823
Hexachloroethane	U		0.127	10.0	1	02/05/2023 00:23	WG1999823
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/05/2023 00:23	WG1999823
Isophorone	U		0.143	10.0	1	02/05/2023 00:23	WG1999823
Naphthalene	U		0.159	1.00	1	02/05/2023 00:23	WG1999823
Nitrobenzene	U		0.297	10.0	1	02/05/2023 00:23	WG1999823
n-Nitrosodimethylamine	U		0.998	10.0	1	02/05/2023 00:23	WG1999823
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/05/2023 00:23	WG1999823
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/05/2023 00:23	WG1999823
Phenanthrene	U		0.112	1.00	1	02/05/2023 00:23	WG1999823
Pyridine	U		0.627	10.0	1	02/05/2023 00:23	WG1999823
Benzylbutyl phthalate	U		0.765	3.00	1	02/05/2023 00:23	WG1999823
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/05/2023 00:23	WG1999823
Di-n-butyl phthalate	U		0.453	3.00	1	02/05/2023 00:23	WG1999823
Diethyl phthalate	U		0.287	3.00	1	02/05/2023 00:23	WG1999823
Dimethyl phthalate	U		0.260	3.00	1	02/05/2023 00:23	WG1999823
Di-n-octyl phthalate	U		0.932	3.00	1	02/05/2023 00:23	WG1999823
Pyrene	U		0.107	1.00	1	02/05/2023 00:23	WG1999823
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/05/2023 00:23	WG1999823
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/05/2023 00:23	WG1999823
2-Chlorophenol	U		0.133	10.0	1	02/05/2023 00:23	WG1999823
2,4-Dichlorophenol	U		0.102	10.0	1	02/05/2023 00:23	WG1999823
2,4-Dimethylphenol	U		0.0636	10.0	1	02/05/2023 00:23	WG1999823
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/05/2023 00:23	WG1999823
2,4-Dinitrophenol	U		5.93	10.0	1	02/05/2023 00:23	WG1999823
2-Methylphenol	U		0.0929	10.0	1	02/05/2023 00:23	WG1999823
3&4-Methyl Phenol	U		0.168	10.0	1	02/05/2023 00:23	WG1999823
2-Nitrophenol	U		0.117	10.0	1	02/05/2023 00:23	WG1999823
4-Nitrophenol	U		0.143	10.0	1	02/05/2023 00:23	WG1999823
Pentachlorophenol	U		0.313	10.0	1	02/05/2023 00:23	WG1999823
Phenol	U		4.33	10.0	1	02/05/2023 00:23	WG1999823
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/05/2023 00:23	WG1999823
2,4,5-Trichlorophenol	U		0.109	10.0	1	02/05/2023 00:23	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,3,4,6-Tetrachlorophenol	U	J4	0.231	10.0	1	02/05/2023 00:23	WG1999823
(S) 2-Fluorophenol	*20.8*			*10.0-120*		*02/05/2023 00:23*	WG1999823
(S) Phenol-d5	*15.1*			*10.0-120*		*02/05/2023 00:23*	WG1999823
(S) Nitrobenzene-d5	*55.4*			*10.0-127*		*02/05/2023 00:23*	WG1999823
(S) 2-Fluorobiphenyl	*58.5*			*10.0-130*		*02/05/2023 00:23*	WG1999823
(S) 2,4,6-Tribromophenol	*50.3*			*10.0-155*		*02/05/2023 00:23*	WG1999823
(S) p-Terphenyl-d14	*61.3*			*10.0-128*		*02/05/2023 00:23*	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/05/2023 00:44	WG1999823
Acenaphthylene	U		0.0921	1.00	1	02/05/2023 00:44	WG1999823
Anthracene	U		0.0804	1.00	1	02/05/2023 00:44	WG1999823
Benzo(a)anthracene	U		0.199	1.00	1	02/05/2023 00:44	WG1999823
Benzo(b)fluoranthene	U		0.130	1.00	1	02/05/2023 00:44	WG1999823
Benzo(k)fluoranthene	U		0.120	1.00	1	02/05/2023 00:44	WG1999823
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/05/2023 00:44	WG1999823
Benzo(a)pyrene	U		0.0381	1.00	1	02/05/2023 00:44	WG1999823
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/05/2023 00:44	WG1999823
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/05/2023 00:44	WG1999823
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/05/2023 00:44	WG1999823
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/05/2023 00:44	WG1999823
2-Chloronaphthalene	U		0.0648	1.00	1	02/05/2023 00:44	WG1999823
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/05/2023 00:44	WG1999823
Chrysene	U		0.130	1.00	1	02/05/2023 00:44	WG1999823
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/05/2023 00:44	WG1999823
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/05/2023 00:44	WG1999823
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/05/2023 00:44	WG1999823
2,6-Dinitrotoluene	U		0.250	10.0	1	02/05/2023 00:44	WG1999823
Fluoranthene	U		0.102	1.00	1	02/05/2023 00:44	WG1999823
Fluorene	U		0.0844	1.00	1	02/05/2023 00:44	WG1999823
Hexachlorobenzene	U		0.0755	1.00	1	02/05/2023 00:44	WG1999823
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/05/2023 00:44	WG1999823
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/05/2023 00:44	WG1999823
Hexachloroethane	U		0.127	10.0	1	02/05/2023 00:44	WG1999823
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/05/2023 00:44	WG1999823
Isophorone	U		0.143	10.0	1	02/05/2023 00:44	WG1999823
Naphthalene	U		0.159	1.00	1	02/05/2023 00:44	WG1999823
Nitrobenzene	U		0.297	10.0	1	02/05/2023 00:44	WG1999823
n-Nitrosodimethylamine	U		0.998	10.0	1	02/05/2023 00:44	WG1999823
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/05/2023 00:44	WG1999823
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/05/2023 00:44	WG1999823
Phenanthrene	U		0.112	1.00	1	02/05/2023 00:44	WG1999823
Pyridine	U		0.627	10.0	1	02/05/2023 00:44	WG1999823
Benzylbutyl phthalate	U		0.765	3.00	1	02/05/2023 00:44	WG1999823
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/05/2023 00:44	WG1999823
Di-n-butyl phthalate	U		0.453	3.00	1	02/05/2023 00:44	WG1999823
Diethyl phthalate	U		0.287	3.00	1	02/05/2023 00:44	WG1999823
Dimethyl phthalate	U		0.260	3.00	1	02/05/2023 00:44	WG1999823
Di-n-octyl phthalate	U		0.932	3.00	1	02/05/2023 00:44	WG1999823
Pyrene	U		0.107	1.00	1	02/05/2023 00:44	WG1999823
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/05/2023 00:44	WG1999823
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/05/2023 00:44	WG1999823
2-Chlorophenol	U		0.133	10.0	1	02/05/2023 00:44	WG1999823
2,4-Dichlorophenol	U		0.102	10.0	1	02/05/2023 00:44	WG1999823
2,4-Dimethylphenol	U		0.0636	10.0	1	02/05/2023 00:44	WG1999823
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/05/2023 00:44	WG1999823
2,4-Dinitrophenol	U		5.93	10.0	1	02/05/2023 00:44	WG1999823
2-Methylphenol	U		0.0929	10.0	1	02/05/2023 00:44	WG1999823
3&4-Methyl Phenol	U		0.168	10.0	1	02/05/2023 00:44	WG1999823
2-Nitrophenol	U		0.117	10.0	1	02/05/2023 00:44	WG1999823
4-Nitrophenol	U		0.143	10.0	1	02/05/2023 00:44	WG1999823
Pentachlorophenol	U		0.313	10.0	1	02/05/2023 00:44	WG1999823
Phenol	U		4.33	10.0	1	02/05/2023 00:44	WG1999823
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/05/2023 00:44	WG1999823
2,4,5-Trichlorophenol	U		0.109	10.0	1	02/05/2023 00:44	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,3,4,6-Tetrachlorophenol	U	J4	0.231	10.0	1	02/05/2023 00:44	WG1999823
(S) 2-Fluorophenol	*26.6*			*10.0-120*		*02/05/2023 00:44*	WG1999823
(S) Phenol-d5	*18.4*			*10.0-120*		*02/05/2023 00:44*	WG1999823
(S) Nitrobenzene-d5	*62.2*			*10.0-127*		*02/05/2023 00:44*	WG1999823
(S) 2-Fluorobiphenyl	*65.5*			*10.0-130*		*02/05/2023 00:44*	WG1999823
(S) 2,4,6-Tribromophenol	*67.0*			*10.0-155*		*02/05/2023 00:44*	WG1999823
(S) p-Terphenyl-d14	*71.8*			*10.0-128*		*02/05/2023 00:44*	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/05/2023 01:05	WG1999823
Acenaphthylene	U		0.0921	1.00	1	02/05/2023 01:05	WG1999823
Anthracene	U		0.0804	1.00	1	02/05/2023 01:05	WG1999823
Benzo(a)anthracene	U		0.199	1.00	1	02/05/2023 01:05	WG1999823
Benzo(b)fluoranthene	U		0.130	1.00	1	02/05/2023 01:05	WG1999823
Benzo(k)fluoranthene	U		0.120	1.00	1	02/05/2023 01:05	WG1999823
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/05/2023 01:05	WG1999823
Benzo(a)pyrene	U		0.0381	1.00	1	02/05/2023 01:05	WG1999823
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/05/2023 01:05	WG1999823
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/05/2023 01:05	WG1999823
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/05/2023 01:05	WG1999823
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/05/2023 01:05	WG1999823
2-Chloronaphthalene	U		0.0648	1.00	1	02/05/2023 01:05	WG1999823
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/05/2023 01:05	WG1999823
Chrysene	U		0.130	1.00	1	02/05/2023 01:05	WG1999823
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/05/2023 01:05	WG1999823
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/05/2023 01:05	WG1999823
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/05/2023 01:05	WG1999823
2,6-Dinitrotoluene	U		0.250	10.0	1	02/05/2023 01:05	WG1999823
Fluoranthene	U		0.102	1.00	1	02/05/2023 01:05	WG1999823
Fluorene	U		0.0844	1.00	1	02/05/2023 01:05	WG1999823
Hexachlorobenzene	U		0.0755	1.00	1	02/05/2023 01:05	WG1999823
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/05/2023 01:05	WG1999823
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/05/2023 01:05	WG1999823
Hexachloroethane	U		0.127	10.0	1	02/05/2023 01:05	WG1999823
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/05/2023 01:05	WG1999823
Isophorone	U		0.143	10.0	1	02/05/2023 01:05	WG1999823
Naphthalene	0.170	J	0.159	1.00	1	02/05/2023 01:05	WG1999823
Nitrobenzene	U		0.297	10.0	1	02/05/2023 01:05	WG1999823
n-Nitrosodimethylamine	U		0.998	10.0	1	02/05/2023 01:05	WG1999823
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/05/2023 01:05	WG1999823
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/05/2023 01:05	WG1999823
Phenanthrene	U		0.112	1.00	1	02/05/2023 01:05	WG1999823
Pyridine	U		0.627	10.0	1	02/05/2023 01:05	WG1999823
Benzylbutyl phthalate	U		0.765	3.00	1	02/05/2023 01:05	WG1999823
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/05/2023 01:05	WG1999823
Di-n-butyl phthalate	U		0.453	3.00	1	02/05/2023 01:05	WG1999823
Diethyl phthalate	U		0.287	3.00	1	02/05/2023 01:05	WG1999823
Dimethyl phthalate	U		0.260	3.00	1	02/05/2023 01:05	WG1999823
Di-n-octyl phthalate	U		0.932	3.00	1	02/05/2023 01:05	WG1999823
Pyrene	U		0.107	1.00	1	02/05/2023 01:05	WG1999823
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/05/2023 01:05	WG1999823
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/05/2023 01:05	WG1999823
2-Chlorophenol	U		0.133	10.0	1	02/05/2023 01:05	WG1999823
2,4-Dichlorophenol	U		0.102	10.0	1	02/05/2023 01:05	WG1999823
2,4-Dimethylphenol	U		0.0636	10.0	1	02/05/2023 01:05	WG1999823
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/05/2023 01:05	WG1999823
2,4-Dinitrophenol	U		5.93	10.0	1	02/05/2023 01:05	WG1999823
2-Methylphenol	U		0.0929	10.0	1	02/05/2023 01:05	WG1999823
3&4-Methyl Phenol	U		0.168	10.0	1	02/05/2023 01:05	WG1999823
2-Nitrophenol	U		0.117	10.0	1	02/05/2023 01:05	WG1999823
4-Nitrophenol	U		0.143	10.0	1	02/05/2023 01:05	WG1999823
Pentachlorophenol	U		0.313	10.0	1	02/05/2023 01:05	WG1999823
Phenol	U		4.33	10.0	1	02/05/2023 01:05	WG1999823
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/05/2023 01:05	WG1999823
2,4,5-Trichlorophenol	U		0.109	10.0	1	02/05/2023 01:05	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,3,4,6-Tetrachlorophenol	U	J4	0.231	10.0	1	02/05/2023 01:05	WG1999823
(S) 2-Fluorophenol	*18.2*			*10.0-120*		*02/05/2023 01:05*	WG1999823
(S) Phenol-d5	*12.9*			*10.0-120*		*02/05/2023 01:05*	WG1999823
(S) Nitrobenzene-d5	*51.7*			*10.0-127*		*02/05/2023 01:05*	WG1999823
(S) 2-Fluorobiphenyl	*54.2*			*10.0-130*		*02/05/2023 01:05*	WG1999823
(S) 2,4,6-Tribromophenol	*43.5*			*10.0-155*		*02/05/2023 01:05*	WG1999823
(S) p-Terphenyl-d14	*53.7*			*10.0-128*		*02/05/2023 01:05*	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/05/2023 01:26	WG1999823
Acenaphthylene	U		0.0921	1.00	1	02/05/2023 01:26	WG1999823
Anthracene	U		0.0804	1.00	1	02/05/2023 01:26	WG1999823
Benzo(a)anthracene	U		0.199	1.00	1	02/05/2023 01:26	WG1999823
Benzo(b)fluoranthene	U		0.130	1.00	1	02/05/2023 01:26	WG1999823
Benzo(k)fluoranthene	U		0.120	1.00	1	02/05/2023 01:26	WG1999823
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/05/2023 01:26	WG1999823
Benzo(a)pyrene	U		0.0381	1.00	1	02/05/2023 01:26	WG1999823
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/05/2023 01:26	WG1999823
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/05/2023 01:26	WG1999823
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/05/2023 01:26	WG1999823
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/05/2023 01:26	WG1999823
2-Chloronaphthalene	U		0.0648	1.00	1	02/05/2023 01:26	WG1999823
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/05/2023 01:26	WG1999823
Chrysene	U		0.130	1.00	1	02/05/2023 01:26	WG1999823
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/05/2023 01:26	WG1999823
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/05/2023 01:26	WG1999823
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/05/2023 01:26	WG1999823
2,6-Dinitrotoluene	U		0.250	10.0	1	02/05/2023 01:26	WG1999823
Fluoranthene	U		0.102	1.00	1	02/05/2023 01:26	WG1999823
Fluorene	U		0.0844	1.00	1	02/05/2023 01:26	WG1999823
Hexachlorobenzene	U		0.0755	1.00	1	02/05/2023 01:26	WG1999823
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/05/2023 01:26	WG1999823
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/05/2023 01:26	WG1999823
Hexachloroethane	U		0.127	10.0	1	02/05/2023 01:26	WG1999823
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/05/2023 01:26	WG1999823
Isophorone	U		0.143	10.0	1	02/05/2023 01:26	WG1999823
Naphthalene	U		0.159	1.00	1	02/05/2023 01:26	WG1999823
Nitrobenzene	U		0.297	10.0	1	02/05/2023 01:26	WG1999823
n-Nitrosodimethylamine	U		0.998	10.0	1	02/05/2023 01:26	WG1999823
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/05/2023 01:26	WG1999823
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/05/2023 01:26	WG1999823
Phenanthrene	U		0.112	1.00	1	02/05/2023 01:26	WG1999823
Pyridine	U		0.627	10.0	1	02/05/2023 01:26	WG1999823
Benzylbutyl phthalate	U		0.765	3.00	1	02/05/2023 01:26	WG1999823
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/05/2023 01:26	WG1999823
Di-n-butyl phthalate	U		0.453	3.00	1	02/05/2023 01:26	WG1999823
Diethyl phthalate	U		0.287	3.00	1	02/05/2023 01:26	WG1999823
Dimethyl phthalate	U		0.260	3.00	1	02/05/2023 01:26	WG1999823
Di-n-octyl phthalate	U		0.932	3.00	1	02/05/2023 01:26	WG1999823
Pyrene	U		0.107	1.00	1	02/05/2023 01:26	WG1999823
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/05/2023 01:26	WG1999823
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/05/2023 01:26	WG1999823
2-Chlorophenol	U		0.133	10.0	1	02/05/2023 01:26	WG1999823
2,4-Dichlorophenol	U		0.102	10.0	1	02/05/2023 01:26	WG1999823
2,4-Dimethylphenol	U		0.0636	10.0	1	02/05/2023 01:26	WG1999823
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/05/2023 01:26	WG1999823
2,4-Dinitrophenol	U		5.93	10.0	1	02/05/2023 01:26	WG1999823
2-Methylphenol	U		0.0929	10.0	1	02/05/2023 01:26	WG1999823
3&4-Methyl Phenol	U		0.168	10.0	1	02/05/2023 01:26	WG1999823
2-Nitrophenol	U		0.117	10.0	1	02/05/2023 01:26	WG1999823
4-Nitrophenol	U		0.143	10.0	1	02/05/2023 01:26	WG1999823
Pentachlorophenol	U		0.313	10.0	1	02/05/2023 01:26	WG1999823
Phenol	U		4.33	10.0	1	02/05/2023 01:26	WG1999823
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/05/2023 01:26	WG1999823
2,4,5-Trichlorophenol	U		0.109	10.0	1	02/05/2023 01:26	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,3,4,6-Tetrachlorophenol	U	J4	0.231	10.0	1	02/05/2023 01:26	WG1999823
(S) 2-Fluorophenol	*24.4*			*10.0-120*		*02/05/2023 01:26*	WG1999823
(S) Phenol-d5	*16.1*			*10.0-120*		*02/05/2023 01:26*	WG1999823
(S) Nitrobenzene-d5	*49.6*			*10.0-127*		*02/05/2023 01:26*	WG1999823
(S) 2-Fluorobiphenyl	*52.1*			*10.0-130*		*02/05/2023 01:26*	WG1999823
(S) 2,4,6-Tribromophenol	*58.5*			*10.0-155*		*02/05/2023 01:26*	WG1999823
(S) p-Terphenyl-d14	*63.1*			*10.0-128*		*02/05/2023 01:26*	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/05/2023 01:47	WG1999823
Acenaphthylene	U		0.0921	1.00	1	02/05/2023 01:47	WG1999823
Anthracene	U		0.0804	1.00	1	02/05/2023 01:47	WG1999823
Benzo(a)anthracene	U		0.199	1.00	1	02/05/2023 01:47	WG1999823
Benzo(b)fluoranthene	U		0.130	1.00	1	02/05/2023 01:47	WG1999823
Benzo(k)fluoranthene	U		0.120	1.00	1	02/05/2023 01:47	WG1999823
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/05/2023 01:47	WG1999823
Benzo(a)pyrene	U		0.0381	1.00	1	02/05/2023 01:47	WG1999823
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/05/2023 01:47	WG1999823
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/05/2023 01:47	WG1999823
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/05/2023 01:47	WG1999823
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/05/2023 01:47	WG1999823
2-Chloronaphthalene	U		0.0648	1.00	1	02/05/2023 01:47	WG1999823
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/05/2023 01:47	WG1999823
Chrysene	U		0.130	1.00	1	02/05/2023 01:47	WG1999823
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/05/2023 01:47	WG1999823
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/05/2023 01:47	WG1999823
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/05/2023 01:47	WG1999823
2,6-Dinitrotoluene	U		0.250	10.0	1	02/05/2023 01:47	WG1999823
Fluoranthene	U		0.102	1.00	1	02/05/2023 01:47	WG1999823
Fluorene	U		0.0844	1.00	1	02/05/2023 01:47	WG1999823
Hexachlorobenzene	U		0.0755	1.00	1	02/05/2023 01:47	WG1999823
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/05/2023 01:47	WG1999823
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/05/2023 01:47	WG1999823
Hexachloroethane	U		0.127	10.0	1	02/05/2023 01:47	WG1999823
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/05/2023 01:47	WG1999823
Isophorone	U		0.143	10.0	1	02/05/2023 01:47	WG1999823
Naphthalene	U		0.159	1.00	1	02/05/2023 01:47	WG1999823
Nitrobenzene	U		0.297	10.0	1	02/05/2023 01:47	WG1999823
n-Nitrosodimethylamine	U		0.998	10.0	1	02/05/2023 01:47	WG1999823
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/05/2023 01:47	WG1999823
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/05/2023 01:47	WG1999823
Phenanthrene	U		0.112	1.00	1	02/05/2023 01:47	WG1999823
Pyridine	U		0.627	10.0	1	02/05/2023 01:47	WG1999823
Benzylbutyl phthalate	U		0.765	3.00	1	02/05/2023 01:47	WG1999823
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/05/2023 01:47	WG1999823
Di-n-butyl phthalate	U		0.453	3.00	1	02/05/2023 01:47	WG1999823
Diethyl phthalate	U		0.287	3.00	1	02/05/2023 01:47	WG1999823
Dimethyl phthalate	U		0.260	3.00	1	02/05/2023 01:47	WG1999823
Di-n-octyl phthalate	U		0.932	3.00	1	02/05/2023 01:47	WG1999823
Pyrene	U		0.107	1.00	1	02/05/2023 01:47	WG1999823
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/05/2023 01:47	WG1999823
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/05/2023 01:47	WG1999823
2-Chlorophenol	U		0.133	10.0	1	02/05/2023 01:47	WG1999823
2,4-Dichlorophenol	U		0.102	10.0	1	02/05/2023 01:47	WG1999823
2,4-Dimethylphenol	U		0.0636	10.0	1	02/05/2023 01:47	WG1999823
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/05/2023 01:47	WG1999823
2,4-Dinitrophenol	U		5.93	10.0	1	02/05/2023 01:47	WG1999823
2-Methylphenol	U		0.0929	10.0	1	02/05/2023 01:47	WG1999823
3&4-Methyl Phenol	U		0.168	10.0	1	02/05/2023 01:47	WG1999823
2-Nitrophenol	U		0.117	10.0	1	02/05/2023 01:47	WG1999823
4-Nitrophenol	U		0.143	10.0	1	02/05/2023 01:47	WG1999823
Pentachlorophenol	U		0.313	10.0	1	02/05/2023 01:47	WG1999823
Phenol	U		4.33	10.0	1	02/05/2023 01:47	WG1999823
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/05/2023 01:47	WG1999823
2,4,5-Trichlorophenol	U		0.109	10.0	1	02/05/2023 01:47	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,3,4,6-Tetrachlorophenol	U	J4	0.231	10.0	1	02/05/2023 01:47	WG1999823
(S) 2-Fluorophenol	*20.8*			*10.0-120*		*02/05/2023 01:47*	WG1999823
(S) Phenol-d5	*15.8*			*10.0-120*		*02/05/2023 01:47*	WG1999823
(S) Nitrobenzene-d5	*56.5*			*10.0-127*		*02/05/2023 01:47*	WG1999823
(S) 2-Fluorobiphenyl	*56.0*			*10.0-130*		*02/05/2023 01:47*	WG1999823
(S) 2,4,6-Tribromophenol	*58.2*			*10.0-155*		*02/05/2023 01:47*	WG1999823
(S) p-Terphenyl-d14	*61.5*			*10.0-128*		*02/05/2023 01:47*	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	02/05/2023 02:08	WG1999823
Acenaphthylene	U		0.0921	1.00	1	02/05/2023 02:08	WG1999823
Anthracene	U		0.0804	1.00	1	02/05/2023 02:08	WG1999823
Benzo(a)anthracene	U		0.199	1.00	1	02/05/2023 02:08	WG1999823
Benzo(b)fluoranthene	U		0.130	1.00	1	02/05/2023 02:08	WG1999823
Benzo(k)fluoranthene	U		0.120	1.00	1	02/05/2023 02:08	WG1999823
Benzo(g,h,i)perylene	U		0.121	1.00	1	02/05/2023 02:08	WG1999823
Benzo(a)pyrene	U		0.0381	1.00	1	02/05/2023 02:08	WG1999823
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	02/05/2023 02:08	WG1999823
Bis(2-chloroethyl)ether	U		0.137	10.0	1	02/05/2023 02:08	WG1999823
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	02/05/2023 02:08	WG1999823
4-Bromophenyl-phenylether	U		0.0877	10.0	1	02/05/2023 02:08	WG1999823
2-Chloronaphthalene	U		0.0648	1.00	1	02/05/2023 02:08	WG1999823
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	02/05/2023 02:08	WG1999823
Chrysene	U		0.130	1.00	1	02/05/2023 02:08	WG1999823
Dibenz(a,h)anthracene	U		0.0644	1.00	1	02/05/2023 02:08	WG1999823
3,3-Dichlorobenzidine	U		0.212	10.0	1	02/05/2023 02:08	WG1999823
2,4-Dinitrotoluene	U		0.0983	10.0	1	02/05/2023 02:08	WG1999823
2,6-Dinitrotoluene	U		0.250	10.0	1	02/05/2023 02:08	WG1999823
Fluoranthene	U		0.102	1.00	1	02/05/2023 02:08	WG1999823
Fluorene	U		0.0844	1.00	1	02/05/2023 02:08	WG1999823
Hexachlorobenzene	U		0.0755	1.00	1	02/05/2023 02:08	WG1999823
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	02/05/2023 02:08	WG1999823
Hexachlorocyclopentadiene	U		0.0598	10.0	1	02/05/2023 02:08	WG1999823
Hexachloroethane	U		0.127	10.0	1	02/05/2023 02:08	WG1999823
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	02/05/2023 02:08	WG1999823
Isophorone	U		0.143	10.0	1	02/05/2023 02:08	WG1999823
Naphthalene	U		0.159	1.00	1	02/05/2023 02:08	WG1999823
Nitrobenzene	U		0.297	10.0	1	02/05/2023 02:08	WG1999823
n-Nitrosodimethylamine	U		0.998	10.0	1	02/05/2023 02:08	WG1999823
n-Nitrosodiphenylamine	U		2.37	10.0	1	02/05/2023 02:08	WG1999823
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	02/05/2023 02:08	WG1999823
Phenanthrene	U		0.112	1.00	1	02/05/2023 02:08	WG1999823
Pyridine	U		0.627	10.0	1	02/05/2023 02:08	WG1999823
Benzylbutyl phthalate	U		0.765	3.00	1	02/05/2023 02:08	WG1999823
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	02/05/2023 02:08	WG1999823
Di-n-butyl phthalate	U		0.453	3.00	1	02/05/2023 02:08	WG1999823
Diethyl phthalate	U		0.287	3.00	1	02/05/2023 02:08	WG1999823
Dimethyl phthalate	U		0.260	3.00	1	02/05/2023 02:08	WG1999823
Di-n-octyl phthalate	U		0.932	3.00	1	02/05/2023 02:08	WG1999823
Pyrene	U		0.107	1.00	1	02/05/2023 02:08	WG1999823
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	02/05/2023 02:08	WG1999823
4-Chloro-3-methylphenol	U		0.131	10.0	1	02/05/2023 02:08	WG1999823
2-Chlorophenol	U		0.133	10.0	1	02/05/2023 02:08	WG1999823
2,4-Dichlorophenol	U		0.102	10.0	1	02/05/2023 02:08	WG1999823
2,4-Dimethylphenol	U		0.0636	10.0	1	02/05/2023 02:08	WG1999823
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	02/05/2023 02:08	WG1999823
2,4-Dinitrophenol	U		5.93	10.0	1	02/05/2023 02:08	WG1999823
2-Methylphenol	U		0.0929	10.0	1	02/05/2023 02:08	WG1999823
3&4-Methyl Phenol	U		0.168	10.0	1	02/05/2023 02:08	WG1999823
2-Nitrophenol	U		0.117	10.0	1	02/05/2023 02:08	WG1999823
4-Nitrophenol	U		0.143	10.0	1	02/05/2023 02:08	WG1999823
Pentachlorophenol	U		0.313	10.0	1	02/05/2023 02:08	WG1999823
Phenol	U		4.33	10.0	1	02/05/2023 02:08	WG1999823
2,4,6-Trichlorophenol	U		0.100	10.0	1	02/05/2023 02:08	WG1999823
2,4,5-Trichlorophenol	U		0.109	10.0	1	02/05/2023 02:08	WG1999823

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,3,4,6-Tetrachlorophenol	U	J4	0.231	10.0	1	02/05/2023 02:08	WG1999823
(S) 2-Fluorophenol	*27.3*			*10.0-120*		*02/05/2023 02:08*	WG1999823
(S) Phenol-d5	*18.3*			*10.0-120*		*02/05/2023 02:08*	WG1999823
(S) Nitrobenzene-d5	*56.7*			*10.0-127*		*02/05/2023 02:08*	WG1999823
(S) 2-Fluorobiphenyl	*62.3*			*10.0-130*		*02/05/2023 02:08*	WG1999823
(S) 2,4,6-Tribromophenol	*67.0*			*10.0-155*		*02/05/2023 02:08*	WG1999823
(S) p-Terphenyl-d14	*66.0*			*10.0-128*		*02/05/2023 02:08*	WG1999823

Method Blank (MB)

(MB) R3887608-2 02/04/23 21:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.0886	1.00
Acenaphthylene	U		0.0921	1.00
Anthracene	U		0.0804	1.00
Benzo(a)anthracene	U		0.199	1.00
Benzo(b)fluoranthene	U		0.130	1.00
Benzo(k)fluoranthene	U		0.120	1.00
Benzo(g,h,i)perylene	U		0.121	1.00
Benzo(a)pyrene	U		0.0381	1.00
Bis(2-chlorethoxy)methane	U		0.116	10.0
Bis(2-chloroethyl)ether	U		0.137	10.0
2,2-oxybis(1-chloropropane)	U		0.210	10.0
4-Bromophenyl-phenylether	U		0.0877	10.0
2-Chloronaphthalene	U		0.0648	1.00
4-Chlorophenyl-phenylether	U		0.0926	10.0
Chrysene	U		0.130	1.00
Dibenz(a,h)anthracene	U		0.0644	1.00
3,3-Dichlorobenzidine	U		0.212	10.0
2,4-Dinitrotoluene	U		0.0983	10.0
2,6-Dinitrotoluene	U		0.250	10.0
Fluoranthene	U		0.102	1.00
Fluorene	U		0.0844	1.00
Hexachlorobenzene	U		0.0755	1.00
Hexachloro-1,3-butadiene	U		0.0968	10.0
Hexachlorocyclopentadiene	U		0.0598	10.0
Hexachloroethane	U		0.127	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.143	10.0
Naphthalene	U		0.159	1.00
Nitrobenzene	U		0.297	10.0
n-Nitrosodimethylamine	U		0.998	10.0
n-Nitrosodiphenylamine	U		2.37	10.0
n-Nitrosodi-n-propylamine	U		0.261	10.0
Phenanthrene	U		0.112	1.00
Pyridine	U		0.627	10.0
Benzylbutyl phthalate	U		0.765	3.00
Bis(2-ethylhexyl)phthalate	U		0.895	3.00
Di-n-butyl phthalate	U		0.453	3.00
Diethyl phthalate	U		0.287	3.00
Dimethyl phthalate	U		0.260	3.00
Di-n-octyl phthalate	U		0.932	3.00

Method Blank (MB)

(MB) R3887608-2 02/04/23 21:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Pyrene	U		0.107	1.00
1,2,4-Trichlorobenzene	U		0.0698	10.0
4-Chloro-3-methylphenol	U		0.131	10.0
2-Chlorophenol	U		0.133	10.0
2,4-Dichlorophenol	U		0.102	10.0
2,4-Dimethylphenol	U		0.0636	10.0
4,6-Dinitro-2-methylphenol	U		1.12	10.0
2,4-Dinitrophenol	U		5.93	10.0
2-Methylphenol	U		0.0929	10.0
3&4-Methyl Phenol	U		0.168	10.0
2-Nitrophenol	U		0.117	10.0
4-Nitrophenol	U		0.143	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		4.33	10.0
2,4,6-Trichlorophenol	U		0.100	10.0
2,4,5-Trichlorophenol	U		0.109	10.0
2,3,4,6-Tetrachlorophenol	U		0.231	10.0
(S) 2-Fluorophenol	*26.2*			*10.0-120*
(S) Phenol-d5	*17.3*			*10.0-120*
(S) Nitrobenzene-d5	*52.2*			*10.0-127*
(S) 2-Fluorobiphenyl	*59.1*			*10.0-130*
(S) 2,4,6-Tribromophenol	*51.0*			*10.0-155*
(S) p-Terphenyl-d14	*71.8*			*10.0-128*

Laboratory Control Sample (LCS)

(LCS) R3887608-1 02/04/23 21:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	50.0	40.4	80.8	41.0-120	
Acenaphthylene	50.0	43.5	87.0	43.0-120	
Anthracene	50.0	42.2	84.4	45.0-120	
Benzo(a)anthracene	50.0	47.3	94.6	47.0-120	
Benzo(b)fluoranthene	50.0	45.0	90.0	46.0-120	
Benzo(k)fluoranthene	50.0	42.9	85.8	46.0-120	
Benzo(g,h,i)perylene	50.0	51.6	103	48.0-121	
Benzo(a)pyrene	50.0	49.3	98.6	47.0-120	
Bis(2-chlorethoxy)methane	50.0	37.1	74.2	33.0-120	
Bis(2-chloroethyl)ether	50.0	32.8	65.6	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3887608-1 02/04/23 21:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,2-oxybis(1-chloropropane)	50.0	31.5	63.0	28.0-120	
4-Bromophenyl-phenylether	50.0	42.5	85.0	45.0-120	
2-Chloronaphthalene	50.0	38.8	77.6	37.0-120	
4-Chlorophenyl-phenylether	50.0	41.7	83.4	44.0-120	
Chrysene	50.0	46.5	93.0	48.0-120	
Dibenz(a,h)anthracene	50.0	51.2	102	47.0-120	
3,3-Dichlorobenzidine	100	87.1	87.1	44.0-120	
2,4-Dinitrotoluene	50.0	46.9	93.8	49.0-124	
2,6-Dinitrotoluene	50.0	46.2	92.4	46.0-120	
Fluoranthene	50.0	49.6	99.2	51.0-120	
Fluorene	50.0	43.0	86.0	47.0-120	
Hexachlorobenzene	50.0	39.3	78.6	44.0-120	
Hexachloro-1,3-butadiene	50.0	27.7	55.4	19.0-120	
Hexachlorocyclopentadiene	50.0	26.5	53.0	15.0-120	
Hexachloroethane	50.0	29.2	58.4	15.0-120	
Indeno(1,2,3-cd)pyrene	50.0	49.0	98.0	49.0-122	
Isophorone	50.0	36.9	73.8	36.0-120	
Naphthalene	50.0	29.8	59.6	27.0-120	
Nitrobenzene	50.0	33.7	67.4	27.0-120	
n-Nitrosodimethylamine	50.0	30.9	61.8	10.0-120	
n-Nitrosodiphenylamine	50.0	37.5	75.0	47.0-120	
n-Nitrosodi-n-propylamine	50.0	38.6	77.2	31.0-120	
Phenanthrene	50.0	47.4	94.8	46.0-120	
Pyridine	50.0	9.12	18.2	10.0-120	
Benzylbutyl phthalate	50.0	52.5	105	43.0-121	
Bis(2-ethylhexyl)phthalate	50.0	48.9	97.8	43.0-122	
Di-n-butyl phthalate	50.0	52.4	105	49.0-121	
Diethyl phthalate	50.0	46.1	92.2	48.0-122	
Dimethyl phthalate	50.0	45.0	90.0	48.0-120	
Di-n-octyl phthalate	50.0	56.7	113	42.0-125	
Pyrene	50.0	47.1	94.2	47.0-120	
1,2,4-Trichlorobenzene	50.0	28.7	57.4	24.0-120	
4-Chloro-3-methylphenol	50.0	37.9	75.8	40.0-120	
2-Chlorophenol	50.0	26.3	52.6	25.0-120	
2,4-Dichlorophenol	50.0	31.9	63.8	36.0-120	
2,4-Dimethylphenol	50.0	30.1	60.2	33.0-120	
4,6-Dinitro-2-methylphenol	50.0	54.3	109	38.0-138	
2,4-Dinitrophenol	50.0	44.4	88.8	10.0-120	
2-Methylphenol	50.0	24.8	49.6	28.0-120	
3&4-Methyl Phenol	50.0	24.1	48.2	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3887608-1 02/04/23 21:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Nitrophenol	50.0	30.9	61.8	31.0-120	
4-Nitrophenol	50.0	21.2	42.4	10.0-120	
Pentachlorophenol	50.0	37.8	75.6	23.0-120	
Phenol	50.0	12.5	25.0	10.0-120	
2,4,6-Trichlorophenol	50.0	41.0	82.0	42.0-120	
2,4,5-Trichlorophenol	50.0	43.9	87.8	44.0-120	
2,3,4,6-Tetrachlorophenol	50.0	86.6	173	42.0-132	J4
(S) 2-Fluorophenol			*30.9*	*10.0-120*	
(S) Phenol-d5			*21.5*	*10.0-120*	
(S) Nitrobenzene-d5			*61.5*	*10.0-127*	
(S) 2-Fluorobiphenyl			*79.2*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*82.0*	*10.0-155*	
(S) p-Terphenyl-d14			*82.4*	*10.0-128*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Kennedy Jenks - Portland, OR

421 SW 6th Avenue
Suite 1000
Portland. OR 97204

Billing Information:

Pres Chk

Report to:
Shaelyn Thomas

Email To:
ShaelynThomas@kennedyjenks.com;labdata@k

Project Description:

City/State Collected:

Please Circle: PT MT CT ET

Phone: **503-423-4033**

Client Project #

Lab Project #
KENJENPOR-TETRAPAK

Collected by (print): Rich Palmer

Site/Facility ID #

P.O. #

Collected by (signature): Rich Palmer

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SVOCs 8270* 100ml Amb NoPres
~~MW-1~~		GW		~~1/31/23~~			
MW-2	grab	GW		1/31/23	1054	2	X
~~MW-3~~		GW		~~1/31/23~~			
MW-5	grab	GW		1/31/23	1010	2	X
MW-6	grab	GW		~~1208 1/31~~	1208	2	X
MW-7	grab	GW		~~1131 1/31~~	1131	2	X
MW-8	grab	GW		~~1302 1/31~~	1302	2	X
Dup-1	grab	GW		1/31/23	1200	2	X

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 158698

G150

Acctnum: **KENJENPOR**
Template: **T222891**
Prelogin: **P974783**
PM: **110 - Brian Ford**
PB: KP 1/23/23

Shipped Via:

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*SVOCs 8270 including Pentachlorophenol and all Tetrachlorophenols and Trichlorophenols.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6094 5456 0530

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Rich Palmer	1/31/23	14:00		0
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.7 °C Bottles Received: 12 NSA6
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/2/23 Time: 1030

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Data Validation Report

Site/Facility Name: Vancouver
Laboratory Sample Delivery Group: L1581698
Laboratory Report Date: 2023-02-06
Date Validated: 2023-03-07
Laboratory Name: Pace Analytical Services, Mt.Juliet, TN
Laboratory Location: Mt. Juliet, TN

Table 1. Data Validation Summary

Quality Control Element	Item Checked?	Issue Noted?	Data Qualified?
Chain of Custody	X		
Sample Preservation	X		
Holding Time	X		
Method Blanks	X		
Trip Blanks	NA		
Laboratory Control Samples	X	X	
Matrix Spikes	NA		
Surrogate Recovery	X		
Laboratory Duplicates	NA		
Field Blank Samples	NA		
Field Duplicate Samples	X		
Chromatograms Provided	NA		
Dissolved Metals Field Filtered	NA		
Other Issues or Information	X	X	

Data Validation Details

Trip Blanks
Trip blanks were not collected or associated with this sample delivery group.

Laboratory Control Samples
Lab Sample ID: (LCS) R3887608-1 Batch: WG1999823
2,3,4,6-Tetrachlorophenol was recovered above the laboratory acceptance criteria at 173%. The associated samples were not detected, no action taken.

Matrix Spikes
Project specific matrix spikes were not analyzed for samples in this sample delivery group.

Laboratory Duplicates
Laboratory duplicates were not required by the methods in this sample delivery group.

Field Blank Samples
Field blanks (i.e. equipment blank, field blank, rinsate blank) were not collected or associated with this sample delivery group.

Field Duplicate Samples
The RPDs for the duplicate pair MW-5-20230131 and DUP-1-20230131 were 0.0%, there were no detections. The RPDs were within acceptance criteria, no action taken.

Chromatograms Provided
Petroleum analyses were not performed for this sample delivery group.

Dissolved Metals Field Filtered
Dissolved metals were not analyzed for samples in this sample delivery group.

Other Issues or Information
Dates added to sample IDs for uniqueness.

Method 8270E list was missing analyte 2,3,5,6-Tetrachlorophenol which was sub-contracted to Pace Analytical Gulf Coast, Baton Rouge, LA. Reference SDG L1584369 for 2,3,5,6-Tetrachlorophenol results and data validation.

Data Usability Statement:

Based on the data validation review, the data are acceptable as delivered. The findings with respect to the quality assurance/quality control (QA/QC) data identified in this report do not adversely affect the use of the analytical results.

Table 2. Description of samples

Sample ID	Sample Date	Lab Sample ID	Sample Type	Matrix	SW8270E
DUP-1-20230131	2023-01-31	L1581698-06	FD	WG	X
MW-2-20230131	2023-01-31	L1581698-01	N	WG	X
MW-5-20230131	2023-01-31	L1581698-02	N	WG	X
MW-6-20230131	2023-01-31	L1581698-03	N	WG	X
MW-7-20230131	2023-01-31	L1581698-04	N	WG	X
MW-8-20230131	2023-01-31	L1581698-05	N	WG	X

Table 3. Parent sample identification

Sample ID	Parent Sample ID	Sample Type
DUP-1-20230131	MW-5-20230131	FD

Table 4. Data that have been qualified are listed below.

Sample ID	Lab Sample ID	Analytic Method	CasRN	Parameter Name	Validated Result	Unit	Validator Reason
Not applicable							

Abbreviations

FD	Field Duplicate Sample
N	Normal Environmental Sample
NA	Not Applicable
WG	Ground Water
X	Item checked

ANALYTICAL REPORT

February 16, 2023

Kennedy Jenks - Portland, OR

Sample Delivery Group:	L1584369
Samples Received:	02/02/2023
Project Number:	
Description:	

Report To: Shaelyn Thomas
421 SW 6th Avenue
Suite 1000
Portland, OR 97204

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-2 L1584369-01 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 10:54 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2005099	1	02/16/23 00:00	02/16/23 00:00	-	Baton Rouge, LA 70820

MW-5 L1584369-02 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 10:10 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2005099	1	02/16/23 00:00	02/16/23 00:00	-	Baton Rouge, LA 70820

MW-6 L1584369-03 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 12:08 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2005099	1	02/16/23 00:00	02/16/23 00:00	-	Baton Rouge, LA 70820

MW-7 L1584369-04 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 11:31 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2005099	1	02/16/23 00:00	02/16/23 00:00	-	Baton Rouge, LA 70820

DUP-1 L1584369-06 GW

Collected by: Rich Palmer | Collected date/time: 01/31/23 12:00 | Received date/time: 02/02/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2005099	1	02/16/23 00:00	02/16/23 00:00	-	Baton Rouge, LA 70820

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Project Narrative

MW-8: no sample volume remaining, could not be analyzed.
L1584369 -01, -02, -03, -04, -06 contains subout data that is included after the chain of custody.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Kennedy Jenks - Portland, OR

421 SW 6th Avenue
Suite 1000
Portland. OR 97204

Billing Information:

Pres Chk

Report to: **Shaelyn Thomas**

Email To: **ShaelynThomas@kennedyjenks.com;labdata@k**

Project Description:

City/State Collected:

Please Circle: PT MT CT ET

Phone: **503-423-4033**

Client Project #

Lab Project # **KENJENPOR-TETRAPAK**

Collected By (print): Rich Palmer

Site/Facility ID #

P.O. #

Collected by (signature): Rich Palmer

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # ~~L1584369~~ L1584369
G150
L1584369

Acctnum: **KENJENPOR**

Template: **T222891**

Prelogin: **P974783**

PM: **110 - Brian Ford**

PB: KP 1/23/23

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SVOCs 8270* 100ml Amb NoPres	Remarks	Sample # (lab only)
~~MW-1~~		GW		~~1/31/23~~					
MW-2	grab	GW		1/31/23	1054	2	X	01	-01
~~MW-3~~		GW		~~1/31/23~~					
MW-5	grab	GW		1/31/23	1010	2	X	02	-02
MW-6	grab	GW		~~1208 1/31~~	1208	2	X	03	-03
MW-7	grab	GW		~~1131 1/31~~	1131	2	X	04	-04
MW-8	grab	GW		~~1302 1/31~~	1302	2	X	05	-05
Dup-1	grab	GW		1/31/23	1200	2	X	06	-06

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*SVOCs 8270 including Pentachlorophenol and all Tetrachlorophenols and Trichlorophenols.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6094 5456 0530

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y __N
COC Signed/Accurate: Y __N
Bottles arrive intact: Y __N
Correct bottles used: Y __N
Sufficient volume sent: Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Rich Palmer	1/31/23	14:00		0
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.7 °C Bottles Received: 12 NSAG
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/2/23 Time: 1030

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

1581698 1

L1581698 KENJENPOR re-log

R5

Please re-log all samples for SUB8270MISC with comment 2,3,5,6 Tetrachlorophenol only as R5 due 02/27.

will be analyzed out of hold.

Time estimate: oh **Time spent:** oh

Members

Brian Ford Jimmy Huckaba

LELAP Certificate Number: 01955
A2LA Accredited (DoD ELAP-QSM 5.4) Certificate Number: 6429.01

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 02/16/2023

Report # 223021409

Project WG2005099 L1584369

Samples Collected 1/31/23

Deliver To	***Additional Recipients***
Brian Ford	SuboutTeam, Pace Analytical Services
Pace Analytical Services, Inc	Jimmy Huckaba, Pace Analytical Services, Inc.
12065 Lebanon Road	Angela Ford, Pace Analytical Services, Inc.
Mount Juliet, TN 37122	

A2LA ACCREDITED
CERT # 6429.01

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 223021409

Certifications

Certification	Certification Number
A2LA Accredited (DoD ELAP-QSM 5.4)	6429.01
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: Pace Analytical Services **Report:** 223021409

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

COC ANOMALIES

COC Anomalies\Changes - Samples were received outside of the extraction holding time (Ruth Welsh(Do Not 02/15/2023 06:43)

SEMI-VOLATILES MASS SPECTROMETRY

In the EPA-8270 analysis of sample 22302140903 (MW-6), the surrogate solution was inadvertently added twice in the prep phase. The amount spiked was adjusted in the LIMS to reflect this and all spike recoveries were acceptable so no corrective action was taken

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22302140901	MW-2	Water	1/31/23 10:54	2/14/23 09:54
22302140902	MW-5	Water	1/31/23 10:10	2/14/23 09:54
22302140903	MW-6	Water	1/31/23 12:08	2/14/23 09:54
22302140904	MW-7	Water	1/31/23 11:31	2/14/23 09:54
22302140905	DUP-1	Water	1/31/23 12:00	2/14/23 09:54

Detect Summary

No analytes were detected for analyses performed by Pace Gulf Coast.

Sample Results

MW-2

Collect Date 01/31/2023 10:54 **Lab ID** 22302140901
Receive Date 02/14/2023 09:54 **Matrix** Water

EPA 8270D RVT

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
02/15/23 07:00	759825	EPA 3510C RV	1	02/16/23 12:32	759953	SMH	NA

CAS#	Parameter	Result	LOQ	Units
935-95-5	2,3,5,6-Tetrachlorophenol	ND	10.0	ug/L

CAS#	Surrogate	Conc Spiked	Conc Rec	Units	%Recovery	%Rec Limits
4165-60-0	Nitrobenzene-d5	50	39.2	ug/L	78	44 - 120
321-60-8	2-Fluorobiphenyl	50	33.8	ug/L	68	44 - 119
1718-51-0	Terphenyl-d14	50	57	ug/L	114	50 - 134
4165-62-2	Phenol-d5	100	35.6	ug/L	36	10 - 120
367-12-4	2-Fluorophenol	100	51.1	ug/L	51	19 - 119
118-79-6	2,4,6-Tribromophenol	100	79.5	ug/L	80	43 - 140

MW-5

Collect Date 01/31/2023 10:10 **Lab ID** 22302140902
Receive Date 02/14/2023 09:54 **Matrix** Water

EPA 8270D RVT

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
02/15/23 07:00	759825	EPA 3510C RV	1	02/16/23 12:53	759953	SMH	NA

CAS#	Parameter	Result	LOQ	Units
935-95-5	2,3,5,6-Tetrachlorophenol	ND	10.0	ug/L

CAS#	Surrogate	Conc Spiked	Conc Rec	Units	%Recovery	%Rec Limits
4165-60-0	Nitrobenzene-d5	50	41	ug/L	82	44 - 120
321-60-8	2-Fluorobiphenyl	50	35.8	ug/L	72	44 - 119
1718-51-0	Terphenyl-d14	50	57.1	ug/L	114	50 - 134
4165-62-2	Phenol-d5	100	36.3	ug/L	36	10 - 120
367-12-4	2-Fluorophenol	100	52	ug/L	52	19 - 119
118-79-6	2,4,6-Tribromophenol	100	76	ug/L	76	43 - 140

MW-6

Collect Date 01/31/2023 12:08 **Lab ID** 22302140903
Receive Date 02/14/2023 09:54 **Matrix** Water

EPA 8270D RVT

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
02/15/23 07:00	759825	EPA 3510C RV	1	02/16/23 13:14	759953	SMH	NA

CAS#	Parameter	Result	LOQ	Units
935-95-5	2,3,5,6-Tetrachlorophenol	ND	10.0	ug/L

CAS#	Surrogate	Conc Spiked	Conc Rec	Units	%Recovery	%Rec Limits
4165-60-0	Nitrobenzene-d5	100	84.2	ug/L	84	44 - 120
321-60-8	2-Fluorobiphenyl	100	71.1	ug/L	71	44 - 119
1718-51-0	Terphenyl-d14	100	106	ug/L	106	50 - 134
4165-62-2	Phenol-d5	200	80.5	ug/L	40	10 - 120
367-12-4	2-Fluorophenol	200	113	ug/L	57	19 - 119
118-79-6	2,4,6-Tribromophenol	200	156	ug/L	78	43 - 140

Sample Results

MW-7

Collect Date 01/31/2023 11:31 **Lab ID** 22302140904
Receive Date 02/14/2023 09:54 **Matrix** Water

EPA 8270D RVT

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
02/15/23 07:00	759825	EPA 3510C RV	1	02/16/23 13:35	759953	SMH	NA

CAS#	Parameter	Result	LOQ	Units
935-95-5	2,3,5,6-Tetrachlorophenol	ND	10.0	ug/L

CAS#	Surrogate	Conc Spiked	Conc Rec	Units	%Recovery	%Rec Limits
4165-60-0	Nitrobenzene-d5	50	39.3	ug/L	79	44 - 120
321-60-8	2-Fluorobiphenyl	50	33.8	ug/L	68	44 - 119
1718-51-0	Terphenyl-d14	50	52.5	ug/L	105	50 - 134
4165-62-2	Phenol-d5	100	33.5	ug/L	34	10 - 120
367-12-4	2-Fluorophenol	100	49.5	ug/L	50	19 - 119
118-79-6	2,4,6-Tribromophenol	100	77.2	ug/L	77	43 - 140

DUP-1

Collect Date 01/31/2023 12:00 **Lab ID** 22302140905
Receive Date 02/14/2023 09:54 **Matrix** Water

EPA 8270D RVT

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
02/15/23 07:00	759825	EPA 3510C RV	1	02/16/23 13:56	759953	SMH	NA

CAS#	Parameter	Result	LOQ	Units
935-95-5	2,3,5,6-Tetrachlorophenol	ND	10.0	ug/L

CAS#	Surrogate	Conc Spiked	Conc Rec	Units	%Recovery	%Rec Limits
4165-60-0	Nitrobenzene-d5	50	36.7	ug/L	73	44 - 120
321-60-8	2-Fluorobiphenyl	50	30.8	ug/L	62	44 - 119
1718-51-0	Terphenyl-d14	50	56.7	ug/L	113	50 - 134
4165-62-2	Phenol-d5	100	30.3	ug/L	30	10 - 120
367-12-4	2-Fluorophenol	100	45.6	ug/L	46	19 - 119
118-79-6	2,4,6-Tribromophenol	100	77.2	ug/L	77	43 - 140

GC/MS Semi-Volatiles QC Summary

Analytical Batch	Client ID	MB759825	
759953	Lab ID	2451456	
Prep Batch	Sample Type	MB	
759825	Prep Date	02/15/23 07:00	
Prep Method	Analysis Date	02/16/23 09:44	
EPA 3510C RV	Matrix	Water	
EPA 8270D RVT		Units Result	ug/L LOQ
2,3,5,6-Tetrachlorophenol	935-95-5	ND	10.0
Surrogate	**CAS#**	**Rec**	**%R**
2,4,6-Tribromophenol	118-79-6	55.9	56
2-Fluorobiphenyl	321-60-8	27.4	55
2-Fluorophenol	367-12-4	41.3	41
Nitrobenzene-d5	4165-60-0	31.4	63
Phenol-d5	4165-62-2	27.6	28
Terphenyl-d14	1718-51-0	45.9	92

Client ID: 4367 - Pace Analytical Services
SDG: 223021409
PM: RWe

CHAIN-OF-CUSTODY / Analytical Request
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mu

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: Pace Analytical	Report To: Pace Analytical Subout Team	Attention: Shaelyn Thomas	
Address: 12065 Lebanon Rd.	Copy To:	Company Name:	Regulatory Agency
Mt. Juliet, TN 37122		Address:	
Email: MTJLSuboutTeam@pacelabs.com	Purchase Order #: L1584369	Pace Quote:	
Phone: (615) 773-9756 Fax (615) 758-5859	Project Name:	Pace Project Manager: Ruth Welsh	State / Location
Requested Due Date: 27-Feb	Project #:	Pace Profile #: 38076	WA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): 2,3,5,6 Tetrachlorophenol by 8270	Residual Chlorine (Y/N)	
1	MW-2	WT				31-Jan	10:54		1	1								X			2,3,5,6 Tetrachlorophenol only.
2	MW-5	WT				31-Jan	10:10		1	1								X			2,3,5,6 Tetrachlorophenol only.
3	MW-6	WT				31-Jan	12:08		1	1								X			2,3,5,6 Tetrachlorophenol only.
4	MW-7	WT				31-Jan	11:31		1	1								X			2,3,5,6 Tetrachlorophenol only.
5	DUP-1	WT				31-Jan	12:00		1	1								X			2,3,5,6 Tetrachlorophenol only.
6																					
7																					
8																					
9																					
10																					
11																					
12																					

1 2 3 4 5

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	James C Huckaba	13-Feb	10:32				
Pace Analytical Batch: WG2005099	Fed Ex	2/14/23	954		2/14/23	954	5 3 8
Pace Analytical SDGs: L1584369							2.7
Location: Baton Rouge, LA 70820							

6295 1091 1311

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:						
SIGNATURE of SAMPLER:	DATE Signed:					

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 223021409	
Client **PM** RWe 4367 - Pace Analytical Services	**Transport Method** FEDEX
Profile Number 302126	**Received By** Roberts, George S.
Line Item(s) 2 - 8270	**Receive Date(s)** 02/14/23

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E38	Temp °C
		2.7

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

Data Validation Report

Site/Facility Name: Vancouver
Laboratory Sample Delivery Group: L1584369
Laboratory Report Date: 2023-02-16
Date Validated: 2023-03-07
Laboratory Name: Pace Analytical Services, Mt.Juliet, TN
Laboratory Location: Mt. Juliet, TN

Table 1. Data Validation Summary

Quality Control Element	Item Checked?	Issue Noted?	Data Qualified?
Chain of Custody	X		
Sample Preservation	X		
Holding Time	X	X	X
Method Blanks	X		
Trip Blanks	NA		
Laboratory Control Samples	X	X	
Matrix Spikes	NA		
Surrogate Recovery	X		
Laboratory Duplicates	NA		
Field Blank Samples	NA		
Field Duplicate Samples	X		
Chromatograms Provided	NA		
Dissolved Metals Field Filtered	NA		
Other Issues or Information	X	X	

Data Validation Details

Holding Time
Samples MW-2-20230131, MW-5-20230131, MW-6-20230131, MW-7-20230131 and DUP-1-20230131 were extracted outside the method recommended holding time of 7 days. The associated sample results were not detected, qualified as rejected, R.

Trip Blanks
Trip blanks were not collected or associated with this sample delivery group.

Laboratory Control Samples
Per Pace Analytical project manager Brian Ford via email on 3/3/2023 associated compound 2,3,5,6-Tetrachlorophenol was not included in the laboratory spike due to being rarely requested or reported, therefore no LCS/LCSD samples were available. Samples were qualified as rejected, R, based upon holding time exceedances, no additional action taken.

Matrix Spikes
Project specific matrix spikes were not analyzed for samples in this sample delivery group.

Surrogate Recovery
The laboratory report noted:
"In the EPA-8270 analysis of sample 22302140903 (MW-6), the surrogate solution was inadvertently added twice in the prep phase. The amount spiked was adjusted in the LIMS to reflect this and all spike recoveries were acceptable so no corrective action was taken." No action taken.

Laboratory Duplicates
Laboratory duplicates were not required by the methods in this sample delivery group.

Field Blank Samples
Field blanks were not collected or associated with this sample delivery group.

Field Duplicate Samples
The RPD for the duplicate pair MW-5-20230131 and DUP-1-20230131 was 0.0%, there were no detections. The RPDs were within acceptance criteria, no action taken.

Chromatograms Provided
Petroleum analyses were not performed for this sample delivery group.

Dissolved Metals Field Filtered
Dissolved metals were not analyzed for samples in this sample delivery group.

Other Issues or Information
Date has been added to sample ID for uniqueness.

Initial analysis of method 8270E was missing analyte 2,3,5,6-Tetrachlorophenol which was sub-contracted to Pace Analytical Gulf Coast, Baton Rouge, LA and included in this data validation. Reference SDG L1581698 from Pace Analytical, Mt. Juliet, TN for additional analyte results and data validation. For project associated sample MW-8 there was no sample volume remaining for analysis, no action was taken.

Data Usability Statement:
Based on the data validation review, the data are acceptable as delivered. The findings with respect to the quality assurance/quality control (QA/QC) data identified in this report do not adversely affect the use of the analytical results except for results rejected due to holding time exceedances.

Table 2. Description of samples

Sample ID	Sample Date	Lab Sample ID	Sample Type	Matrix	SW8270D
DUP-1-20230131	2023-01-31	22302140905	FD	WG	X
MW-2-20230131	2023-01-31	22302140901	N	WG	X
MW-5-20230131	2023-01-31	22302140902	N	WG	X
MW-6-20230131	2023-01-31	22302140903	N	WG	X
MW-7-20230131	2023-01-31	22302140904	N	WG	X

Table 3. Parent sample identification

Sample ID	Parent Sample ID	Sample Type
DUP-1-20230131	MW-5-20230131	FD

Table 4. Data that have been qualified are listed below.

Sample ID	Lab Sample ID	Analytic Method	CasRN	Parameter Name	Validated Result	Unit	Validator Reason
DUP-1-20230131	22302140905	SW8270D	935-95-5	2,3,5,6-Tetrachlorophenol	< 10.0 R	ug/l	R due to holding time exceedance
MW-2-20230131	22302140901	SW8270D	935-95-5	2,3,5,6-Tetrachlorophenol	< 10.0 R	ug/l	R due to holding time exceedance
MW-5-20230131	22302140902	SW8270D	935-95-5	2,3,5,6-Tetrachlorophenol	< 10.0 R	ug/l	R due to holding time exceedance
MW-6-20230131	22302140903	SW8270D	935-95-5	2,3,5,6-Tetrachlorophenol	< 10.0 R	ug/l	R due to holding time exceedance
MW-7-20230131	22302140904	SW8270D	935-95-5	2,3,5,6-Tetrachlorophenol	< 10.0 R	ug/l	R due to holding time exceedance

Abbreviations

FD	Field Duplicate Sample
N	Normal Environmental Sample
NA	Not Applicable
R	The result has been rejected based on data validation findings.
ug/l	micrograms per liter
WG	Ground Water
X	Item checked

Attachment B

Groundwater Sampling and Purge Forms

WELL GAUGING DATA

Project # 230131-RP1 Date 1/31/23 Client Kennedy Jenks

Site 3125 Thompson Ave Vancouver, WA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
mw-1	0910	2	—	—	—	—	Dry	50.10		
mw-2	0900	2	—	—	—	—	46.45	50.35		
mw-3	0845	1.5	—	—	—	—	45.70	51.80		blocked
mw-5	0855	2	—	—	—	—	46.15	58.30		
mw-6	0920	2	—	—	—	—	44.78	54.18		
mw-7	0905	2	—	—	—	—	44.67	54.55		
mw-8	0935	2	—	—	—	—	43.25	54.50	↓	

LOW FLOW WELL MONITORING DATA SHEET

Project #: 230131-RP1	Client: Kennedy Jenks
Sampler: Rich Palmer	Gauging Date: 1/31/23
Well I.D.: MW-1	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 50.10	Depth to Water (ft.): Dry
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type:

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
Sampling Method: Dedicated Tubing New Tubing Other
Start Purge Time: Flow Rate: Pump Depth:

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
	—		Well	is	dry			
				No	sample		take	

Did well dewater? Yes No Amount actually evacuated:
Sampling Time: Sampling Date:
Sample I.D.: Laboratory:
Analyzed for: TPH-G BTEX MTBE TPH-D Other:
Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 230131-RP1	Client: Kennedy Jenks
Sampler: Rich P	Gauging Date: 1/31/23
Well I.D.: MW-2	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 50.35	Depth to Water (ft.): 46.45
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | Peristaltic Pump | (Bladder Pump)
Sampling Method: (Dedicated Tubing) | New Tubing | Other ___

Start Purge Time: 1039 Flow Rate: 200 mL/MIN Pump Depth: 48'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1042	8.74	7.14	0.118	62	13.33	-28.1	600	46.45
1045	10.30	7.18	0.124	46	13.46	-29.8	1200	46.45
1048	11.21	7.19	0.129	25	13.30	-24.9	1800	46.45
1051	11.22	7.20	0.129	25	13.31	-24.8	2400	46.45
1053	11.23	7.20	0.130	25	13.33	-24.7	3000	46.45

Did well dewater? Yes (No) Amount actually evacuated: 3000 mL

Sampling Time: 1054 Sampling Date: 1/31/23

Sample I.D.: MW-2 Laboratory: Pace

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time ___ Duplicate I.D.: —

LOW FLOW WELL MONITORING DATA SHEET

Project #: 230131-RP1	Client: Kennedy Jenks
Sampler: Rich Palmer	Gauging Date: 1/31/23
Well I.D.: MW-5	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 58.30	Depth to Water (ft.): 46.15
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | Peristaltic Pump | (Bladder Pump)
Sampling Method: (Dedicated Tubing) | New Tubing | Other ___

Start Purge Time: 0955 Flow Rate: 200 mL/min Pump Depth: 52'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0958	10.36	7.11	0.130	32	15.52	-46.0	600	46.15
1001	10.49	7.10	0.131	25	15.08	-44.7	1200	46.15
1003	10.96	6.98	0.134	20	13.80	-33.1	1800	46.15
1006	10.99	6.98	0.134	20	13.85	-32.8	2400	46.15
1009	11.00	6.97	0.135	20	13.80	-33.1	3000	46.15

Did well dewater? Yes (No)	Amount actually evacuated: 3000 mL
Sampling Time: 1010	Sampling Date: 1/31/23
Sample I.D.: MW-5	Laboratory: Pace
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.: Dup-1 @ 1200

LOW FLOW WELL MONITORING DATA SHEET

Project #: 230131-RP1	Client: Kennedy Jenk
Sampler: Rich Palmer	Gauging Date: 1/31/23
Well I.D.: MW-6	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 54.18	Depth to Water (ft.): 44.78
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" ~~Grundfos Pump~~ Peristaltic Pump (Bladder Pump)
Sampling Method: (Dedicated Tubing) New Tubing Other ___

Start Purge Time: 1152 Flow Rate: 200 mL/MIN Pump Depth: 50'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1155	10.31	6.76	0.166	93	13.91	3.5	600	44.78
1158	10.99	6.81	0.168	76	13.91	-6.3	1200	44.78
1201	11.00	6.81	0.169	55	14.14	-6.2	1800	44.78
1204	11.01	6.82	0.170	55	14.15	-6.2	2400	44.78
1207	11.00	6.82	0.170	55	14.14	-6.2	3000	44.78

Did well dewater? Yes (No) Amount actually evacuated: 3000 mL

Sampling Time: 1208 Sampling Date: 1/31/23

Sample I.D.: MW-6 Laboratory: Pace

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ ~~Time~~ Duplicate I.D.: —

LOW FLOW WELL MONITORING DATA SHEET

Project #: 230131-RP1	Client: Kennedy Jenks
Sampler: Rich Palmer	Gauging Date: 1/31/23
Well I.D.: MW-7	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 54.55	Depth to Water (ft.): 44.67
Depth to Free Product: ~~	Thickness of Free Product (feet): ~~
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: ~~2" Grundfos Pump~~ Peristaltic Pump (Bladder Pump)
Sampling Method: (Dedicated Tubing) New Tubing Other ___

Start Purge Time: 1115 Flow Rate: 200 mL/min Pump Depth: 50'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1118	10.05	6.71	0.094	107	34.44	-8.6	600	44.67
1121	10.54	6.75	0.096	79	16.66	-6.7	1200	44.67
1124	11.15	6.80	0.102	50	14.36	-2.2	1800	44.67
1127	11.14	6.80	0.102	50	14.36	-2.2	2400	44.67
1130	11.14	6.81	0.100	50	14.38	-2.1	3000	44.67

Did well dewater? Yes (No) Amount actually evacuated: 3000 mL

Sampling Time: 1131 Sampling Date: 1/31/23

Sample I.D.: MW-7 Laboratory: Pace

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See CoC

Equipment Blank I.D.: ~~ @ Time Duplicate I.D.: ~~

LOW FLOW WELL MONITORING DATA SHEET

Project #: 230131 -RP1	Client: Kennedy Jenks
Sampler: Rich Palmer	Gauging Date: 1/31/23
Well I.D.: MW-8	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): 54.50	Depth to Water (ft.): 43.25
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | Peristaltic Pump | (Bladder Pump)
Sampling Method: (Dedicated Tubing) | New Tubing | Other ___

Start Purge Time: 1246 Flow Rate: 200 mL/min Pump Depth: 49'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1249	9.53	6.88	0.141	40	20.58	-6.1	600	43.25
1252	10.84	6.82	0.143	38	14.98	-3.0	1200	43.25
1255	11.47	6.76	0.146	30	14.01	-1	1800	43.25
1258	11.48	6.76	0.146	30	14.08	-0.8	2400	43.25
1301	11.49	6.76	0.145	30	14.05	-0.8	3000	43.25

Did well dewater? Yes (No) Amount actually evacuated: 3000 mL

Sampling Time: 1302 Sampling Date: 1/31/23

Sample I.D.: MW-8 Laboratory: Pace

Analyzed for: TPH-G BTEX MTBE TPH-D Other: — see COC

Equipment Blank I.D.: — @ Time Duplicate I.D.: —

Company Name/Address:
Kennedy Jenks - Portland, OR

421 SW 6th Avenue
Suite 1000
Portland, OR 97204

Billing Information:

Pres Chk

Report to: **Shaelyn Thomas**

Email To: **ShaelynThomas@kennedyjenks.com;labdata@k**

Project Description:

City/State Collected:

Please Circle: PT MT CT ET

Phone: **503-423-4033**

Client Project #

Lab Project # **KENJENPOR-TETRAPAK**

Collected by (print): Rich Palmer

Site/Facility ID #

P.O. #

Collected by (signature): Rich Palmer

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SVOCs 8270* 100ml Amb NoPres									
~~Replicate 1~~		GW		1/31/23												
MW-2	grab	GW		1/31/23	1054	2	X									
~~Replicate 3~~		GW		1/31/23												
MW-5	grab	GW		1/31/23	1010	2	X									
MW-6	grab	GW		1/31/23	1206	2	X									
MW-7	grab	GW		1/31/23	1131	2	X									
MW-8	grab	GW		1/31/23	1302	2	X									
Dup-1	grab	GW		1/31/23	1206	2	X									

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG #

Table #

Acctnum: **KENJENPOR**
Template: **T222891**
Prelogin: **P974783**
PM: **110 - Brian Ford**
PB: KP 1/12/23

Shipped Via:

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:*SVOCs 8270 including Pentachlorophenol and all Tetrachlorophenols and Trichlorophenols.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Rich Palmer	1/31/23	14:00			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

WELLHEAD INSPECTION FORM

Client: Kennedy Jenks Site: 3185 Thompson Ave Van WA Date: 1/31/23

Job #: 230131-RP1 Technician: Rick P Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Check indicates deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (list qty)	Tabs stripped (list qty)	Tabs broken (list qty)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (list if cap or lick replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe damaged, or any specific details not covered by checklist)
mw-1	X														
mw-2	X														
mw-3	X														
mw-5	X														
mw-6	X														
mw-7	X														
mw-8	X														

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Tetra Pak 3125 Thompson Ave Van WA				PROJECT NUMBER 230131 -RP1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSi 556	12010264G	1/31/23 0730	pH 4 7 10	7.07 ✓	—	12.25	RP
		↓	COND 3900	3862 ✓	—	12.21	RP
			ORP 240	250 ✓	—	12.33	RP
			D.O. 100	101.1 ✓	—	—	RP

PURGE DRUM INVENTORY LOG

CLIENT Kennedy Jenk

SITE ADDRESS Tetra Pak 3125 Thompson Ave Van WA

STATUS OF DRUM(S) UPON ARRIVAL							
Number of drum(s) empty:	1						
Number of drum(s) 1/4 full:	0						
Number of drum(s) 1/2 full:	0						
Number of drum(s) 3/4 full:	0						
Number of drum(s) full:	0						
Total drum(s) on site:	1						
STATUS OF DRUM(S) UPON DEPARTURE							
Number of drum(s) empty:	0						
Number of drum(s) 1/4 full:	1						
Number of drum(s) 1/2 full:	0						
Number of drum(s) 3/4 full:	0						
Number of drum(s) full:	0						
Total drum(s) on site:	1						
LOCATION OF DRUM(S)							
Is/Are drum(s) at wellhead(s)?	No						
Describe location if drum(s) is/are located elsewhere:	East of MW-6 across parking lot alongside bldg						
Label drum(s) properly:	yes						
FINAL STATUS							
Number of new drum(s) left on site this event:	Ø						
Date of inspection:	1/31/23						
Logged by BTS Field Technician:	RP						
Office reviewed by:							