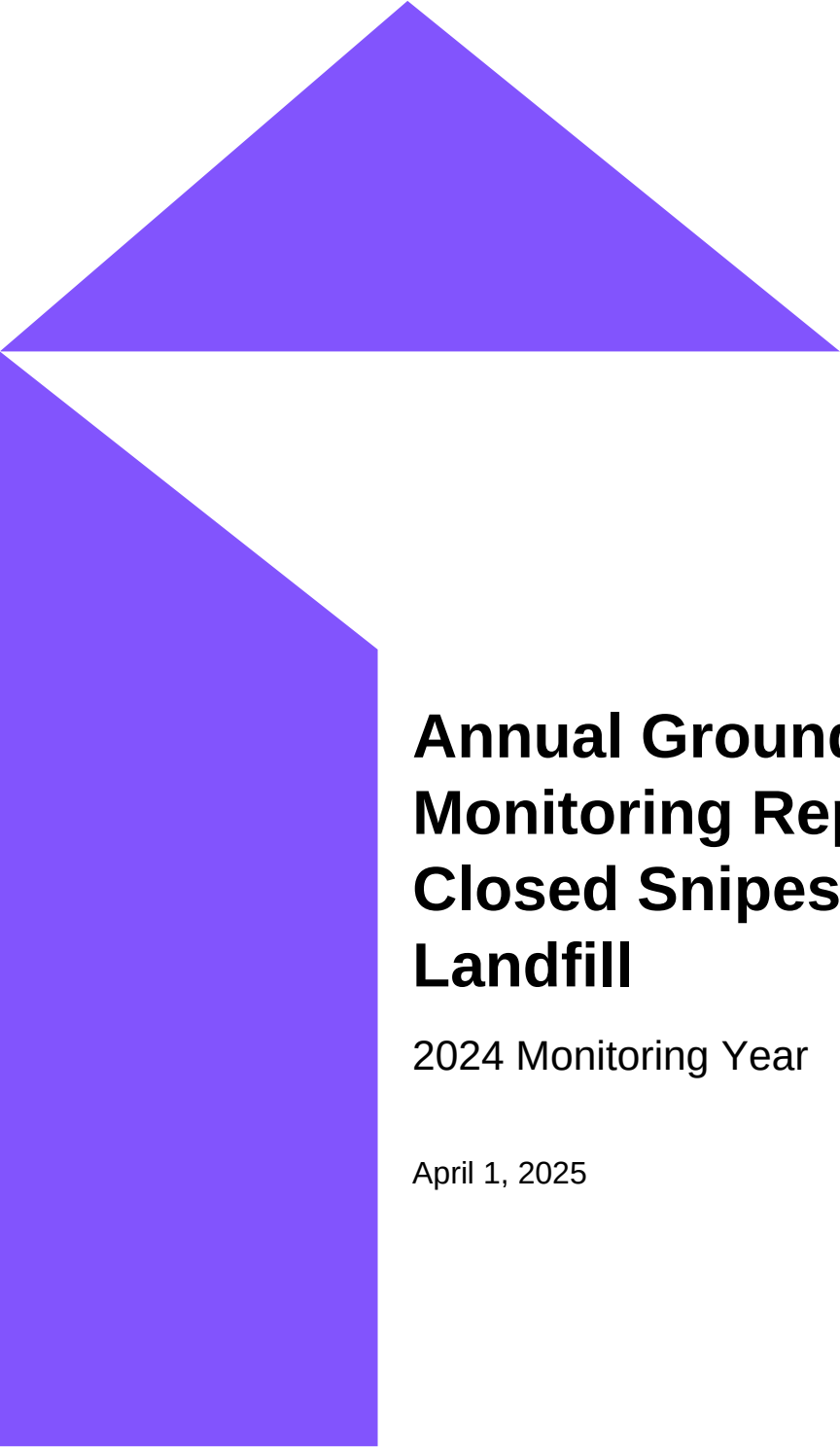


A large, solid purple graphic element on the left side of the page. It consists of a tall, narrow rectangle at the bottom, which is topped by a triangle pointing to the right. The top of the triangle is aligned with the right edge of the rectangle below it.

Annual Groundwater Monitoring Report Closed Snipes Mountain Landfill

2024 Monitoring Year

April 1, 2025

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Annual Groundwater Monitoring Report Closed Snipes Mountain Landfill

2024 Monitoring Year

April 1, 2025

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1 Introduction

This is the 2024 annual groundwater report for the closed Snipes Mountain Landfill. Yakima County operated the Lower Valley Transfer Station at the site until December 30, 2022. This report includes data collected to date. This report is written to fulfill reporting requirements stipulated in Chapter 173-304-490 WAC (Minimum Functional Standards or MFS) as discussed with the Yakima County Health Department and Central Regional Office of the Department of Ecology on February 14, 1992.

1.1 2024 Monitoring Activities

The following wells were sampled in 2024:

- 2024 Q2:
 - June 11, 2024: SMW-1, SMW-2;
 - June 12, 2024: SMW-4, SMW-5d
 - June 13, 2024: SMW-5s
- 2024 Q3:
 - August 29, 2024: SMW-4, SMW-5s, SMW-5d
- 2024 Q4:
 - November 20, 2024: SMW-2, SMW-4, SMW-5s, SMW-5d

Wells SMW-1, SMW-4, SMW-5s, and SMW-5d are sampled during each event. Well SMW-2 is sampled during the Q2 and Q4 events. Water levels were measured at wells concurrent with the 2024 Q2, Q3, and Q4 sampling events. Analytical data is included in Table 2 and field data sheets are included in Attachment A.

The water level at SMW-1 was too low to allow sampling during both the 2024 Q3 and Q4 sampling events.

The pumps at SMW-5s and SMW-5d were pulled on January 10, 2023 after several attempts at repair and replacement of the Grundfos Redi-Flo2 pumps. Groundwater samples are being collected with Hydrasleeve grab samplers and single-use tethers as an interim method in lieu of electric submersible pumps.

1.2 Landfill History

Snipes Mountain Landfill has been closed since March 30, 1994. Municipal solid waste was disposed in accordance with the Development and Closure Plan until the landfill was closed under WAC 173-304. It is not regulated under the new solid waste regulations, WAC 173-351, except for the final cover, which was established in 1994. Unlined septage ponds at the landfill were pumped out and closed in 1991. The major reference for detailed site information is the Development and Closure Plan (DCP), which includes a hydrogeologic assessment and description of sampling procedures (Parametrix, 1990). Additional hydrogeologic information obtained from the installation of three monitoring wells in 1993 was incorporated into the third annual report (Pacific Groundwater Group, 1994).

Groundwater samples were collected quarterly from September 1989 until June 1998. Analytical parameters included the MFS suite, priority pollutant metals, pesticides, and volatile organic compounds (VOCs). In August 1998, a variance was granted allowing monitoring at the landfill to be conducted on a semi-annual basis as opposed to a quarterly basis (Ecology and Dept. of

Health, 1998). The first semi-annual sampling round was conducted in December 1998. Based on the prior results, sampling was continued for the MFS suite in wells with additional VOC sampling in SMW-1. The current sampling plan includes MFS parameters and VOC analyses for all sampled wells. The MFS parameters include dissolved metals (iron, manganese, and zinc), sulfate, chloride, nitrate-nitrite, ammonia, total organic carbon (TOC), and chemical oxygen demand (COD).

On March 14, 2007, the Yakima Health District approved reducing sampling at SMW-3 to only water level measurements (Yakima Health, 2007). Declining water levels at SMW-3 have prevented collection of samples with the current pump configuration.

This site is currently being investigated to satisfy the requirements of Agreed Order No. DE 22514 (AO) between Yakima County and Ecology. To support the Remedial Investigation work, groundwater monitoring for wells north of the anticline (SMW-1, SMW-4, SMW-5s, SMW-5d) is temporarily being conducted quarterly.

2 Water Levels and Groundwater Flow Directions

2.1 Water Level Trends

Table 1 presents well survey and water level data for the monitoring wells. The data presented in Table 1 are plotted in Figure 1 as hydrographs. Changes in monitoring well water levels reflect influences of regional and local groundwater withdrawals for irrigation. Water levels in wells SMW-1, SMW-4, and SMW-5d have historically declined during the irrigation season and recovered when irrigation wells are not pumping. This effect is less evident in recent data because the semi-annual measurements are not sufficient to fully document the highs and lows. SMW-1, SMW-2, SMW-4, SMW-5d, DNR, and the Newhouse well are all screened in the Elephant Mountain member of the Columbia River Basalt Group (Tem) aquifer.

In contrast to water levels in the irrigation-influenced wells, water levels in SMW-2, SMW-3, and SMW-5s remain nearly constant. The lack of response in these wells is attributed to their completion intervals, which are stratigraphically below (SMW-3) and above (SMW-5s) the Tem aquifer, and the anticline separating SMW-2 from the refuse and other monitoring wells.

Although water levels at SMW-3 are not highly seasonal, they have declined approximately 5 feet from 2000 Q2 levels (Table 1). Water levels in SMW-3 have been too low for sampling since 2005. In 2007 Yakima County Health District approved reducing sampling at SMW-3 to monitoring water levels with the contingency that if site conditions change significantly, sampling at SMW-3 may be required (Yakima Health, 2007). Similar, but less pronounced declining trends are observed at SMW-1, SMW-4, SMW-5s and SW-5d. In contrast, water levels at SMW-2 have risen approximately 2 feet since 2000 Q2.

2.2 Interpretation of Groundwater Flow Directions

Groundwater flow direction is estimated from wells screened in the Tem aquifer including SMW-1, SMW-4 and SMW-5d. As seen in the hydrographs in Figure 1, the pumping of the irrigation wells changes water levels in the Tem aquifer north of the anticline, which also influences the groundwater flow direction and gradient. When the irrigation wells are pumping, the hydraulic gradient in the Tem aquifer is towards the northeast in the north limb of the anticline. The hydraulic gradient in the Tem aquifer has historically shifted to a more southerly flow direction during the December water level measurement when the irrigation wells are not pumping.

Water levels at SMW-1, SMW-4 and SMW-5d were measured four times during 2024: June 11 (2024 Q2), July 23, August 29 (2024 Q3), and November 20 (2024 Q4). Groundwater flow directions are plotted over a top-of-basalt structural contour maps for 2024 Q2, 2024 Q3, and 2024 Q4 in Figures 2a-2c. SMW-1 was dry in 2024 Q3 and the calculated groundwater flow direction in Figure 2b uses the depth of the well. Historically the hydraulic gradient between SMW-1, SMW-4 and SMW-5d reverses from a northeasterly direction during the pumping season and a southwesterly direction in the winter, non-pumping months. The gradient is typically steeping during irrigation at approximately 0.0139 in Q2 and 0.0049 in Q4. This year the gradient was approximately 0.013 in Q2 and 0.0063 in Q4.

3 Water Quality Sampling

This section describes water quality sampling conducted at Snipes, geochemical results, and quality assurance reviews.

3.1 Analysis of Water Quality Data

Data analysis was completed by visual inspection of time series plots of selected analytical parameters with knowledge of site hydrogeology. Figures 3 through 11 present time series plots of various parameters. Parameters with numerous non-detects were not plotted. Where non-detects are plotted, they are shown as being equal to the detection limit. Table 2 shows the statistical summary of select MFS parameters and organics for each of the wells and Table 3 presents the analytical results for samples collected in 2024. Laboratory reports are included in Attachment B.

Similar to previous years, groundwater quality data collected in 2024 indicates that most parameters are within expected ambient ranges, but that wells SMW-1, SMW-4 and SMW-5s appear to be impacted by organic and inorganic contaminants. Historically, septage was disposed into unlined ponds at the landfill, which is the most likely source and transport mechanism for the contaminants. The last septage pond to be used was the western-most pond. Disposal of septage ceased prior to the pond being pumped out in May 1991. This site, as well as the source(s) and extent of contamination, is currently being investigated to satisfy the requirements of Agreed Order No. DE 22514 (AO) between Yakima County and Ecology.

3.2 MFS Conventional Parameters

Time series plots of conventional parameters are presented in Figures 3 through 6. The analytical results for these parameters indicate that the concentrations in the samples are generally in the range of expected ambient values.

Concentrations of MFS parameters within the Tem aquifer are generally greater in SMW-1 than concentrations in SMW-4 and SMW-5d, which are frequently similar. Concentrations within the Tem aquifer vary widely over the short distances between wells SMW-1, SMW-4 and SMW-5d. MFS concentrations are relatively stable at wells SMW-2, SMW-4, and SMW-5d, and historically were stable at SMW-3.

- Specific conductance increased from 2007 through 2010 at SMW-5s, followed by stabilization with variability from 2011 through 2024 (Figure 3). Prior to 2007, specific conductance at SMW-5s was generally between 200-400 umhos/cm, similar to SMW-2, SMW-3, SMW-4, and SMW-5d, and since 2011 has been generally between 500-700 umhos/cm, similar to SMW-1. All measurements in 2024 were below the GWQC (700 umhos/cm).
- Chloride increased from 1989 through 2004 at SMW-1, followed by stabilization from 2006 through 2023 (Figure 4). Chloride concentrations increased rapidly in SMW-5s from 2000 through 2012 and stabilizing to decreasing with variability from 2015 through 2024. Concentrations at SMW-2 and SMW-5s have been more variable in 2023 and 2024 compared to prior years. Chloride concentrations have been increasing slowly at SMW-4 since 2002. Overall, chloride concentrations remain below the GWQC (250 mg/L).
- Sulfate concentrations decreased from 1994 through 2016 at SMW-1, followed by stabilization from 2014 through 2024 (Figure 5). Sulfate concentrations in SMW-5s increased rapidly from 2006 through 2013, followed by stabilization with variability from 2013 through 2022. Concentrations at SMW-5s have been more variable in 2023 and 2024 compared to

prior years. Sulfate concentrations at SMW-2 indicate moderate increases have occurred from 2013 through 2024.

- Nitrate concentrations at SMW-5s increased from near 0.2 mg/L to over 3 mg/L between approximately 2001 and 2015 and have been stable to decreasing, with concentrations in 2024 below 2 mg/L (Figure 6). Concentrations at SMW-5s have been more variable in 2023 and 2024 compared to prior years. Nitrate concentrations at SMW-1 have been variable but relatively stable from 2011 through 2024. Nitrate was measured at its highest concentration at SMW-5d (0.907 mg/L) in 2024 Q4. Overall, nitrate concentrations remain below the GWQC (10 mg/L).

The increasing trends in specific conductance, chloride, sulfate, and nitrate at SMW-5s through 2014 followed by declines are consistent with the arrival of a groundwater plume with a decreasing source. This is qualitatively consistent with the site conceptual model of a set of releases at the site that stopped concurrent with landfill closure. These trends will continue to be monitored in future sampling events.

3.3 MFS Metals

Concentrations of MFS metals concentrations were generally consistent with previously detected concentrations or trends. There were MFS metals exceedances of the GWQC in 2024. MFS exceedances and trends include:

- Dissolved iron exceeded the GWQC (0.3 mg/l) at SMW-5s during 2024 Q4 with a concentration of 0.591 mg/L (Figure 7).
- Dissolved manganese exceeded the GWQC (0.05 mg/l) at SMW-5s during 2024 Q2 with a concentration of 0.135 mg/L, 2024 Q3 with a concentration of 0.0905 mg/L, and 2024 Q4 with a concentration of 0.278 mg/L (Figure 8). Concentrations at SMW-5s have increased sharply since 2020 and have been consistently above the GWQC since 2023 Q2. Dissolved manganese concentrations in SMW-5d had a long-term decreasing trend followed by stabilization from 2013 through 2016. Concentrations at SMW-5d were non-detect in 2024 Q2 and Q3. Other concentrations were within expected ranges.
- Dissolved zinc did not exceed the GWQC (5 mg/L) in 2024 (Figure 9).

No other dominant trends were observed.

3.4 Volatile Organic Compounds

Volatile organic compounds (VOCs) have been consistently detected in wells SMW-1 and SMW-4 since monitoring began in 1989 and 1994, respectively, and at SMW-5s since 2010. Reporting limits for VOC analyses were lowered 2013 to conform to current laboratory standards of practice. Several constituents are now detected at concentrations below the previous standard reporting limits. VOC detections in 2024 included the following:

- Well SMW-1 had detections of 1,1-Dichloroethane (0.14 ug/L), 1,1-Dichloroethene (0.15 ug/L), chloroform (0.22 ug/L), cis-1,2 dichloroethene (cis-1,2 DCE) (0.22 ug/L), Dichlorodifluoromethane (CFC-12) (0.56 ug/L), Tetrachloroethene (PCE) (14.5 ug/L), Trichloroethene (TCE) (0.91 ug/L), and Trichlorofluoromethane (CFC-11) (0.20 ug/L) in 2024.
- Well SMW-4 had detections of 1,1-Dichloroethane (0.06 ug/L), chloroform (0.11 ug/L), cis-1,2 dichloroethene (cis-1,2 DCE) (0.40, 0.33, 0.58 ug/L), CFC-12 (0.35 and 0.47 ug/L), PCE (6.66, 4.50, 4.53 ug/L), TCE (0.58, 0.43, 0.87 ug/L), and CFC-11 (0.14 ug/L) in 2024.
- Well SMW-5s had detections of 1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113) (0.16 and 1.49 ug/L), acetone (2.13 and 14.2 ug/L), carbon disulfide (0.26 ug/L), CFC-12 (0.18 ug/L), PCE (1.56, 0.57, 0.88 ug/L), and TCE (0.10 ug/L) in 2024.

- Well SMW-5d had detections of 1,2,4-Trimethylbenzene (0.08 ug/L) and PCE (0.14 ug/L) in 2024.

PCE exceeded the GWQC (0.8 ug/L) at SMW-1, SMW-4, and SMW-5s. The other VOC detections were either below GWQCs or there are no GWQCs for those constituents. VOC detections are consistent with septage disposal into the landfill prior to 1991. PCE is a common solvent used in dry cleaning, chemical manufacturing, as a parts cleaner, and is readily available to the general public. TCE is either a degradation product of PCE, or was a primary organic contaminant, likely in the septage. Cis-1,2 DCE is a common degradation product of TCE and PCE and indicates that biodegradation of chlorinated ethenes is occurring along the transport pathway. CFC-11, CFC-12, CFC-113, and carbon disulfide are common landfill VOC constituents.

Detections are generally consistent with previous detections in these site monitoring wells with the exception of 1,1-Dichlorethane, 1,2,4-Trimethylbenzene, and chloroform, which had not been previously detected in any monitoring well; these detections are below the reporting limit (meaning concentrations are estimated), below screening levels, and have not been confirmed.

PCE is the highest-concentration VOC contaminant at the site. Key PCE results include:

- PCE has been detected in SMW-1 consistently since 1989 (Figure 10). Concentrations in SMW-1 have decreased substantially since 1989, and appear to have roughly stabilized into a concentration range between 5 and 15 ug/L.
- PCE has also been consistently detected in SMW-4 since the well was installed in 1994. Concentrations in SMW-4 slowly increased between 1994 and 2000 and are generally stable to decreasing through 2024.
- PCE detection frequency and concentrations at SMW-5s increased beginning in 2010. Concentrations increased through 2012, stabilized below 5 ug/L, and appear to have decreased since 2020 (Figure 10).

The rise and recent declines in PCE concentrations at SMW-5s (Figure 10) appear to be following the trends for chloride, sulfate, and nitrate. The inorganic compounds are common leachate indicators and the rising and falling trends may reflect a slug of landfill-impacted groundwater moving past well SMW-5s. These trends will be further evaluated as part of the site Remedial Investigation.

3.5 Quality Assurance / Quality Control

Each semi-annual report includes the results of a quality assurance review of the analytical data. Quality assurance reviews of the 2024 analytical data generally indicate that the data are representative of the quality of samples submitted for analysis.

4 References

Department of Ecology, 1998. Letter dated August 6, 1998 to Art McEwen Re: Snipes Mountain Landfill Semiannual Groundwater Monitoring Variance Request.

Parametrix, Inc. 1991. Snipes Mountain Landfill Development and Closure Plan. March 1991.

Yakima Health District, 1998. Letter to Ron Pepper dated August 20, 1998 Re: Variance Request for Snipes Mountain Landfill Groundwater Monitoring.

Table 1. Well Survey and Water Level Data

Closed Snipes Mountain Landfill

	SMW-1		SMW-2		SMW-3		SMW-4		SMW-5s (Shallow)		SMW-5d (Deep)		30E1 (DNR)		31D1 (Newhouse)	
Ground Elevation, ft	999		895		1035		1000		951		951		819		791	
Measuring Point	TOSM		TOSM		TOSM		TOSM		TOSM		TOSM		TOSM		TOSM	
Measuring Pt Elevation	1001		896.8		1037		1003		953.6		953.6		820.2		793.5	
DATE	DTW	PSE	DTW	PSE	DTW	PSE	DTW	PSE	DTW	PSE	DTW	PSE	DTW	PSE	DTW	PSE
01-Mar-88													37.16	782.99		
01-Nov-88													49.08	771.07		
30-Mar-89													36.79	783.36		
18-Oct-89	227.94	773.29	220.64	676.16	275.15	761.88										
24-Oct-89													43.58	776.57		
05-Dec-89	224.54	776.69	231.67	665.13	276.46	760.57										
27-Feb-90													36.83	783.32		
27-Mar-90	221.16	780.07	221.62	675.18	276.07	760.96										
29-Jun-90	230.69	770.54	221.09	675.71	275.12	761.91										
05-Oct-90	235.00	766.23	226.43	670.37	276.09	760.94										
13-Feb-91	222.00	779.23	222.31	674.49	275.85	761.18										
13-Mar-91													37.17	782.98		
29-Mar-91	220.21	781.02	221.71	675.09	275.83	761.20										
12-Apr-91	220.72	780.51	220.56	676.24	274.66	762.37										
13-Apr-91															75.00	718.54
18-Apr-91															163.58	629.96
26-Apr-91	222.67	778.56	221.43	675.37	274.18	762.85									75.15	718.39
10-May-91	225.80	775.43	222.75	674.05	274.39	762.64									75.49	718.05
13-May-91	226.38	774.85	221.99	674.81	274.16	762.87										
16-May-91	226.38	774.85	221.99	674.81	274.16	762.87										
24-May-91	227.23	774.00	221.91	674.89	274.23	762.80									76.49	717.05
07-Jun-91	227.62	773.61	223.25	673.55	274.33	762.70									77.97	715.57
21-Jun-91	229.75	771.48	223.80	673.00	274.28	762.75									78.35	715.19
05-Jul-91	230.91	770.32	226.07	670.73	274.13	762.90									163.00	630.54
19-Jul-91	233.13	768.10	225.54	671.26	274.83	762.20									81.88	711.66
02-Aug-91	231.99	769.24	227.99	668.81	274.25	762.78							48.84	771.31	162.79	630.75
15-Aug-91	234.44	766.79	228.41	668.39	274.28	762.75									163.01	630.53
28-Aug-91	236.18	765.05														
04-Sep-91	236.84	764.39	229.24	667.56	274.37	762.66									163.31	630.23
20-Sep-91	238.25	762.98	229.79	667.01	274.25	762.78									163.03	630.51
08-Oct-91	236.68	764.55	230.18	666.62	274.61	762.42									163.00	630.54
17-Oct-91	235.48	765.75	230.73	666.07	274.66	762.37									163.00	630.54
04-Nov-91	233.38	767.85	229.89	666.91	274.69	762.34							48.25	771.90	80.17	713.37
20-Nov-91	230.80	770.43	226.85	669.95	274.48	762.55							45.93	774.22	78.37	715.17
04-Dec-91	228.67	772.56	225.62	671.18	274.38	762.65							44.08	776.07	77.50	716.04
23-Dec-91	226.56	774.67	224.95	671.85	274.62	762.41							42.29	777.86	77.13	716.41
06-Jan-92	225.14	776.09	224.30	672.50	274.15	762.88							41.07	779.08	76.13	717.41
21-Jan-92	223.94	777.29	223.78	673.02	274.54	762.49							40.06	780.09	76.58	716.96
04-Feb-92	222.89	778.34	223.51	673.29	274.49	762.54									76.11	717.43
18-Feb-92	221.84	779.39	223.03	673.77	274.06	762.97							40.67	779.48	75.95	717.59
26-Feb-92	221.75	779.48	223.24	673.56	274.87	762.16										
03-Mar-92	221.10	780.13	222.56	674.24	274.12	762.91							38.59	781.56	75.56	717.98
17-Mar-92	220.91	780.32	222.46	674.34	274.19	762.84							33.91	786.24	75.56	717.98
30-Mar-92	220.51	780.72	222.31	674.49	274.35	762.68							37.29	782.86	76.10	717.44
13-Apr-92	223.26	777.97	223.27	673.53	274.12	762.91							40.67	779.48	78.98	714.56
27-Apr-92	223.05	778.18	223.51	673.29	274.30	762.73							78.79	741.36	163.27	630.27
11-May-92	224.35	776.88	225.85	670.95	274.37	762.66							40.67	779.48	163.27	630.27
19-May-92	225.37	775.86	226.33	670.47	273.97	763.06										
26-May-92	226.15	775.08	226.64	670.16	274.11	762.92							44.14	776.01	163.00	630.54
08-Jun-92	228.18	773.05	227.16	669.64	274.05	762.98							79.36	740.79	163.04	630.50
01-Sep-92	239.71	761.52	230.78	666.02	274.49	762.54										
22-Dec-92	228.64	772.59	225.15	671.65												
11-Mar-93	222.96	778.27	223.39	673.41	275.27	761.76										
27-May-93	223.17	778.06	226.61	670.19	274.88	762.15										
25-Aug-93	236.21	765.02	228.97	667.83	275.30	761.73										
21-Dec-93	228.71	772.52	224.71	672.09	275.57	761.46	228.25	774.55	179.07	774.50	179.15	774.42				
30-Mar-94	225.08	776.15	223.50	673.30	276.56	760.47	226.35	776.45	179.30	774.27	176.16	777.41				
15-Jun-94	232.45	768.78	226.16	670.64	275.63	761.40	237.51	765.29	179.61	773.96	189.64	763.93				
22-Sep-94			228.61	668.19	276.29	760.74	250.37	752.43	180.78	772.79	205.49	748.08				
13-Dec-94	236.71	764.52	225.08	671.72	276.66	760.37	236.40	766.40	180.44	773.13	186.06	767.51				
27-Mar-95	229.22	772.01	223.92	672.88	277.33	759.70	232.37	770.43	180.12	773.45	186.05	767.52				
08-Jun-95	231.92	769.31			276.96	760.07	236.31	766.49	180.28	773.29	189.35	764.22				
15-Jun-95			225.39	671.41												

Table 1. Well Survey and Water Level Data

Closed Snipes Mountain Landfill

	SMW-1		SMW-2		SMW-3		SMW-4		SMW-5s (Shallow)		SMW-5d (Deep)		30E1 (DNR)		31D1 (Newhouse)	
21-Aug-95	242.69	758.54	227.12	669.68	277.12	759.91	249.47	753.33	180.62	772.95	204.27	749.30				
19-Dec-95	231.60	769.63	224.08	672.72	277.70	759.33	231.60	771.20	179.97	773.60	181.60	771.97				
13-Mar-96	226.22	775.01	222.14	674.66	277.55	759.48	226.78	776.02	179.56	774.01	177.05	776.52				
29-May-96	230.34	770.89	223.47	673.33	277.18	759.85	234.60	768.20	179.98	773.59	187.67	765.90				
01-Aug-96	241.40	759.83	225.27	671.53	277.09	759.94	249.81	752.99	180.49	773.08	205.35	748.22				
17-Dec-96	233.29	767.94	224.13	672.67	278.60	758.43	233.31	769.49	180.09	773.48	183.28	770.29				
25-Feb-97	227.24	773.99	221.94	674.86	277.64	759.39	227.86	774.94	179.04	774.53	178.13	775.44				
15-May-97	231.34	769.89	223.19	673.61	277.20	759.83	238.41	764.39	179.53	774.04	194.74	758.83				
08-Jul-97	237.55	763.68	224.70	672.10	277.11	759.92	244.93	757.87	179.83	773.74	200.49	753.08				
04-Dec-97	233.62	767.61	223.10	673.70	277.66	759.37	233.73	769.07	180.77	772.80	183.43	770.14				
25-Feb-98	226.68	774.55	221.53	675.27	277.18	759.85	227.24	775.56	179.31	774.26	177.44	776.13				
03-Jun-98	229.65	771.58	221.56	675.24	276.83	760.20	231.53	771.27	179.78	773.79	181.97	771.60				
09-Dec-98	236.03	765.20	224.04	672.76	278.20	758.83	235.86	766.94	180.54	773.03	185.45	768.12				
27-May-99	231.5	769.70	223.9	672.89	277.3	759.71	237.3	765.51	180.2	773.34	192.7	760.90				
28-Sep-99	245.3	755.91	225.6	671.16	278.1	758.95	248.4	754.39	180.9	772.69	199.8	753.77				
15-Dec-99	234	767.19	223.3	673.54	277.6	759.41	233.8	768.97	183.5	770.06	180.3	773.27				
14-Jun-00	232	769.24	222.2	674.62	277.7	759.38	236.6	766.23	179.6	773.95	190.7	762.88				
6-Dec-00	234.41	766.82	220.72	676.08	277.55	759.48	234.89	767.91	180.15	773.42	184.18	769.39				
6-Jun-01	233.51	767.72	220.11	676.69	277.38	759.65	237.07	765.73	180.49	773.08	187.13	766.44				
11-Dec-01	235.60	765.63	220.25	676.55	278.42	758.61	236.08	766.72	180.83	772.74	185.79	767.78				
3-Jul-02	234.40	766.83	219.35	677.45	278.15	758.88	240.90	761.90	181.00	772.57	196.65	756.92				
11-Dec-02	234.35	766.88	219.62	677.18	278.74	758.29	234.80	768.00	180.72	772.85	184.57	769.00				
18-Jul-03	241.70	759.53	220.00	676.80	280.00	757.03	245.55	757.25	182.00	771.57	195.15	758.42				
11-Dec-03	239.95	761.28	219.75	677.05	280.71	756.32	239.25	763.55	181.96	771.61	188.39	765.18				
23-Jun-04	234.75	766.48	219.15	677.65	280.71	756.32	240.59	762.21	181.52	772.05	196.73	756.84				
14-Dec-04	234.38	766.85	219.15	677.65	281.75	755.28	234.41	768.39	181.62	771.95	184.00	769.57				
15-Jun-05	236.71	764.52	221.57	675.23	281.40	755.63	243.41	759.39	181.38	772.19	200.40	753.17				
12-Jan-06	234.94	766.29	219.47	677.33	282.65	754.38	235.16	767.64	181.84	771.73	184.83	768.74				
29-Jun-06	239.10	762.13	219.58	677.22	283.09	753.94	246.60	756.20	181.67	771.90	198.69	754.88				
13-Dec-06	232.74	768.49	219.28	677.52	283.35	753.68	237.61	765.19	181.37	772.20	186.85	766.72				
27-Jun-07	238.97	762.26	219.36	677.44	283.20	753.83	253.30	749.50	181.08	772.49	198.49	755.08				
11-Dec-07	237.57	763.66	219.63	677.17	284.01	753.02	237.78	765.02	181.18	772.39	187.10	766.47				
25-Jun-08	237.70	763.53	220.35	676.45	283.73	753.30	243.63	759.17	181.29	772.28	201.15	752.42				
9-Dec-08	237.03	764.20	220.45	676.35	284.21	752.82	237.30	765.50	181.50	772.07	186.83	767.74				
17-Jun-09	236.18	765.05	219.11	677.69	283.14	753.89	242.67	760.13	181.12	772.45	200.01	753.56				
15-Sep-09									181.74	771.83						
1-Dec-09	237.49	763.74	220.44	676.36	283.68	753.35	242.30	760.50	181.47	772.10	193.14	760.43				
22-Jun-10	233.88	767.35	219.50	677.30	283.92	753.11	237.05	765.75	180.88	772.69	187.66	765.91				
26-Jul-10									181.12	772.45						
7-Dec-10	234.79	766.44	219.02	677.78	283.09	753.94	235.14	767.66	180.92	772.65	184.58	768.99				
29-Jun-11	233.62	767.61	218.86	677.94	282.08	754.95	238.58	764.22	180.75	772.82	192.69	760.88				
13-Dec-11	233.03	768.20	218.50	715.30	282.50	754.53	233.63	769.17	180.98	772.59	183.12	770.45				
13-Jun-12	233.16	768.07	219.22	677.58	282.05	754.98	239.15	763.65	180.85	772.72	195.55	758.02				
5-Dec-12	234.45	766.78	219.52	677.28	282.56	754.47	234.52	768.28	181.12	772.45	183.68	769.89				
12-Jun-13	232.00	769.23	219.50	677.30	282.10	754.93	237.90	764.90	180.85	772.72	190.00	763.57				
2-Dec-13	234.62	766.61	219.22	677.58	282.18	754.85	235.02	767.78	181.12	772.45	184.43	769.14				
17-Jun-14	235.64	765.59	219.52	677.28	281.56	755.47	239.17	763.63	181.26	772.31	212.91	740.66				
17-Jul-14	240.67	760.56					247.50	755.30	181.43	772.14	204.90	748.67				
10-Nov-14	238.00	763.23					238.32	764.48	182.29	771.28	187.31	766.26				
2-Dec-14	235.13	766.10	219.49	677.31	282.10	754.93	235.43	767.37	182.15	771.42	184.94	768.63				
23-Jun-15	240.42	760.81	219.52	677.28	281.74	755.29			182.60	770.97	199.83	753.74				
1-Dec-15	240.20	761.03	220.00	676.80	282.65	754.38			183.87	769.70	189.46	764.11				
30-Mar-16	230.14	771.09														
15-Jun-16	239.27	761.96	219.59	677.21	282.51	754.52			182.62	770.95	197.24	756.33				
7-Sep-16	245.00	756.23					250.09	752.71	183.69	769.88	198.17	755.40				
14-Dec-16	234.66	766.57	220.00	676.80	283.32	753.71			182.61	770.96	184.23	769.34				
6-Jun-17	230.60	770.63	219.22	677.58	282.63	754.40			181.32	772.25	182.71	770.86				
5-Dec-17	232.76	768.47	219.69	677.11	283.02	754.01	233.03	769.77	182.35	771.22	182.62	770.95				
26-Jun-18	244.04	757.19	219.43	677.37	282.13	754.90	238.64	764.16	181.66	771.91	191.24	762.33				
12-Dec-18	234.64	766.59	219.22	677.58	282.52	754.51	233.05	769.75	181.79	771.78	182.44	771.13				
12-Jun-19	230.60	770.63	219.73	677.07	292.84	744.19	234.35	768.45	181.09	772.48	194.72	758.85				
12-Dec-19	231.87	769.36	218.86	677.94	282.09	754.94	232.48	770.32	182.15	771.42	181.45	772.12				
9-Jun-20	233.91	767.32	219.82	676.98	282.52	754.51	237.12	765.68	182.30	771.27	187.47	766.10				
29-Dec-20	233.48	767.75	219.70	677.10	281.99	755.04	233.23	769.57	182.64	770.93	183.74	769.83				
2-Jun-21	233.12	768.11	219.80	677.00	281.70	755.33	238.58	764.22	182.18	771.39	195.04	758.53				
8-Dec-21	235.42	765.81	219.09	677.71	282.56	754.47	235.03	767.77	181.51	772.06	184.60	768.97				
29-Nov-22	237.37	763.86	219.33	677.47	282.51	754.52	237.70	765.10	182.41	771.16	186.97	766.60				
10-Jan-23	NT		NT		NT		233.32	769.48	181.90	771.67	183.12	770.45				

Table 1. Well Survey and Water Level Data

Closed Snipes Mountain Landfill

	SMW-1		SMW-2		SMW-3		SMW-4		SMW-5s (Shallow)		SMW-5d (Deep)		30E1 (DNR)		31D1 (Newhouse)	
23-May-23	231.26	769.97	219.98	676.82	282.48	754.55	235.38	767.42	181.77	771.80	191.85	761.72				
5-Dec-23	236.95	764.28	210.05	686.75	282.14	754.89	236.70	766.10	182.68	770.89	186.01	767.56				
11-Jun-24	236.59	764.64	220.53	676.27	282.75	754.28	241.92	760.88	182.19	771.38	198.21	755.36				
23-Jul-24	245.84	755.39	NT		NT		251.08	751.72	183.53	770.04	206.73	746.84				
29-Aug-24	DRY		220.89	675.91	283.00	754.03	251.81	750.99	184.05	769.52	200.91	752.66				
20-Nov-24	242.75	758.48	220.54	676.26	292.39	744.64	242.28	760.52	183.98	769.59	191.20	762.37				

TOSM = Top of Steel Casing Monument.

DTW = Depth to Water.

PSE = Potentiometric Surface Elevation (MSL).

NT = Not Taken.

Table 2 - Statistical Summary of Selected Parameters

Closed Snipes Mountain Landfill

Well	Constituent	Analyses	Detections	Mean	Standard Deviation	Minimum	Maximum
SMW-1	1,1-Dichloroethene	74	7	0.28	0.07	0.15	0.36
SMW-1	2-Butanone (MEK)	74	0				
SMW-1	Acetone	74	4	7.23	4.00	2.3	11
SMW-1	Carbon Tetrachloride	74	14	1.81	1.22	0.6	5.5
SMW-1	Carbon, Total Organic	74	18	1.13	0.77	0.39	3.3
SMW-1	Chloride	75	75	15.15	2.54	10.1	20.4
SMW-1	cis-1,2-Dichloroethene	73	2	0.23	0.01	0.22	0.24
SMW-1	Nitrate	74	74	2.65	1.05	0.082	7
SMW-1	Sulfate	73	73	115.73	32.35	36.1	193.7
SMW-1	Tetrachloroethene (PCE)	74	74	18.24	40.03	3.5	350
SMW-1	trans-1,2-Dichloroethene	74	0				
SMW-1	Trichloroethene (TCE)	74	34	0.77	0.36	0.3	1.6
SMW-1	Vinyl Chloride	74	0				
SMW-2	1,1-Dichloroethene	53	0				
SMW-2	2-Butanone (MEK)	53	0				
SMW-2	Acetone	53	2	8.45	3.61	5.9	11
SMW-2	Carbon Tetrachloride	53	0				
SMW-2	Carbon, Total Organic	88	17	0.99	0.64	0.12	2.04
SMW-2	Chloride	87	87	5.00	1.10	3.4	10
SMW-2	cis-1,2-Dichloroethene	53	0				
SMW-2	Nitrate	88	88	0.28	0.05	0.02	0.435
SMW-2	Sulfate	86	86	66.44	11.11	16.6	88
SMW-2	Tetrachloroethene (PCE)	53	0				
SMW-2	trans-1,2-Dichloroethene	53	0				
SMW-2	Trichloroethene (TCE)	53	0				
SMW-2	Vinyl Chloride	53	0				
SMW-3	1,1-Dichloroethene	15	0				
SMW-3	2-Butanone (MEK)	15	0				
SMW-3	Acetone	15	0				
SMW-3	Carbon Tetrachloride	15	0				
SMW-3	Carbon, Total Organic	48	12	0.99	0.80	0.12	2.6
SMW-3	Chloride	48	48	3.20	0.50	2.1	5
SMW-3	cis-1,2-Dichloroethene	15	0				
SMW-3	Nitrate	48	47	0.21	0.02	0.16	0.26
SMW-3	Sulfate	48	48	17.31	8.01	8.6	68.4
SMW-3	Tetrachloroethene (PCE)	15	0				
SMW-3	trans-1,2-Dichloroethene	15	0				
SMW-3	Trichloroethene (TCE)	15	0				
SMW-3	Vinyl Chloride	15	0				

Table 2 - Statistical Summary of Selected Parameters

Closed Snipes Mountain Landfill

Well	Constituent	Analyses	Detections	Mean	Standard Deviation	Minimum	Maximum
SMW-4	1,1-Dichloroethene	58	0				
SMW-4	2-Butanone (MEK)	58	6	38.18	23.67	6.1	66
SMW-4	Acetone	58	5	12.22	10.61	3	30
SMW-4	Carbon Tetrachloride	58	0				
SMW-4	Carbon, Total Organic	57	13	2.04	2.27	0.58	9.45
SMW-4	Chloride	57	57	5.85	1.07	3.3	8.29
SMW-4	cis-1,2-Dichloroethene	58	11	0.40	0.12	0.21	0.58
SMW-4	Nitrate	57	41	0.35	0.27	0.01	0.99
SMW-4	Sulfate	57	57	32.19	3.98	18	40.9
SMW-4	Tetrachloroethene (PCE)	58	57	6.56	2.17	1.16	11
SMW-4	trans-1,2-Dichloroethene	58	0				
SMW-4	Trichloroethene (TCE)	58	14	0.56	0.16	0.38	0.87
SMW-4	Vinyl Chloride	58	0				
SMW-5D	1,1-Dichloroethene	65	0				
SMW-5D	2-Butanone (MEK)	65	5	21.04	12.72	8.1	34
SMW-5D	Acetone	65	3	10.67	1.53	9	12
SMW-5D	Carbon Tetrachloride	65	0				
SMW-5D	Carbon, Total Organic	63	12	2.01	2.03	0.75	8.18
SMW-5D	Chloride	62	62	5.04	0.65	4.04	6.33
SMW-5D	cis-1,2-Dichloroethene	65	0				
SMW-5D	Nitrate	63	14	0.08	0.24	0.01	0.907
SMW-5D	Sulfate	62	62	31.69	3.47	22.8	39.5
SMW-5D	Tetrachloroethene (PCE)	65	1	0.14		0.14	0.14
SMW-5D	trans-1,2-Dichloroethene	65	0				
SMW-5D	Trichloroethene (TCE)	65	0				
SMW-5D	Vinyl Chloride	65	0				
SMW-5S	1,1-Dichloroethene	73	0				
SMW-5S	2-Butanone (MEK)	73	7	23.96	38.37	5	110
SMW-5S	Acetone	73	5	12.79	8.41	2.13	25
SMW-5S	Carbon Tetrachloride	73	0				
SMW-5S	Carbon, Total Organic	71	28	3.31	5.85	0.29	28.28
SMW-5S	Chloride	71	70	18.60	12.39	4.1	43.7
SMW-5S	cis-1,2-Dichloroethene	73	0				
SMW-5S	Nitrate	71	68	4.66	26.77	0.0378	222
SMW-5S	Sulfate	69	69	54.48	25.42	26.8	141
SMW-5S	Tetrachloroethene (PCE)	73	33	3.34	4.51	0.49	26
SMW-5S	trans-1,2-Dichloroethene	73	0				
SMW-5S	Trichloroethene (TCE)	73	15	0.29	0.23	0.1	1.1
SMW-5S	Vinyl Chloride	73	0				

Notes:

SMW-3 was last sampled in 2009.

Blank spaces indicate too few detections to calculate statistics.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q2

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
Field Parameters							
Depth to Water, Ft.		236.59	220.53	282.75	241.92	182.19	198.21
Dissolved oxygen, mg/L		8.84	9		3.33	5.36	3.45
Oxidation Reduction Potential, mV		87.7	52.2		140.2	137.3	155.1
pH, Field, std. units	6.5-8.5	7.31	7.46		7.63	7.16	7.65
Specific Conductance @ 25C, Field, umhos/cm	700	594	406.4		351.3	556	284.7
Temperature, C		17.1	18.1		17.3	19.5	19.9
Inorganics							
Alkalinity as CaCO ₃ , Total, mg/L CaCO ₃		209	108		144	172	111
Ammonia, Total, mg/L as N		0.04U	0.04U		0.04U	0.044	0.04U
Carbon, Total Organic, mg/L		0.69	0.5U		0.5U	2.1	0.5U
Chemical Oxygen Demand (COD), mg/L		10U	10U		10U	10U	10U
Chloride, mg/L	250	16.5D	8.89		7.65	21.8D	4.04
Nitrate, mg/L as N	10	1.66H	0.422H		0.775	1.45	UH
Nitrate + Nitrite (NO ₂ + NO ₃), mg-N/L	10	1.67D	0.434		0.775	1.46D	0.01U
Nitrite, mg/L as N	1	0.016H	0.012H		0.01U	0.015	UH
Sulfate, mg/L	250	93.2D	86D		27.1	74.5D	24.4
Metals							
Calcium, mg/L		72.9	39.8		34.8	51.7	25.3
Iron, Dissolved, mg/L	0.3	0.0426J	0.184		0.05U	0.05U	0.05U
Magnesium, Dissolved, mg/L		24.7	13.2		11.2	15.2	7.08
Manganese, Dissolved, mg/L	0.05	0.0038J	0.0463		0.004U	0.135	0.004U
Potassium, Dissolved, mg/L		6.84	8.24		6.75	4.26	5.26
Sodium, Dissolved, mg/L		17.7	21.1		19.5	23.1	19.3
Zinc, Dissolved, mg/L	5	0.0163J	0.016J		0.02U	0.02U	0.02U
VOC							
1,1,1,2-Tetrachloroethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,1,1-Trichloroethane (TCA), ug/L	200	0.2U	0.2U		0.2U	0.2U	0.2U
1,1,2,2-Tetrachloroethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,1,2-Trichloro-1,2,2-trifluoroetha, ug/l		0.2U	0.2U		0.2U	0.16J	0.2U
1,1,2-Trichloroethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,1-Dichloroethane, ug/L	1	0.14J	0.2U		0.06J	0.2U	0.2U
1,1-Dichloroethene, ug/L		0.15J	0.2U		0.2U	0.2U	0.2U
1,1-Dichloropropene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,2,3-Trichlorobenzene, ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
1,2,3-Trichloropropane, ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene, ug/L	70	0.5U	0.5U		0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.08J
1,2-Dibromo-3-chloropropane (DBCP), ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
1,2-Dibromoethane (EDB), ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,2-Dichlorobenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,2-Dichloroethane (EDC), ug/L	0.5	0.2U	0.2U		0.2U	0.2U	0.2U

* CONF = Confluent growth on all dilutions, no coliforms.

J - Estimated value. B - Compound found in blank.

No result indicates analyte not analyzed for.

U - Not detected above indicated detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

** Indicates detected in the trip blank but not qualified.

M - Estimated value - low spectral match parameters.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

Y - Not detected at raised detection limit.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q2

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
1,2-Dichloropropane, ug/L	0.6	0.2U	0.2U		0.2U	0.2U	0.2U
1,3,5-Trimethylbenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,3-Dichlorobenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,3-Dichloropropane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
1,4-Dichlorobenzene, ug/L	4	0.2U	0.2U		0.2U	0.2U	0.2U
2,2-Dichloropropane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
2-Butanone (MEK), ug/L		5U	5U		5U	5U	5U
2-Chloroethyl Vinyl Ether, ug/L		1U	1U		1U	1U	1U
2-Chlorotoluene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
2-Hexanone, ug/L		5U	5U		5U	5U	5U
4-Chlorotoluene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
4-Isopropyltoluene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
4-Methyl-2-Pentanone (MIBK), ug/L		5U	5U		5U	5U	5U
Acetone, ug/L		5U	5U		5U	2.13J	5U
Acrolein, ug/L		5U	5U		5U	5U	5U
Acrylonitrile, ug/L	0.07	1U	1U		1U	1U	1U
Benzene, ug/L	1	0.2U	0.2U		0.2U	0.2U	0.2U
Bromobenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Bromochloromethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Bromodichloromethane, ug/L	0.3	0.2U	0.2U		0.2U	0.2U	0.2U
Bromoform, ug/L	5	0.2U	0.2U		0.2U	0.2U	0.2U
Bromomethane, ug/L		1U	1U		1U	1U	1U
Carbon Disulfide, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Carbon Tetrachloride, ug/L	0.3	0.2U	0.2U		0.2U	0.2U	0.2U
Chlorobenzene, ug/L	100	0.2U	0.2U		0.2U	0.2U	0.2U
Chloroethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Chloroform, ug/L	7	0.09J	0.2U		0.11J	0.2U	0.2U
Chloromethane, ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
cis-1,2-Dichloroethene, ug/L		0.22	0.2U		0.4	0.2U	0.2U
cis-1,3-Dichloropropene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Dibromochloromethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Dibromomethane, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Dichlorodifluoromethane (CFC 12), ug/L		0.56Q	0.2U		0.35Q	0.18J	0.2U
Dichloromethane(Methylene Chloride), ug/L	5	1U	1U		1U	1U	1U
Ethylbenzene, ug/L	700	0.2U	0.2U		0.2U	0.2U	0.2U
Hexachlorobutadiene, ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
Iodomethane, ug/L		1U	1U		1U	1U	1U
Isopropylbenzene (Cumene), ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
m,p-Xylene, ug/L		0.4U	0.4U		0.4U	0.4U	0.4U
Methyl tert-Butyl Ether, ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
Naphthalene, ug/L		0.5U	0.5U		0.5U	0.5U	0.5U
n-Butylbenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
n-Propylbenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
o-Xylene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
sec-Butylbenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U

* CONF = Confluent growth on all dilutions, no coliforms.

** Indicates detected in the trip blank but not qualified.

J - Estimated value. B - Compound found in blank.

M - Estimated value - low spectral match parameters.

No result indicates analyte not analyzed for.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

U - Not detected above indicated detection limit.

Y - Not detected at raised detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q2

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
Styrene, ug/L	100	0.2U	0.2U		0.2U	0.2U	0.2U
tert-Butylbenzene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Tetrachloroethene (PCE), ug/L	0.8	14.5	0.2U		6.66	1.56	0.2U
Toluene, ug/L	1000	0.2U	0.2U		0.2U	0.2U	0.2U
Total Xylenes, ug/L	10000	0.6U	0.6U		0.6U	0.6U	0.6U
trans-1,2-Dichloroethene, ug/L	100	0.2U	0.2U		0.2U	0.2U	0.2U
trans-1,3-Dichloropropene, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
trans-1,4-Dichloro-2-butene, ug/L		1U	1U		1U	1U	1U
Trichloroethene (TCE), ug/L	3	0.91	0.2U		0.58	0.11	0.2U
Trichlorofluoromethane (CFC 11), ug/L		0.2J	0.2U		0.14J	0.2U	0.2U
Vinyl Acetate, ug/L		0.2U	0.2U		0.2U	0.2U	0.2U
Vinyl Chloride, ug/L	0.02	0.2U	0.2U		0.2U	0.2U	0.2U

* CONF = Confluent growth on all dilutions, no coliforms.

J - Estimated value. B - Compound found in blank.

No result indicates analyte not analyzed for.

U - Not detected above indicated detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

** J Indicates detected in the trip blank but not qualified.

M - Estimated value - low spectral match parameters.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

Y - Not detected at raised detection limit.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q3

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
Field Parameters							
Depth to Water, Ft.		220.89	283.00	251.81		184.05	200.91
Dissolved oxygen, mg/L				2.43		1.78	3.31
Oxidation Reduction Potential, mV				73.1		67.7	19.6
pH, Field, std. units	6.5-8.5			7.61		5.95	7.84
Specific Conductance @ 25C, Field, umhos/cm	700			412		502	377
Temperature, C				17.03		23.39	22.88
Inorganics							
Ammonia, Total, mg/L as N				0.04U		0.072	0.04U
Carbon, Total Organic, mg/L				9.45		28.28	8.18
Chemical Oxygen Demand (COD), mg/L				11.1		31.2	10U
Chloride, mg/L	250			8.29		43.7D	4.11
Nitrate, mg/L as N	10			0.625		0.02U	0.02U
Nitrate + Nitrite (NO ₂ + NO ₃), mg-N/L	10			0.625		0.01U	0.012
Nitrite, mg/L as N	1			0.01U		0.01U	0.01U
Sulfate, mg/L	250			27.9		58.5D	22.8
Metals							
Iron, Dissolved, mg/L	0.3			0.05U		0.05U	0.05U
Manganese, Dissolved, mg/L	0.05			0.004U		0.0905	0.004U
Zinc, Dissolved, mg/L	5			0.02U		0.02U	0.02U
VOC							
1,1,1,2-Tetrachloroethane, ug/L				0.2U		0.2U	0.2U
1,1,1-Trichloroethane (TCA), ug/L	200			0.2U		0.2U	0.2U
1,1,2,2-Tetrachloroethane, ug/L				0.2U		0.2U	0.2U
1,1,2-Trichloro-1,2,2-trifluoroetha, ug/l				0.2U		1.49	0.2U
1,1,2-Trichloroethane, ug/L				0.2U		0.2U	0.2U
1,1-Dichloroethane, ug/L	1			0.2U		0.2U	0.2U
1,1-Dichloroethene, ug/L				0.2U		0.2U	0.2U
1,1-Dichloropropene, ug/L				0.2U		0.2U	0.2U
1,2,3-Trichlorobenzene, ug/L				0.5U		0.5U	0.5U
1,2,3-Trichloropropane, ug/L				0.5U		0.5U	0.5U
1,2,4-Trichlorobenzene, ug/L	70			0.5U		0.5U	0.5U
1,2,4-Trimethylbenzene, ug/L				0.2U		0.2U	0.2U
1,2-Dibromo-3-chloropropane (DBCP), ug/L				0.5U		0.5U	0.5U
1,2-Dibromoethane (EDB), ug/L				0.2U		0.2U	0.2U
1,2-Dichlorobenzene, ug/L				0.2U		0.2U	0.2U
1,2-Dichloroethane (EDC), ug/L	0.5			0.2U		0.2U	0.2U
1,2-Dichloropropane, ug/L	0.6			0.2U		0.2U	0.2U
1,3,5-Trimethylbenzene, ug/L				0.2U		0.2U	0.2U
1,3-Dichlorobenzene, ug/L				0.2U		0.2U	0.2U
1,3-Dichloropropane, ug/L				0.2U		0.2U	0.2U
1,4-Dichlorobenzene, ug/L	4			0.2U		0.2U	0.2U

* CONF = Confluent growth on all dilutions, no coliforms.

** Indicates detected in the trip blank but not qualified.

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M - Estimated value - low spectral match parameters.

No result indicates analyte not analyzed for.

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GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q3

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
2,2-Dichloropropane, ug/L					0.2U	0.2U	0.2U
2-Butanone (MEK), ug/L					5U	5U	5U
2-Chloroethyl Vinyl Ether, ug/L					1U	1U	1U
2-Chlorotoluene, ug/L					0.2U	0.2U	0.2U
2-Hexanone, ug/L					5U	5U	5U
4-Chlorotoluene, ug/L					0.2U	0.2U	0.2U
4-Isopropyltoluene, ug/L					0.2U	0.2U	0.2U
4-Methyl-2-Pentanone (MIBK), ug/L					5U	5U	5U
Acetone, ug/L					5U	5U	5U
Acrolein, ug/L					5U	5U	5U
Acrylonitrile, ug/L	0.07				1U	1U	1U
Benzene, ug/L	1				0.2U	0.2U	0.2U
Bromobenzene, ug/L					0.2U	0.2U	0.2U
Bromochloromethane, ug/L					0.2U	0.2U	0.2U
Bromodichloromethane, ug/L	0.3				0.2U	0.2U	0.2U
Bromoform, ug/L	5				0.2U	0.2U	0.2U
Bromomethane, ug/L					1U	1U	1U
Carbon Disulfide, ug/L					0.2U	0.26	0.2U
Carbon Tetrachloride, ug/L	0.3				0.2U	0.2U	0.2U
Chlorobenzene, ug/L	100				0.2U	0.2U	0.2U
Chloroethane, ug/L					0.2U	0.2U	0.2U
Chloroform, ug/L	7				0.2U	0.2U	0.2U
Chloromethane, ug/L					0.5U	0.5U	0.5U
cis-1,2-Dichloroethene, ug/L					0.33	0.2U	0.2U
cis-1,3-Dichloropropene, ug/L					0.2U	0.2U	0.2U
Dibromochloromethane, ug/L					0.2U	0.2U	0.2U
Dibromomethane, ug/L					0.2U	0.2U	0.2U
Dichlorodifluoromethane (CFC 12), ug/L					0.47	0.2U	0.2U
Dichloromethane(Methylene Chloride), ug/L	5				1U	1U	1U
Ethylbenzene, ug/L	700				0.2U	0.2U	0.2U
Hexachlorobutadiene, ug/L					0.5U	0.5U	0.5U
Iodomethane, ug/L					1U	1U	1U
Isopropylbenzene (Cumene), ug/L					0.2U	0.2U	0.2U
m,p-Xylene, ug/L					0.4U	0.4U	0.4U
Methyl tert-Butyl Ether, ug/L					0.5U	0.5U	0.5U
Naphthalene, ug/L					0.5U	0.5U	0.5U
n-Butylbenzene, ug/L					0.2U	0.2U	0.2U
n-Propylbenzene, ug/L					0.2U	0.2U	0.2U
o-Xylene, ug/L					0.2U	0.2U	0.2U
sec-Butylbenzene, ug/L					0.2U	0.2U	0.2U
Styrene, ug/L	100				0.2U	0.2U	0.2U
tert-Butylbenzene, ug/L					0.2U	0.2U	0.2U
Tetrachloroethene (PCE), ug/L	0.8				4.50	0.57	0.14J
Toluene, ug/L	1000				0.2U	0.2U	0.2U
Total Xylenes, ug/L	10000				0.6U	0.6U	0.6U

* CONF = Confluent growth on all dilutions, no coliforms.

** Indicates detected in the trip blank but not qualified.

J - Estimated value. B - Compound found in blank.

M - Estimated value - low spectral match parameters.

No result indicates analyte not analyzed for.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

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GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q3

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
trans-1,2-Dichloroethene, ug/L	100			0.2U	0.2U	0.2U	
trans-1,3-Dichloropropene, ug/L				0.2U	0.2U	0.2U	
trans-1,4-Dichloro-2-butene, ug/L				1U	1U	1U	
Trichloroethene (TCE), ug/L	3			0.43	0.2U	0.2U	
Trichlorofluoromethane (CFC 11), ug/L				0.2U	0.2U	0.2U	
Vinyl Acetate, ug/L				0.2U	0.2U	0.2U	
Vinyl Chloride, ug/L	0.02			0.2U	0.2U	0.2U	

* CONF = Confluent growth on all dilutions, no coliforms. ** Indicates detected in the trip blank but not qualified.

J - Estimated value. B - Compound found in blank. M - Estimated value - low spectral match parameters.

No result indicates analyte not analyzed for. Q - Indicates quarter of the year (ie: Q1 = first quarter).

U - Not detected above indicated detection limit. Y - Not detected at raised detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q4

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
Field Parameters							
Depth to Water, Ft.		242.75	220.54	292.39	242.28	183.98	191.2
Dissolved oxygen, mg/L			7.48		1.43	1.68	1.53
Oxidation Reduction Potential, mV			3.9		45.8	77.7	48.2
pH, Field, std. units	6.5-8.5		7.39		7.55	5.98	7.88
Specific Conductance @ 25C, Field, umhos/cm	700		413		351	377	279
Temperature, C			16.51		15.64	12.01	11.92
Inorganics							
Ammonia, Total, mg/L as N			0.04U		0.04U	0.04U	0.04U
Carbon, Total Organic, mg/L			0.5U		0.5U	0.91	2.7
Chemical Oxygen Demand (COD), mg/L			10U		10U	10U	10U
Chloride, mg/L	250		9.18		7.77	26.8D	4.08
Nitrate, mg/L as N	10		0.435H		UH	UH	0.907H
Nitrate + Nitrite (NO ₂ + NO ₃), mg-N/L	10		0.435		0.01U	0.01U	0.907
Nitrite, mg/L as N	1		UH		UH	UH	UH
Sulfate, mg/L	250		85D		33.2D	67D	23.9
Metals							
Iron, Dissolved, mg/L	0.3		0.266		0.05U	0.591	0.126
Manganese, Dissolved, mg/L	0.05		0.0499		0.004U	0.278	0.0075
Zinc, Dissolved, mg/L	5		0.0176J		0.02U	0.0249	0.02U
VOC							
1,1,1,2-Tetrachloroethane, ug/L			0.2U		0.2U	0.2U	0.2U
1,1,1-Trichloroethane (TCA), ug/L	200		0.2U		0.2U	0.2U	0.2U
1,1,2,2-Tetrachloroethane, ug/L			0.2U		0.2U	0.2U	0.2U
1,1,2-Trichloro-1,2,2-trifluoroetha, ug/l			0.2U		0.2U	0.2U	0.2U
1,1,2-Trichloroethane, ug/L			0.2U		0.2U	0.2U	0.2U
1,1-Dichloroethane, ug/L	1		0.2U		0.2U	0.2U	0.2U
1,1-Dichloroethene, ug/L			0.2U		0.2U	0.2U	0.2U
1,1-Dichloropropene, ug/L			0.2U		0.2U	0.2U	0.2U
1,2,3-Trichlorobenzene, ug/L			0.5U		0.5U	0.5U	0.5U
1,2,3-Trichloropropane, ug/L			0.5U		0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene, ug/L	70		0.5U		0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene, ug/L			0.2U		0.2U	0.2U	0.2U
1,2-Dibromo-3-chloropropane (DBCP), ug/L			0.5U		0.5U	0.5U	0.5U
1,2-Dibromoethane (EDB), ug/L			0.2U		0.2U	0.2U	0.2U
1,2-Dichlorobenzene, ug/L			0.2U		0.2U	0.2U	0.2U
1,2-Dichloroethane (EDC), ug/L	0.5		0.2U		0.2U	0.2U	0.2U
1,2-Dichloropropane, ug/L	0.6		0.2U		0.2U	0.2U	0.2U
1,3,5-Trimethylbenzene, ug/L			0.2U		0.2U	0.2U	0.2U
1,3-Dichlorobenzene, ug/L			0.2U		0.2U	0.2U	0.2U
1,3-Dichloropropane, ug/L			0.2U		0.2U	0.2U	0.2U
1,4-Dichlorobenzene, ug/L	4		0.2U		0.2U	0.2U	0.2U

* CONF = Confluent growth on all dilutions, no coliforms.

J - Estimated value. B - Compound found in blank.

No result indicates analyte not analyzed for.

U - Not detected above indicated detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

** Indicates detected in the trip blank but not qualified.

M - Estimated value - low spectral match parameters.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

Y - Not detected at raised detection limit.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q4

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
2,2-Dichloropropane, ug/L			0.2U		0.2U	0.2U	0.2U
2-Butanone (MEK), ug/L			5U		5U	5U	5U
2-Chloroethyl Vinyl Ether, ug/L			1U		1U	1U	1U
2-Chlorotoluene, ug/L			0.2U		0.2U	0.2U	0.2U
2-Hexanone, ug/L			5U		5U	5U	5U
4-Chlorotoluene, ug/L			0.2U		0.2U	0.2U	0.2U
4-Isopropyltoluene, ug/L			0.2U		0.2U	0.2U	0.2U
4-Methyl-2-Pentanone (MIBK), ug/L			5U		5U	5U	5U
Acetone, ug/L			5U		5U	14.2	5U
Acrolein, ug/L			5U		5U	5U	5U
Acrylonitrile, ug/L	0.07		1U		1U	1U	1U
Benzene, ug/L	1		0.2U		0.2U	0.2U	0.2U
Bromobenzene, ug/L			0.2U		0.2U	0.2U	0.2U
Bromochloromethane, ug/L			0.2U		0.2U	0.2U	0.2U
Bromodichloromethane, ug/L	0.3		0.2U		0.2U	0.2U	0.2U
Bromoform, ug/L	5		0.2U		0.2U	0.2U	0.2U
Bromomethane, ug/L			1U		1U	1U	1U
Carbon Disulfide, ug/L			0.2U		0.2U	0.2U	0.2U
Carbon Tetrachloride, ug/L	0.3		0.2U		0.2U	0.2U	0.2U
Chlorobenzene, ug/L	100		0.2U		0.2U	0.2U	0.2U
Chloroethane, ug/L			0.2U		0.2U	0.2U	0.2U
Chloroform, ug/L	7		0.2U		0.2U	0.2U	0.2U
Chloromethane, ug/L			0.5U		0.5U	0.5U	0.5U
cis-1,2-Dichloroethene, ug/L			0.2U		0.58	0.2U	0.2U
cis-1,3-Dichloropropene, ug/L			0.2U		0.2U	0.2U	0.2U
Dibromochloromethane, ug/L			0.2U		0.2U	0.2U	0.2U
Dibromomethane, ug/L			0.2U		0.2U	0.2U	0.2U
Dichlorodifluoromethane (CFC 12), ug/L			0.2U		0.2U	0.2U	0.2U
Dichloromethane(Methylene Chloride), ug/L	5		1U		1U	1U	1U
Ethylbenzene, ug/L	700		0.2U		0.2U	0.2U	0.2U
Hexachlorobutadiene, ug/L			0.5U		0.5U	0.5U	0.5U
Iodomethane, ug/L			1U		1U	1U	1U
Isopropylbenzene (Cumene), ug/L			0.2U		0.2U	0.2U	0.2U
m,p-Xylene, ug/L			0.4U		0.4U	0.4U	0.4U
Methyl tert-Butyl Ether, ug/L			0.5U		0.5U	0.5U	0.5U
Naphthalene, ug/L			0.5U		0.5U	0.5U	0.5U
n-Butylbenzene, ug/L			0.2U		0.2U	0.2U	0.2U
n-Propylbenzene, ug/L			0.2U		0.2U	0.2U	0.2U
o-Xylene, ug/L			0.2U		0.2U	0.2U	0.2U
sec-Butylbenzene, ug/L			0.2U		0.2U	0.2U	0.2U
Styrene, ug/L	100		0.2U		0.2U	0.2U	0.2U
tert-Butylbenzene, ug/L			0.2U		0.2U	0.2U	0.2U
Tetrachloroethene (PCE), ug/L	0.8		0.2U		4.53	0.88	0.2U
Toluene, ug/L	1000		0.2U		0.2U	0.2U	0.2U
Total Xylenes, ug/L	10000		0.6U		0.6U	0.6U	0.6U

* CONF = Confluent growth on all dilutions, no coliforms.

** Indicates detected in the trip blank but not qualified.

J - Estimated value. B - Compound found in blank.

M - Estimated value - low spectral match parameters.

No result indicates analyte not analyzed for.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

U - Not detected above indicated detection limit.

Y - Not detected at raised detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

The Groundwater Quality Criteria for pH is 6.5 to 8.5.

Table 3. Groundwater Monitoring Data, Snipes Mountain Landfill

2024 Q4

Sample Name		SMW-1	SMW-2	SMW-3	SMW-4	SMW-5s	SMW-5d
Constituent	GWQC						
trans-1,2-Dichloroethene, ug/L	100		0.2U		0.2U	0.2U	0.2U
trans-1,3-Dichloropropene, ug/L			0.2U		0.2U	0.2U	0.2U
trans-1,4-Dichloro-2-butene, ug/L			1U		1U	1U	1U
Trichloroethene (TCE), ug/L	3		0.2U		0.87	0.2U	0.2U
Trichlorofluoromethane (CFC 11), ug/L			0.2U		0.2U	0.2U	0.2U
Vinyl Acetate, ug/L			0.2U		0.2U	0.2U	0.2U
Vinyl Chloride, ug/L	0.02		0.2U		0.2U	0.2U	0.2U

* CONF = Confluent growth on all dilutions, no coliforms.

J - Estimated value. B - Compound found in blank.

No result indicates analyte not analyzed for.

U - Not detected above indicated detection limit.

GWQC - Groundwater Quality Criteria as outlined in WAC 173-200, Appendix A. These values are the most stringent levels derived from WAC 173-200 (10/1990) and WAC 246-290 (7/2004).

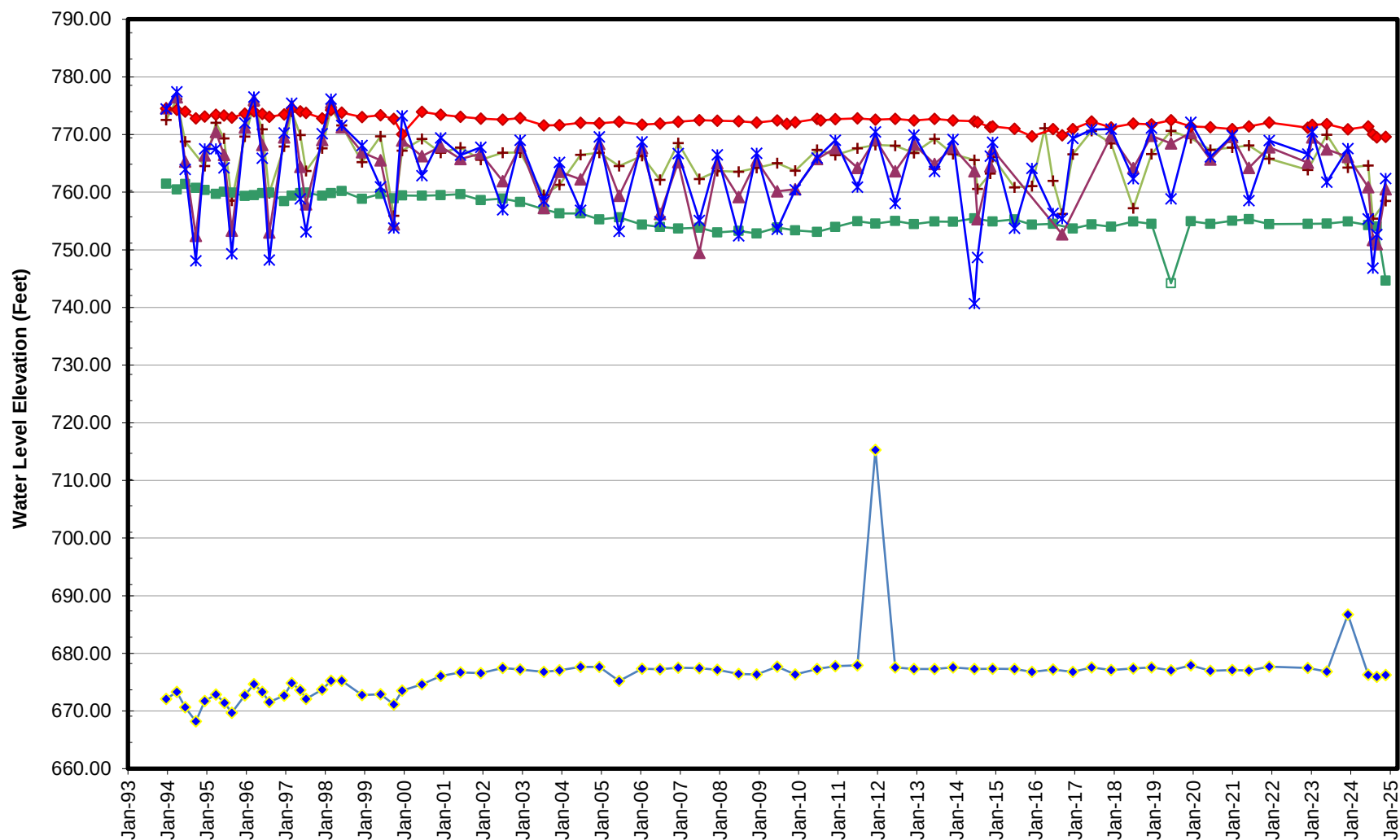
The Groundwater Quality Criteria for pH is 6.5 to 8.5.

** Indicates detected in the trip blank but not qualified.

M - Estimated value - low spectral match parameters.

Q - Indicates quarter of the year (ie: Q1 = first quarter).

Y - Not detected at raised detection limit.

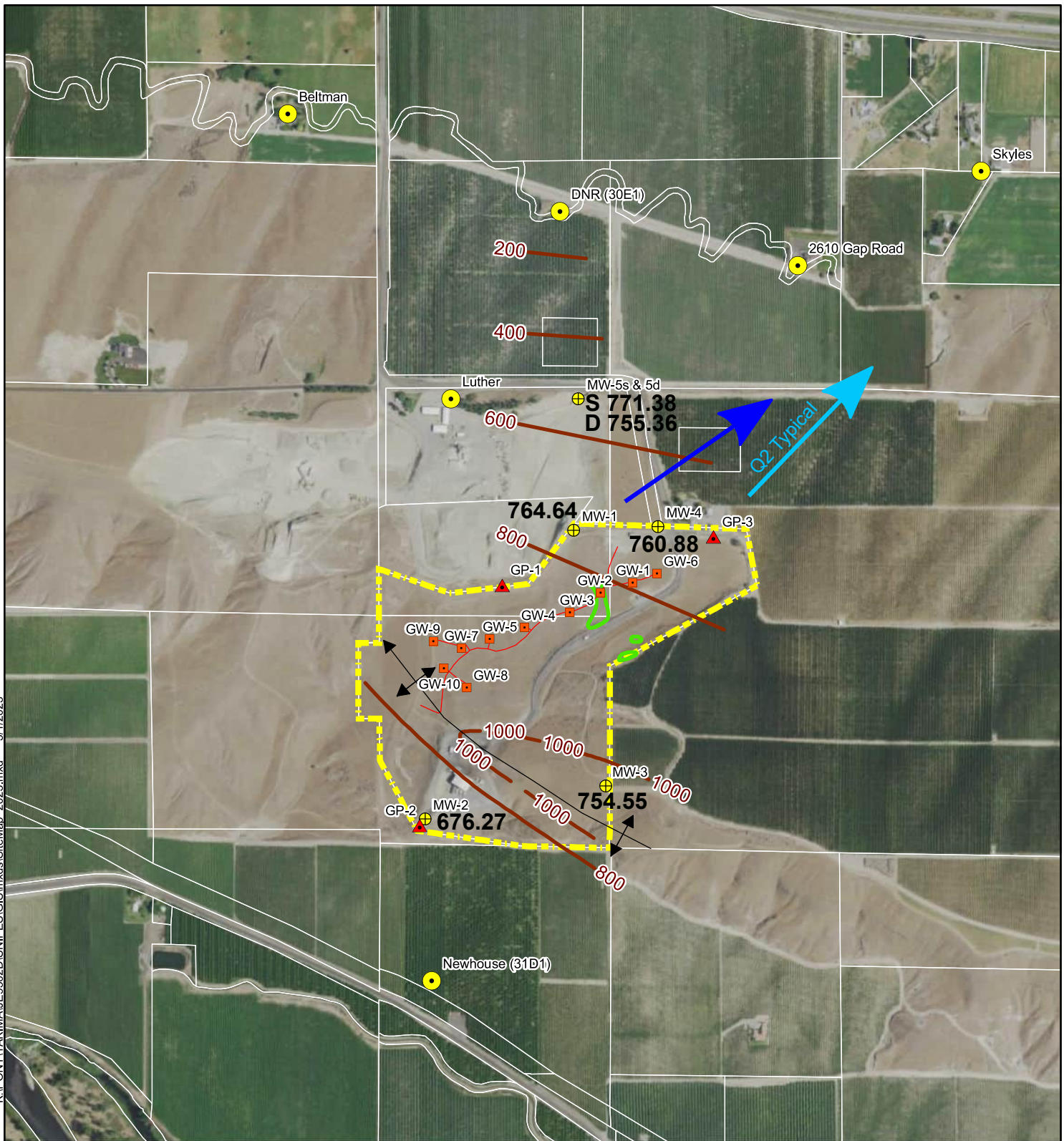


+ SMW-1 ♦ SMW-2 ■ SMW-3
 ▲ SMW-4 ◆ SMW-5s * SMW-5d

Hollow data points indicate suspect measurements.

Figure 1. Hydrographs
Snipes Mountain Landfill (LVTS)

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758.53 Groundwater Elevation and Flow Direction ←

- | | |
|--------------------------|-------------------------------|
| ⊕ Monitoring Well | — Elevation contour on top of |
| ■ Gas Well | Tem Geologic Unit; Dashed |
| ▲ Gas Probes & Gas Flair | where removed. |
| ● Offsite Well | — Gas Extraction Piping |
| | ⋯ County Property Boundary |
| | □ Former Seepage Ponds |
| | (Approximate) |

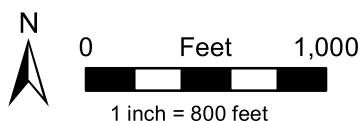
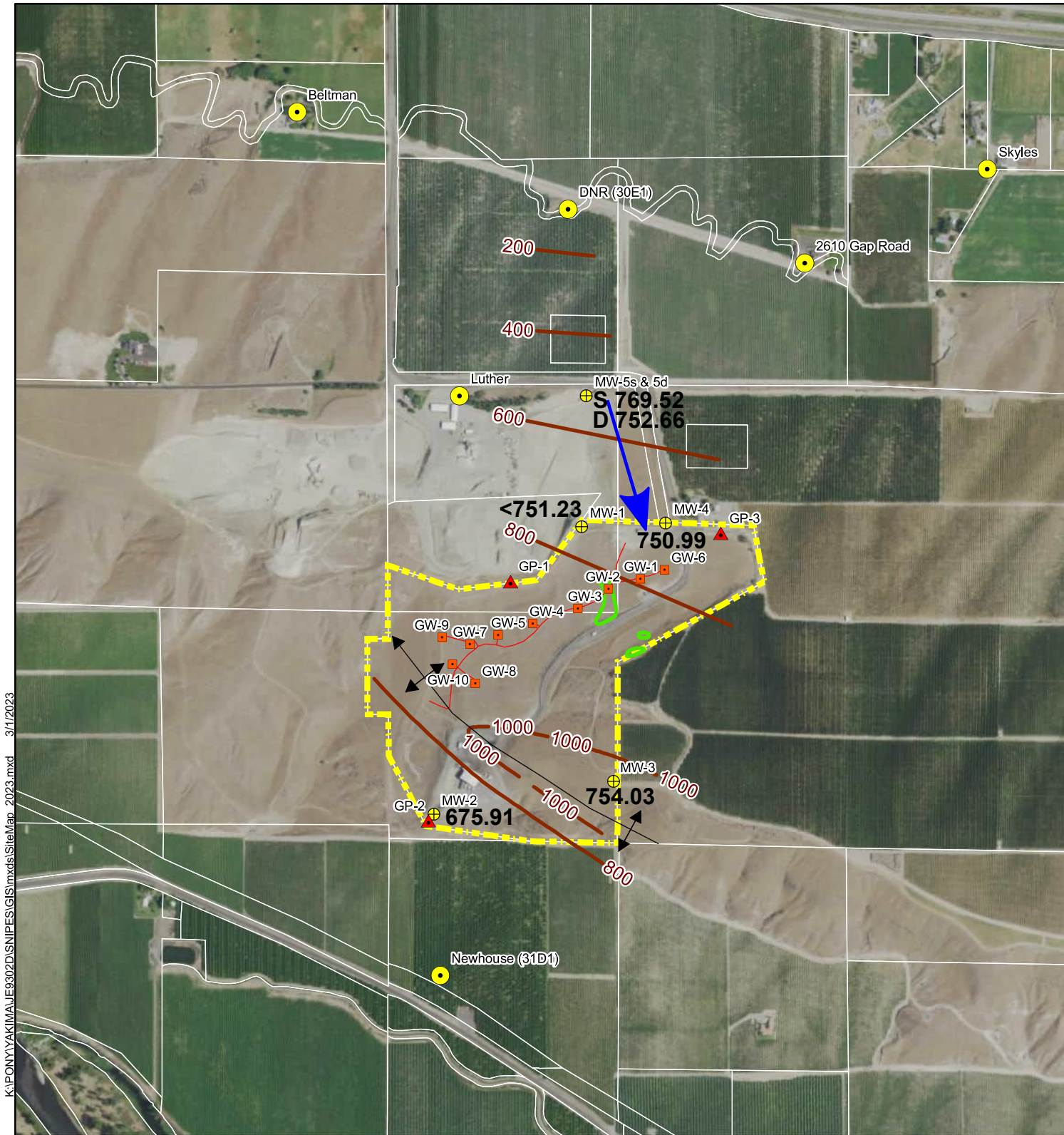


Figure 2a.
Groundwater Flow and
Structural Contour Map
2024 Q2

Snipes Mountain Landfill,
Yakima County

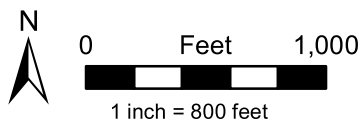
M
M
MOTT
MACDONALD



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758.53 Groundwater Elevation and Flow Direction

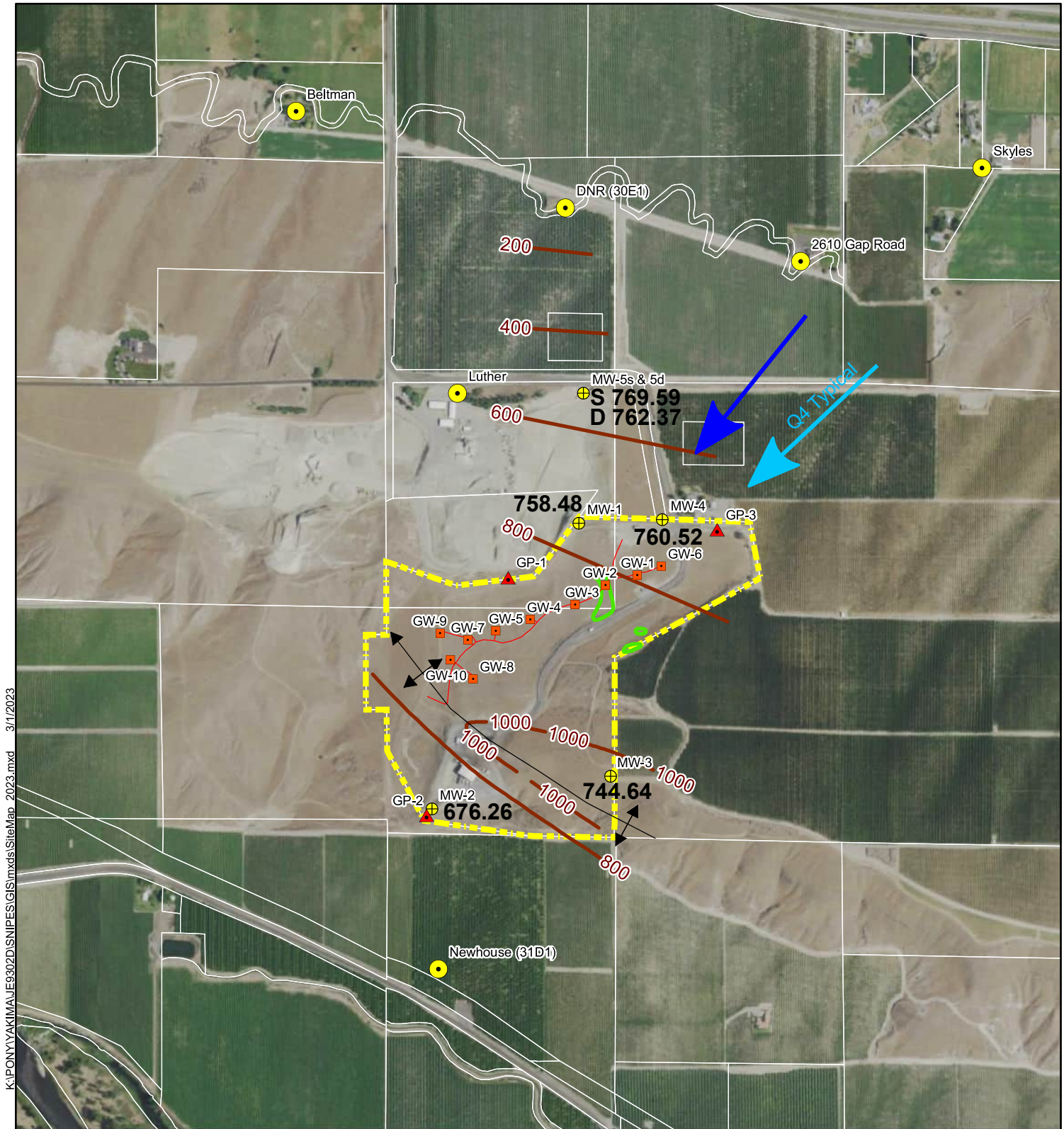
- Monitoring Well
- Gas Well
- Gas Probes & Gas Flair
- Offsite Well
- Elevation contour on top of Tem Geologic Unit; Dashed where removed.
- Gas Extraction Piping
- County Property Boundary
- Former Seepage Ponds (Approximate)



**Figure 2b.
Groundwater Flow and
Structural Contour Map
2024 Q3**

Snipes Mountain Landfill,
Yakima County

M
MOTT
MACDONALD



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758.53 Groundwater Elevation and Flow Direction

- Monitoring Well
- Gas Well
- Gas Probes & Gas Flair
- Offsite Well
- Elevation contour on top of Tem Geologic Unit; Dashed where removed.
- Gas Extraction Piping
- County Property Boundary
- Former Seepage Ponds (Approximate)

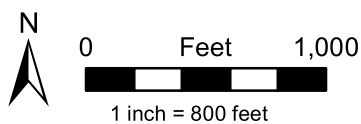
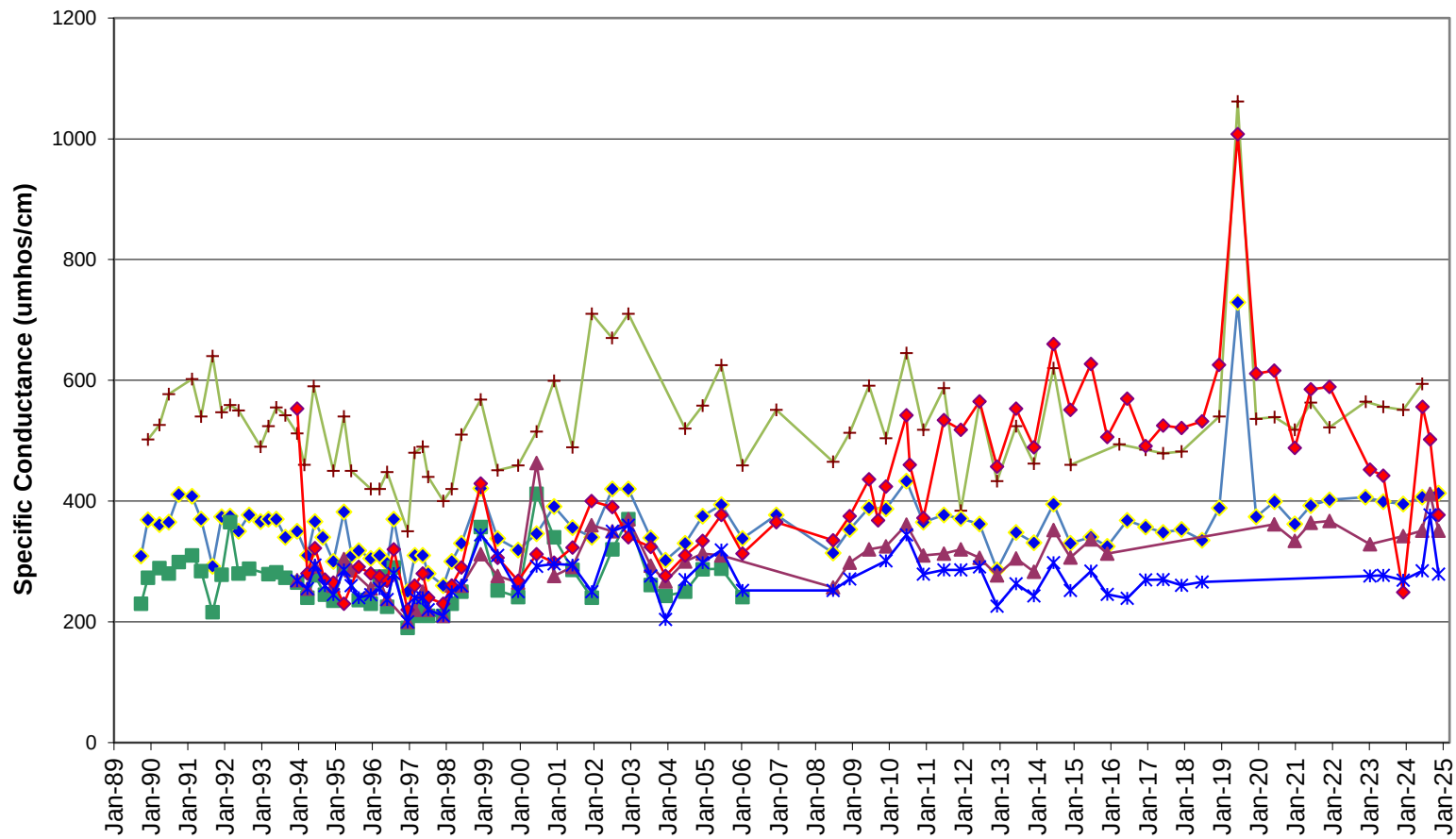


Figure 2c.
Groundwater Flow and
Structural Contour Map
2024 Q4

Snipes Mountain Landfill,
Yakima County

M
M
MOTT
MACDONALD



SMW-1 SMW-2 SMW-3
 SMW-4 SMW-5S SMW-5D

Figure 3. Specific Conductance Time Series Plot
Snipes Mountain Landfill (LVTS)

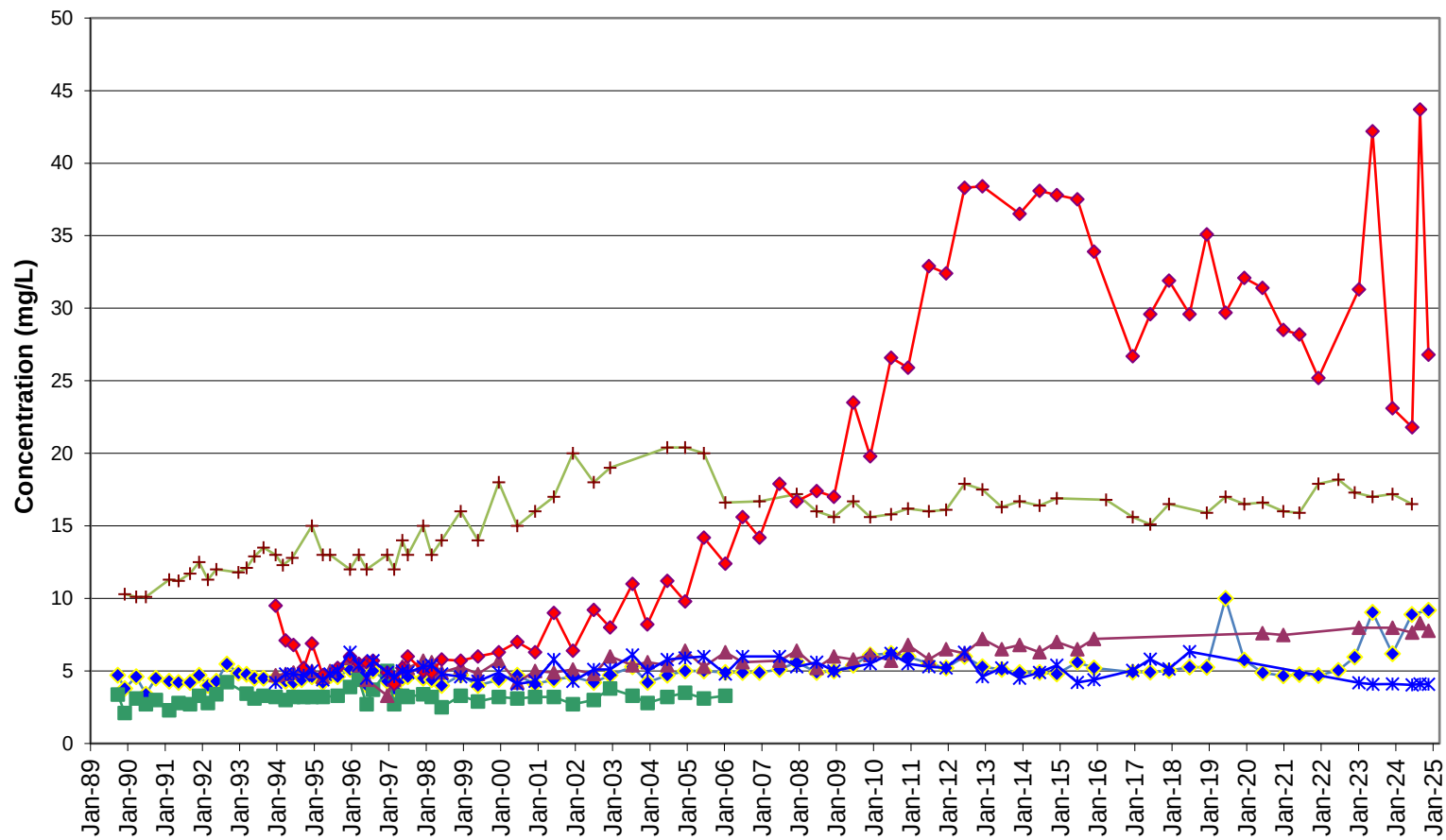
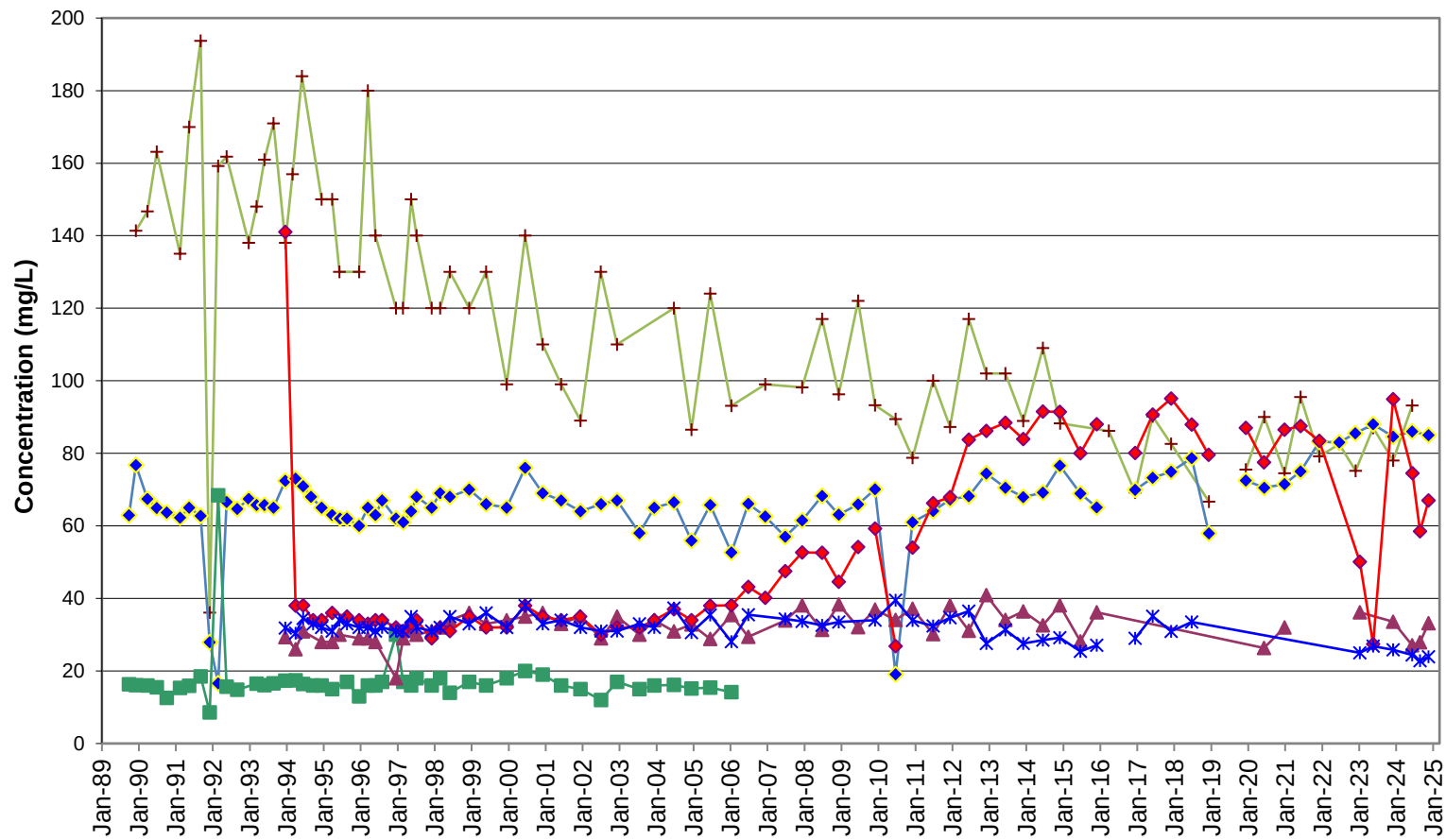


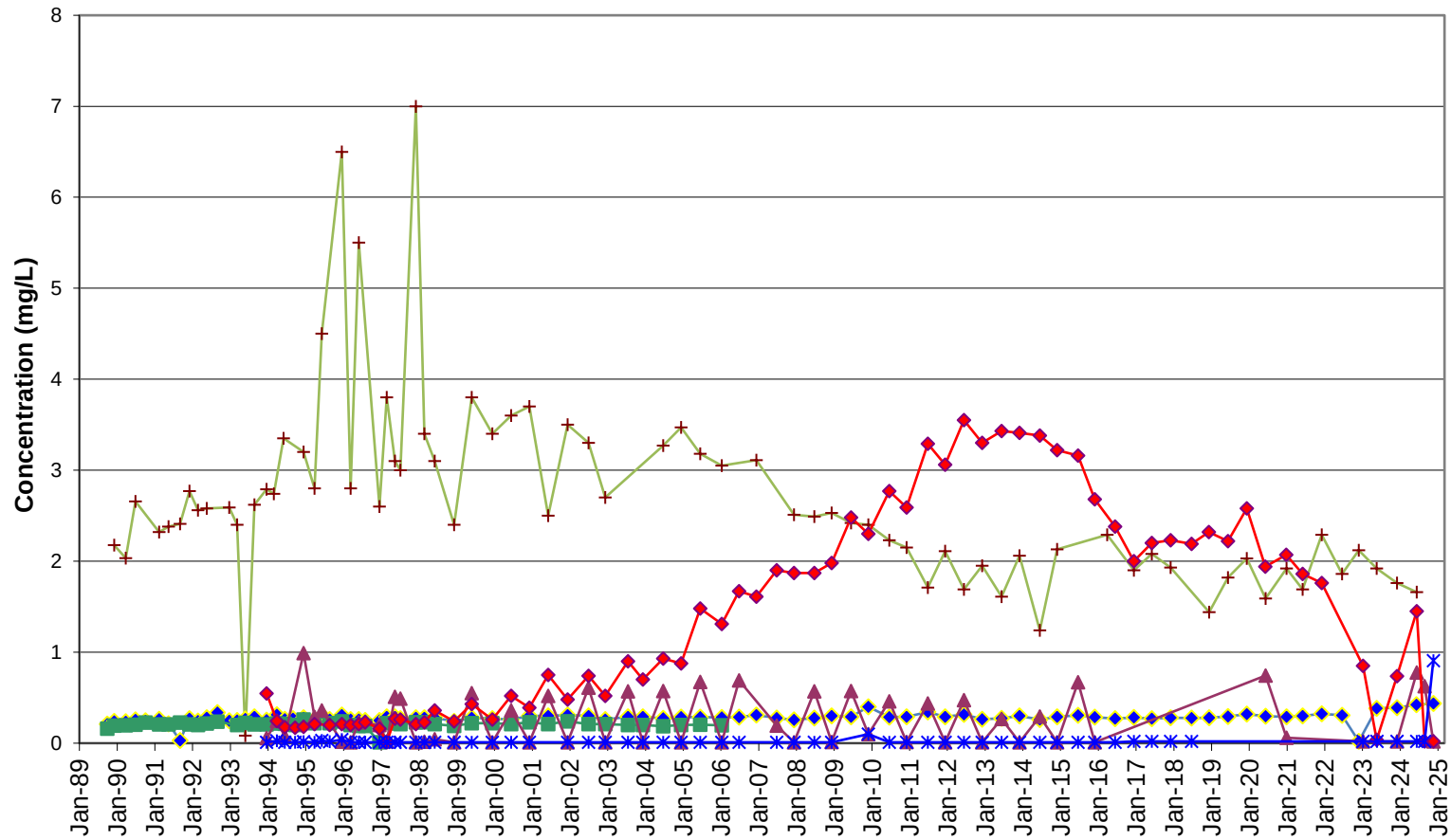
Figure 4. Chloride Time Series Plot
Snipes Mountain Landfill (LVTs)

+ SMW-1 ♦ SMW-2 ■ SMW-3
 ▲ SMW-4 ◆ SMW-5S * SMW-5D



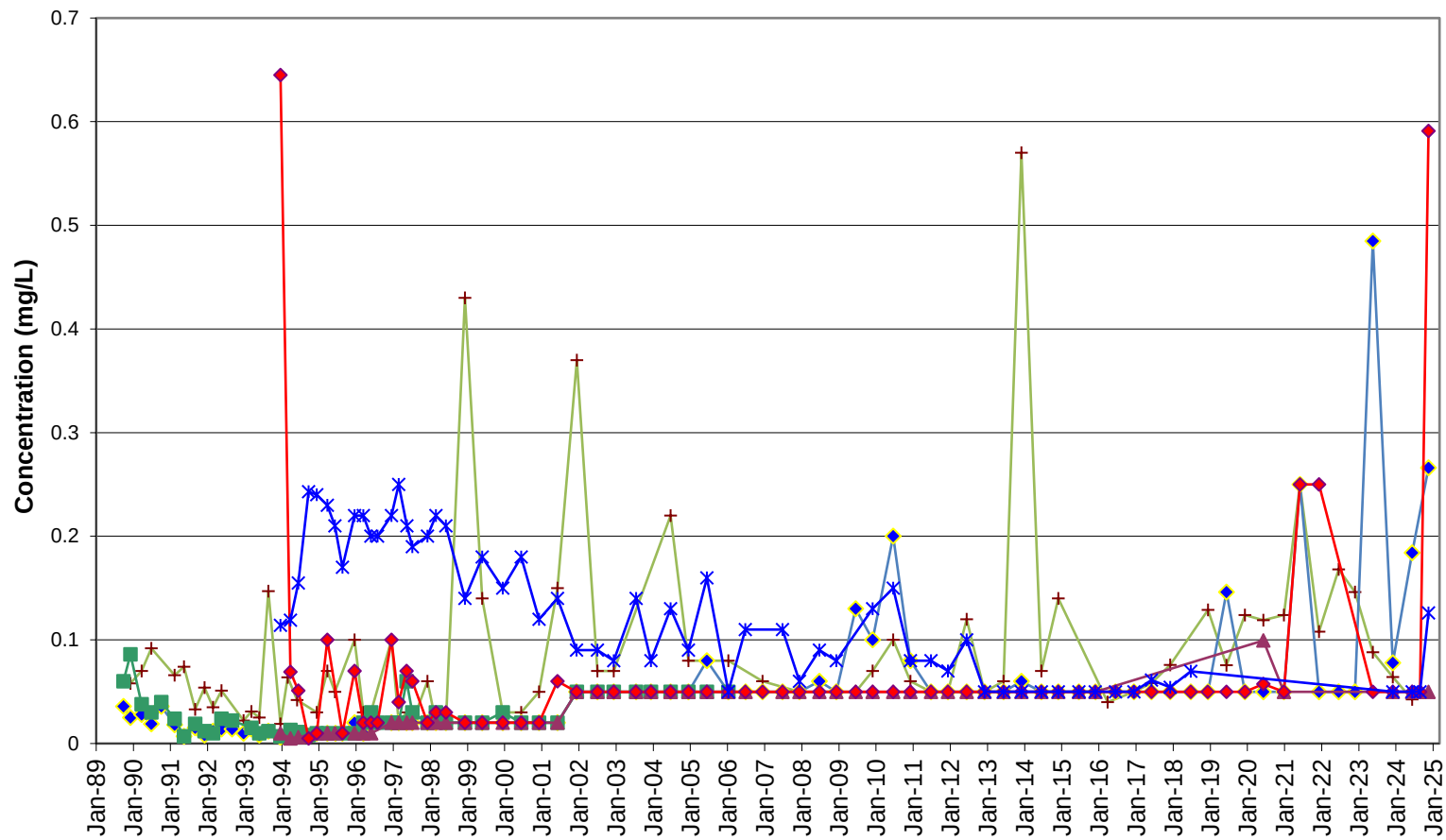
SMW-1 SMW-2 SMW-3
 SMW-4 SMW-5S SMW-5D

Figure 5. Sulfate Time Series Plot
Snipes Mountain Landfill (LVTS)



+ SMW-1 ♦ SMW-2 ■ SMW-3
 ▲ SMW-4 ♦ SMW-5S × SMW-5D
 Non-detects plotted at reporting limit

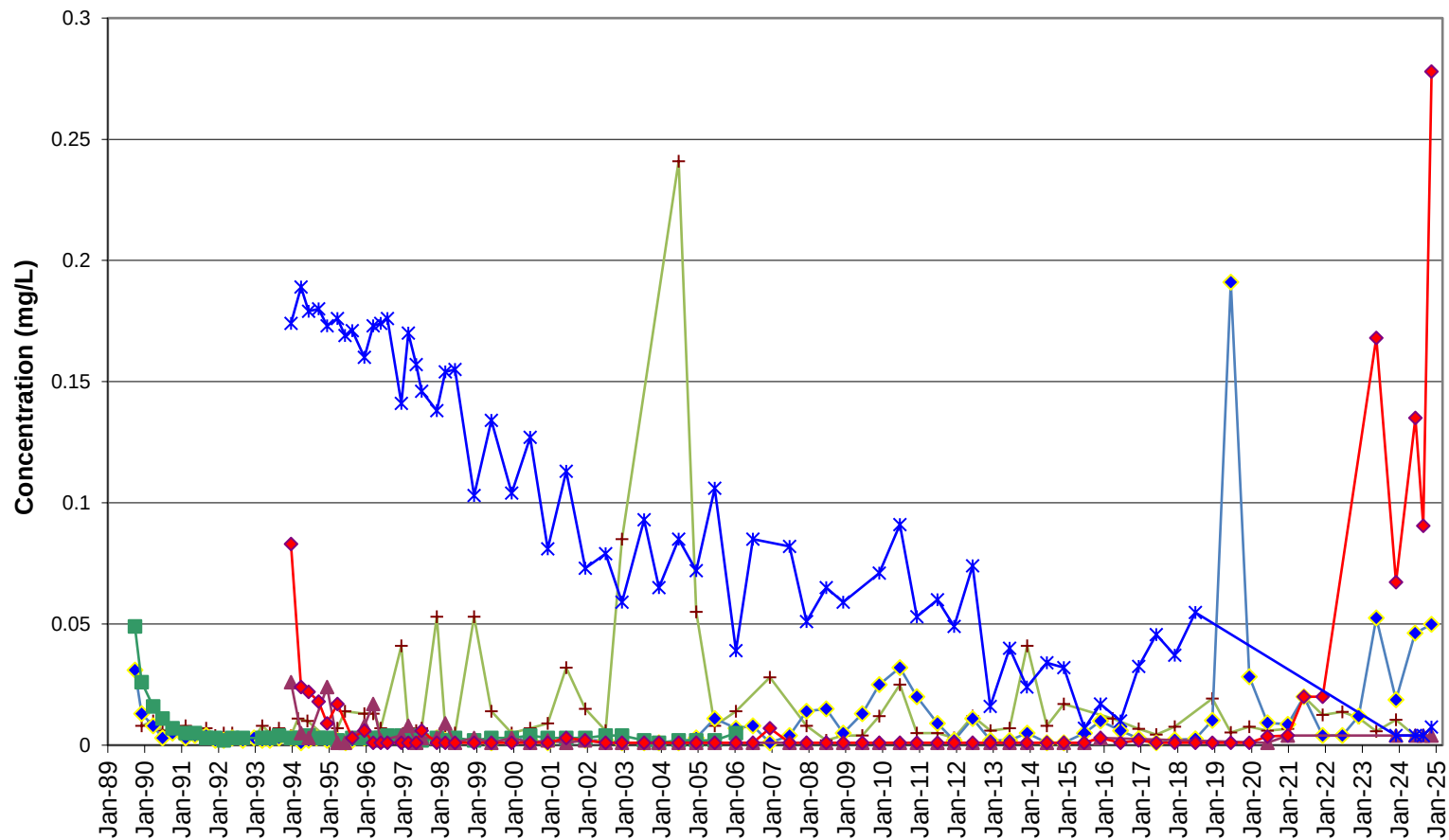
Figure 6. Nitrate Time Series Plot
Snipes Mountain Landfill (LVTS)



SMW-1 SMW-2 SMW-3
 SMW-4 SMW-5S SMW-5D

Non-detects plotted at reporting limit

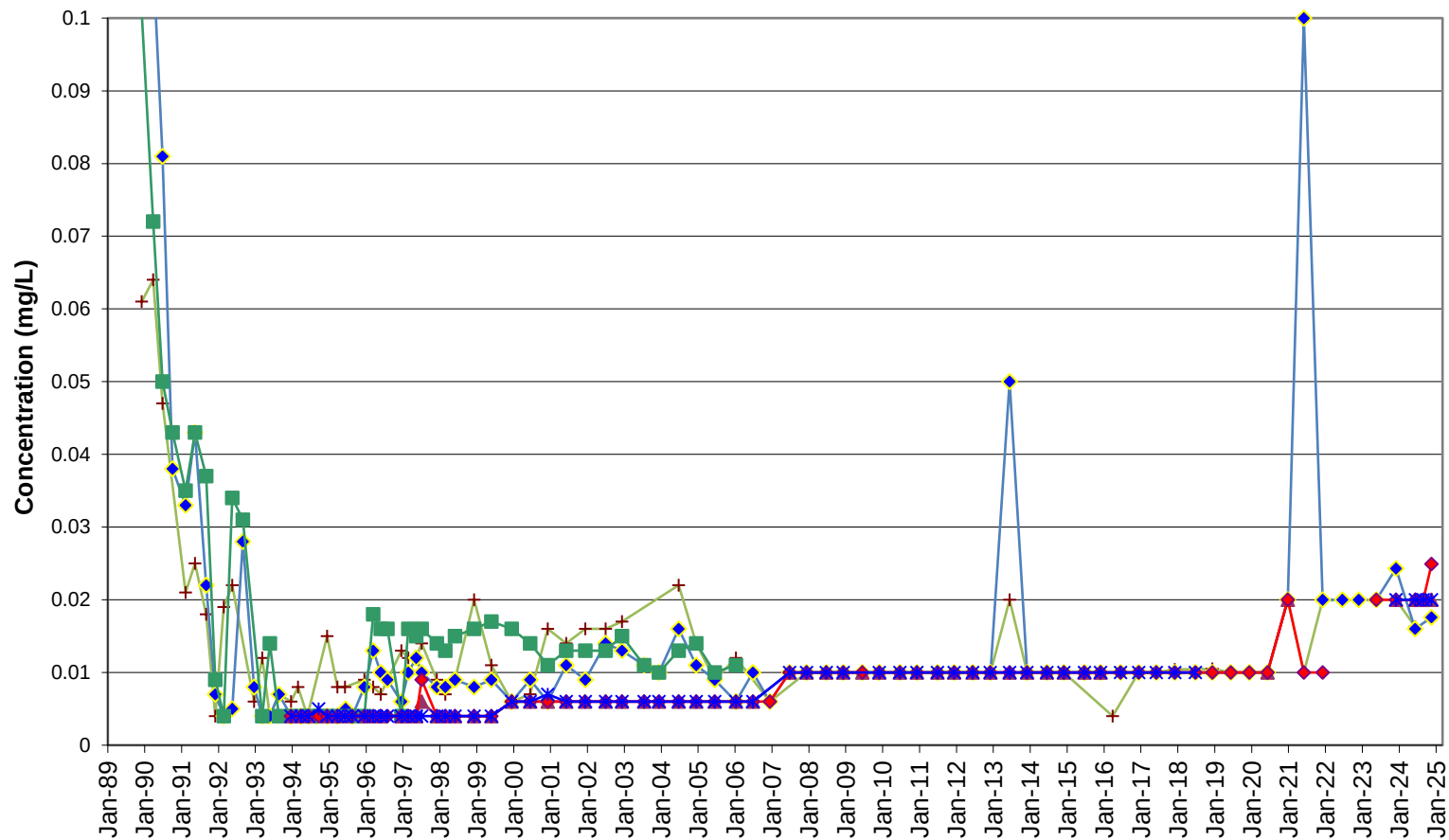
Figure 7. Dissolved Iron Time Series Plot
Snipes Mountain Landfill (LVTS)



+ SMW-1 ♦ SMW-2 ■ SMW-3
 ▲ SMW-4 ♦ SMW-5S * SMW-5D

Non-detects plotted at reporting limit

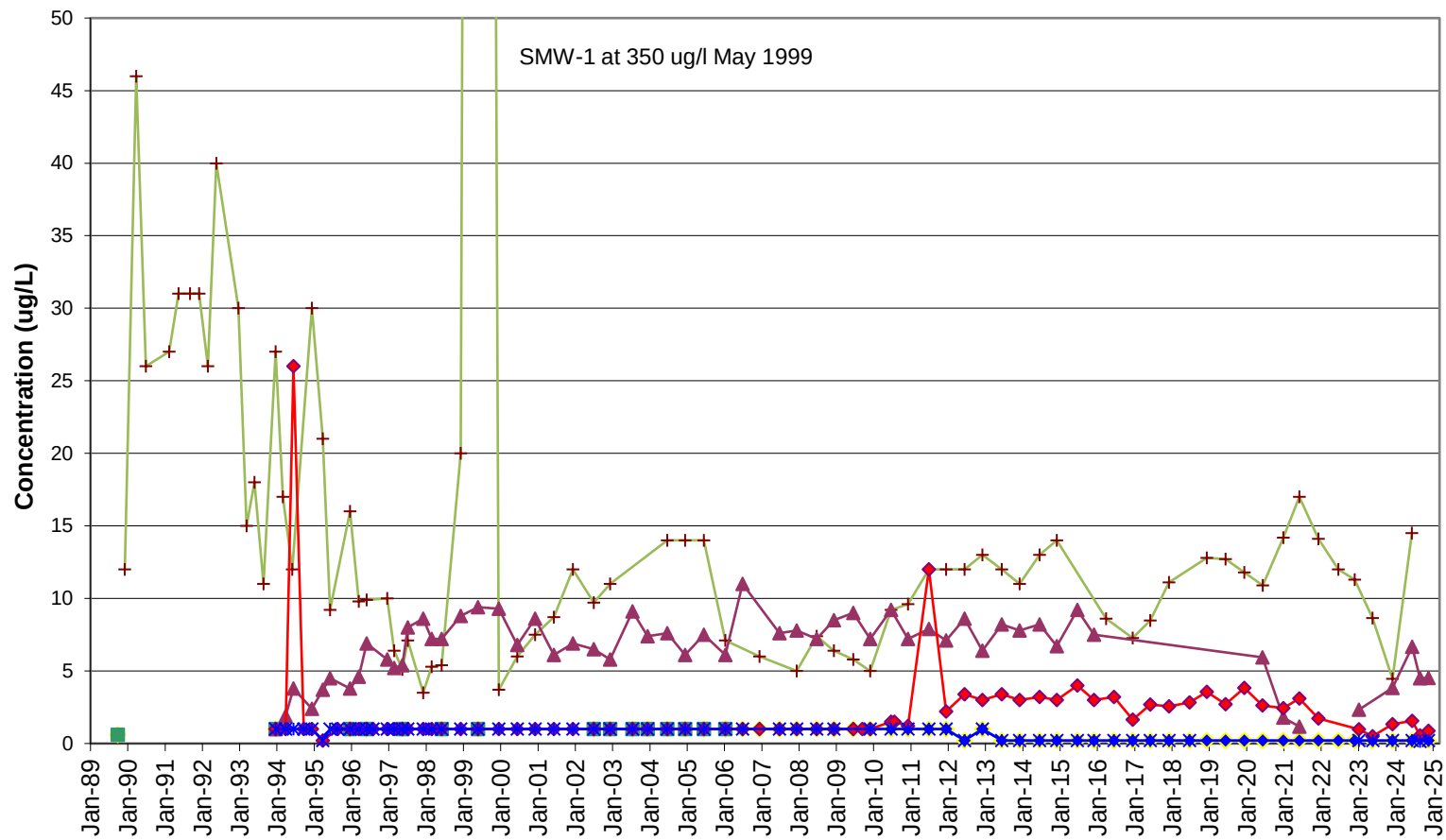
Figure 8. Dissolved Manganese Time Series Plot
Snipes Mountain Landfill (LVTS)



SMW-1 SMW-2 SMW-3
 SMW-4 SMW-5S SMW-5D

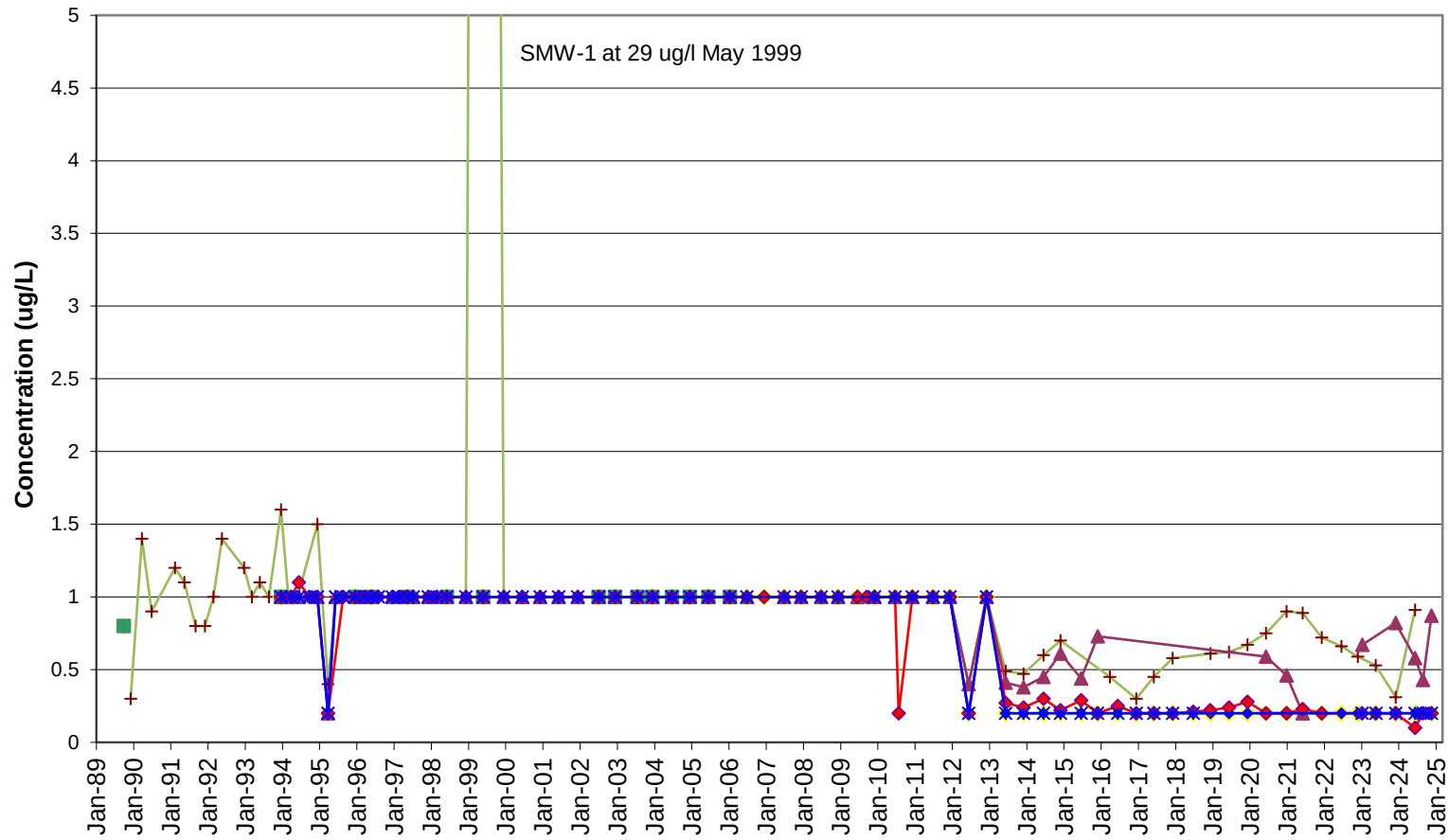
Non-detects plotted at reporting limit

Figure 9. Dissolved Zinc Time Series Plot
Snipes Mountain Landfill (LVTs)



+ SMW-1 ♦ SMW-2 ■ SMW-3
 ▲ SMW-4 ◆ SMW-5S ✱ SMW-5D
 Non-detects plotted at reporting limit

Figure 10. Tetrachloroethene (PCE) Time Series Plot
Snipes Mountain Landfill (LVTS)



SMW-1 SMW-2 SMW-3
 SMW-4 SMW-5S SMW-5D

Non-detects plotted at reporting limit

Figure 11. Trichloroethene (TCE) Time Series Plot
Snipes Mountain Landfill (LVTS)

Attachment A: Field Data Sheets

6/10 • packing/driving 0600-1045
• replaced tubing in CNGMW-5!

CNGMW-9 DTW 8.49 ft @ 1635

CNGMW-2 DTW 8.51 ft @ 1639

CNGMW-10 DTW 8.07 ft @ 1716

CNGMW-11 DTW 10.50 ft @ 1850

CNGMW-8 DTW 10.45 ft @ 1854

CNGMW-6 DTW 11.40 ft @ 1858

• should replace J-plug for CNGMW-6 w/ flush top

• one new drum onsite, ~3/4-4/5 full

• left CNG ~7pm

• brought spare supplies + coolers into hotel rooms, new ice, gas in suitcase generator

• no time/will to do any gas readings

6/11 • left Signal on trailer would not work → had broken fuse
- Pep Boys didn't want to deal w/ it but did it

• Call w. Melinda

- Don't go left + up past pink house

- Go past house, a small hidden sign says 'Browns'

- Turn sharp right.

• arrived @ DNR house ~1010 + spoke with 2 Evans employees. Indicated they drank from 2 spigots outside of the house, both labeled drinking water. Said the 2 spigots were the same. Blue spigot closer to the house (further N) was sampled. Employees were unaware of the delivered jugs of water

6/11 SMW-3 DTW @ ~ 1900
282.75 ft

* residential wells sampled through tubing that led to flow-through cell. Cell itself was disconnected before sampling. Tubing not changed between wells

6/12 CMW-1 dry

CMW-2 sampled before YSI calibrated

~~Sulfate @ Cheyne has 2nHCl(?) preservative??~~

~~Snipees SO₄ has no preservative~~ Sulfide has preservative

finished gas = hydrostar 1049

→ return compressor, get Prediflo boxes, drop off hydrostar, gas LFG meter charger, buy gloves + USB converter

↳ found a dog

* sampled CMW-3, not enough time to finish CMW4 before gates locked (left ~ 4pm)

* attempted to deploy transducer into SMW-5d after sampling w/ hydrasteers → got stuck on wet casing (~ 1925)

* installed transducer into SMW-4 after sampling ~ 2025

6/10

Organizing + Driving : Split by 4.

Site 1 : 11:03 am

pH 10, 4, 7 → OK

Conductivity → Calibrated 1588 for 1413 μ S.
[Hot day today → 31°C]

6/13

• Cheyenne CMW-4 + packing truck + driving to well

0635 - 0845 = 2.25 hrs

- calibrated YSI at CMW-4

- installed barlogger at SMW-5 @ ~1025
- installed transducer at SMW-SD @ 1031
- installed transducer at SMW-Ss @ 1052
- Terrace Heights: 1100 - 1900
- drive back, unpack : 1900 - 2015
get gas + ice

} 1 hr (w/ extra analytics)
45 min to
MICA

Snipes total
= 2.25
hrs

6/14

- return rental gear to the office, drop off samples,
return rental truck : 0715 - 0900

Martine

509 864-7787

HP60

11/30/14

Yatima Valley
Harry

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Page: 1 of	
ARI Client Company: P46 / Mott MacDonald		Phone: 303-217-6756		Date: _____	
Client Contact: Jeff Parker				No. of Coolers: _____	
Client Project Name: Yakima - Snipes Mtn				Cooler Temps: _____	
Client Project #: 518300030-001		Samplers: Ashley Parkhurst / Anthony Guscumini		Analysis Requested	
Sample ID	Date	Time	Matrix	No. Containers	Notes/Comments
Evans Well	6/11/2024	1110	W	7	Volatiles [SW8260D] Diss (FF) Fe, Mn, Zn, Ca, Na, Mg, K
DNR Well	6/11/2024	1035	W	7	NO3/NO2 NH3/TOC/COD Chloride Sulfate Alkalinity NH4PH-HCID Diss. (FF) Ca, Na, Mg, K
Bracon Well	6/11/2024	1350	W	7	
SMUJ-1	6/11/2024	1715	W	10	
SMUJ-2	6/11/2024	1530	W	9	
SMUJ-4	6/12/2024	2015	W	10	
SMUJ-5d	6/12/2024	1915	W	9	
SMUJ-5s	6/13/2024	0936	W	9	
Relinquished by: (Signature) _____ Received by: (Signature) _____ Printed Name: Ashley Parkhurst Printed Name: Leah McFadden Company: Mott MacDonald Company: ARS Date & Time: 6/14/2024 0805 Date & Time: 6/14/2024 08:09					
Comments/Special Instructions non-VX samples for SMUJ-5d and SMUJ-5s are not 100% full; must ~70% full					



Analytical Resources, LLC
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Set 15 minute
interval

Pgg

Future Start
= 6/12/2024
09:00 am

CALCULATION WORK SHEET

Yakima Co. Snipes

Calc. No. _____

Transducer Install 6/2024

Page _____ of _____

✓ **SMW-1** : Serial # = 003-2194951

min DTW = 220.21'

max DTW = 245.32'

last 10 years: min DTW = 230.1'
max DTW = 245.0'

→ aim for 250' length
removed 48.5 ft, 0.6 ft folded 1/2

✓ **SMW-4** : Serial # = 003-2194461

min DTW = 226.35'

max DTW = 253.30'

last 10 years: min DTW = 232.5'
max DTW = 250.1'

→ aim for 256'
removed 43', 0.6' folded 1/2

✓ **SMW-5d** : Serial # = 003-2194659

min DTW = 176.16'

max DTW = 212.91'

last 10 years: min DTW = 181.5'
max DTW = 212.9'

→ 206'
removed 193', ~0.6' folded 1/2 @ transducer

✓ **SMW-5s** : Serial # = 003-2194672

min DTW = 179.04'

max DTW = 183.87'

last 10 years: min DTW = 181.1 ft
max DTW = 183.9'

→ ~~209'~~ 200' total ft of cable; 0.6' folded 1/2 @ transducer

Title

Project

Snipes PI Interim acts

Prepared by:

Ashley Parkhurst

Date

6/2024

Reviewed by:

Date

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-1

Sampling Event: 2024 02

Sample #: _____

Project Number: 518300030-001
Project Name: Snipes Mountain Landfill
Project Address: Outlook, WA
Client Name: Yakima County
Laboratory: ARI
Chain-of-Custody (yes/no): yes
Shipment Method: drop-off

Date: 6/11/2024
Location: LVTs
Sampled By: AP / AG
Purged By: AP / AG
Date Sent to Lab: _____
Field CC Sample Number: _____
Sample Split: _____

Depth to Water (feet): 236.59

Purge Volume Measurement Method: Qt

Depth of Well (feet): 250 ft

Purge Date/Time: 6/11/2024 1655

Reference Point (surveyors notch, etc.): N

Purging Equipment: Hydrostar

Sampling Equipment: Hydrostar

Water Level Probe Used: Yak 102x

Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf

PV = ($\pi r^2 h$) (7.48 gal/ft³)

Purge Volume = ft of water 13.41 x CVC 0.16 x Casing Volumes 1 = 2.15 gallons

3x casing vols = 6.45 gal

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
1659 <u>1659</u>	<u>5</u>						
<u>1659</u>	<u>4</u>	<u>7.25</u>	<u>563</u>	<u>17.2</u>	<u>Relatively clear</u>	<u>212.5</u>	<u>10.85</u>
<u>1701</u>	<u>6.5</u>	<u>7.36</u>	<u>570</u>	<u>17.2</u>	<u>"</u>	<u>194.2</u>	<u>9.81</u>
<u>1703</u>	<u>9.0</u>	<u>7.40</u>	<u>576</u>	<u>17.2</u>	<u>"</u>	<u>176.1</u>	<u>9.50</u>
<u>1705</u>	<u>11.5</u>	<u>7.41</u>	<u>576</u>	<u>17.2</u>	<u>"</u>	<u>153.2</u>	<u>9.33</u>
<u>1707</u>	<u>14.0</u>	<u>7.38</u>	<u>583</u>	<u>17.2</u>	<u>"</u>	<u>128.8</u>	<u>9.14</u>
<u>1709</u>	<u>16.5</u>	<u>7.38</u>	<u>587</u>	<u>17.1</u>	<u>"</u>	<u>112.1</u>	<u>9.04</u>
<u>1711</u>	<u>19.0</u>	<u>7.34</u>	<u>591</u>	<u>17.1</u>	<u>"</u>	<u>98.1</u>	<u>8.93</u>
<u>1713</u>	<u>21.5</u>	<u>7.31</u>	<u>594</u>	<u>17.1</u>	<u>"</u>	<u>87.7</u>	<u>8.84</u>

Note: Well has insufficeint water to sample (runs dry) if SWL below 239 ft bgs.

Well Integrity:

Bottle Inventory

Day/Time Sampled: 6/11/2024 1715

Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>
				<u>Nitrate-HCl</u>
				<u>Alkalinity</u>

PgG

Signature: [Signature]

Page 1 of 1

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-2

Sampling Event: 2024 Q2

Sample #: _____

Project Number: 518300030-001
 Project Name: Snipes Mountain Landfill
 Project Address: Outlook, WA
 Client Name: Yakima County
 Laboratory: ARI
 Chain-of-Custody (yes/no) yes
 Shipment Method: drop off

Date: 6/11/2024
 Location: LVTs
 Sampled By: AP / AG
 Purged By: AP / AG
 Date Sent to Lab: _____
 Field CC Sample Number: _____
 Sample Split: _____

Depth to Water (feet): 220.53

Purge Volume Measurement Method: Qt

Depth of Well (feet): 250 ft

Purge Date/Time: 6/11/2024 1503

Reference Point (surveyors notch, etc.): mark TOM

Purging Equipment: Hydrostar

Sampling Equipment: Hydrostar

Water Level Probe Used: Yak coax

Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf PV=($\pi r^2 h$) (7.48 gal/ft³)

Purge Volume = ft of water 29.47 x CVC 0.16 x Casing Volumes 1 = 4.72 gallons 14.14 gal x3 casing vols

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1510</u>	<u>4.2</u>	<u>7.62</u>	<u>397.2</u>	<u>18.3</u>	<u>Relatively clear, very small black flakes</u>	<u>177.0</u>	<u>10.01</u>
<u>1513</u>	<u>6.0</u>	<u>7.63</u>	<u>399.9</u>	<u>18.3</u>	<u>Relatively clear</u>	<u>161.8</u>	<u>9.65</u>
<u>1516</u>	<u>7.8</u>	<u>7.59</u>	<u>400.7</u>	<u>18.2</u>	<u>"</u>	<u>140.0</u>	<u>9.44</u>
<u>1519</u>	<u>9.6</u>	<u>7.56</u>	<u>401.8</u>	<u>18.2</u>	<u>"</u>	<u>115.5</u>	<u>9.30</u>
<u>1522</u>	<u>11.4</u>	<u>7.51</u>	<u>403.8</u>	<u>18.2</u>	<u>"</u>	<u>91.8</u>	<u>9.18</u>
<u>1525</u>	<u>13.2</u>	<u>7.49</u>	<u>405.0</u>	<u>18.1</u>	<u>"</u>	<u>70.5</u>	<u>9.09</u>
<u>1528</u>	<u>15.0</u>	<u>7.46</u>	<u>406.4</u>	<u>18.1</u>	<u>"</u>	<u>52.2</u>	<u>9.00</u>

Well Integrity:

Bottle Inventory

Day/Time Sampled: 6/11/2024 1530

Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>

PGG

Signature: [Signature]

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GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-4

Sampling Event: 2024 02

Sample #: _____

Project Number: 518300030-001	Date: <u>6/12/2024</u>
Project Name: Snipes Mountain Landfill	Location: LVTS
Project Address: Outlook, WA	Sampled By: AP / AG
Client Name: Yakima County	Purged By: AP / AG
Laboratory: ARI	Date Sent to Lab: _____
Chain-of-Custody (yes/no) _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>24.90</u>	Purge Volume Measurement Method: _____
Depth of Well (feet): 320 ft	Purge Date/Time: <u>6/12/2024 1710</u> →
Reference Point (surveyors notch, etc.): _____	Purging Equipment: <u>bladder pump</u>
Sampling Equipment: <u>bladder pump</u>	Water Level Probe Used: _____
Casing Volume Constants (CVC): 2-inch = 0.16 gpf; 4-inch = 0.656 gpf; 6-inch = 1.47 gpf	
Purge Volume = ft of water <u>78.08</u> x CVC <u>0.16</u> x Casing Volumes <u>1</u> = <u>12.5</u> gallons $PV = (\pi r^2 h) (7.48 \text{ gal/ft}^3)$ <u>3x casing vol</u> = <u>37.5 gal</u>	

$\frac{Q}{(gpm)}$
0.2

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1737</u>	<u>3</u>	<u>6.96</u>	<u>353.8</u>	<u>18.2</u>	<u>Relatively clear</u>	<u>66.8</u>	<u>2.21</u>
<u>1742</u>	<u>4</u>	<u>7.07</u>	<u>353.1</u>	<u>18.4</u>	<u>))</u>	<u>57.9</u>	<u>2.26</u>
<u>1747</u>	<u>5</u>	<u>7.13</u>	<u>352.6</u>	<u>18.6</u>	<u>))</u>	<u>51.9</u>	<u>2.14</u>
<u>2009</u>		<u>7.63</u>	<u>351.9</u>	<u>17.4</u>	<u>))</u>	<u>143.5</u>	<u>3.51</u>
<u>2014</u>		<u>7.63</u>	<u>351.3</u>	<u>17.3</u>	<u>))</u>	<u>140.2</u>	<u>3.33</u>

2.25 gal = Purge volume post-pump failure.

battery for control box died while sampling SMW-5D → unknown purge volume
(2x)

Well Integrity: _____

Bottle Inventory				Day/Time Sampled: <u>6/12/2024 2015</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>

PGG

Signature: GRPage 1 of 1

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-5D

Sampling Event: 2024 Q2

Sample #: _____

Project Number: <u>518300030-001</u>	Date: <u>6/12/2024</u>
Project Name: <u>Snipes Mountain Landfill</u>	Location: <u>LVT5</u>
Project Address: <u>Outlook, WA</u>	Sampled By: <u>AP / AG</u>
Client Name: <u>Yakima County</u>	Purged By: <u>AP / AG</u>
Laboratory: <u>ARI</u>	Date Sent to Lab: _____
Chain-of-Custody (yes/no) _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>198.21</u>	Purge Volume Measurement Method: <u>n/a</u>
Depth of Well (feet): <u>470.5 ft</u>	Purge Date/Time: <u>n/a</u>
Reference Point (surveyors notch, etc.): <u>mark</u>	Purging Equipment: <u>hydrasleeve</u>
Sampling Equipment: <u>hydrasleeve</u>	Water Level Probe Used: <u>Yak coax</u>
Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf	
Purge Volume = ft of water _____ x CVC <u>0.16</u> x Casing Volumes _____ = _____ gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1910</u>		<u>7.65</u>	<u>284.7</u>	<u>19.9</u>	<u>Cloudy, w. light colored sed.</u>	<u>155.1</u>	<u>3.45</u>

attempted to install transducer at ~1930 → sticking to casing. left overnight

Well Integrity: good

Bottle Inventory				Day/Time Sampled: <u>6/12/2024 1910</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>
				<u>Alkalinity</u>

PGG

Signature: _____

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GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-5S

Sampling Event: 2024 Q2

Sample #: _____

Project Number: <u>518300030-001</u>	Date: <u>6/13/2024</u>
Project Name: <u>Snipes Mountain Landfill</u>	Location: <u>LVTS</u>
Project Address: <u>Outlook, WA</u>	Sampled By: <u>AP/AG</u>
Client Name: <u>Yakima County</u>	Purged By: <u>AP/AG</u>
Laboratory: <u>ARI</u>	Date Sent to Lab: _____
Chain-of-Custody (yes/no) _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>182.49 (6/12) 182.19 (6/13)</u>	Purge Volume Measurement Method: <u>n/a</u>
Depth of Well (feet): <u>248 ft</u>	Purge Date/Time: <u>n/a</u>
Reference Point (surveyors notch, etc.): <u>mark TOM</u>	Purging Equipment: <u>hydrasleeve</u>
Sampling Equipment: <u>hydrasleeve</u>	Water Level Probe Used: <u>1/2" 1024</u>
Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf	
Purge Volume = ft of water _____ x CVC <u>0.16</u> x Casing Volumes _____ = _____ gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1013</u>	_____	<u>7.16</u>	<u>556.0</u>	<u>19.5</u>	<u>cloudy (white)</u>	<u>137.3</u>	<u>8.38 5.36</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Well Integrity: _____

Bottle Inventory				Day/Time Sampled: <u>6/13/2024 0930</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>

PGG

Signature: [Signature]

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GROUNDWATER SAMPLING FIELD DATA SHEET

Well #: Evans Well

Sampling Event: 2024 Q2 + Snipes pre-R1

Sample #: _____

Project Number: 518300031-003 Date: 6/11/2024
 Project Name: _____ Location: _____
 Project Address: _____ Sampled By: AP/AG
 Client Name: _____ Purged By: AP/AG
 Laboratory: _____ Date Sent to Lab: _____
 Chain-of-Custody (yes/no): _____ Field CC Sample Number: _____
 Shipment Method: _____ Sample Split: _____

Depth to Water (feet): _____ Purge Volume Measurement Method: Q
 Depth of Well (feet): _____ Purge Date/Time: 6/11/2024 1037 →
 Reference Point (surveyors notch, etc.): _____ Purging Equipment: _____
 Sampling Equipment: _____ Water Level Probe Used: _____

Three-Casing Volume Constant (CVC): 2-inch = **0.48** gpf ; 4-inch = **1.97** gpf ; 6-inch = **4.41** gpf PV = (π r² h) (7.48 gal/ft³)
 Purge Volume = ft of water _____ x CVC _____ = _____ gallons Casing diameter (ft/in): _____

TIME (2400 hr)	CUMULATIVE VOLUME (gal / L)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual / NTU)	ORP mV	DO (mg/L)
<u>1042</u>	<u>10</u>	<u>7.61</u>	<u>399.9</u>	<u>19.2</u>	<u>clear, some fizz</u>	<u>131.6</u>	<u>9.06</u>
<u>1047</u>	<u>20</u>	<u>7.66</u>	<u>400.4</u>	<u>19.5</u>	<u>"</u>	<u>124.3</u>	<u>7.49</u>
<u>1052</u>	<u>30</u>	<u>7.68</u>	<u>399.4</u>	<u>19.2</u>	<u>"</u>	<u>123.3</u>	<u>2.74</u>
<u>1057</u>	<u>40</u>	<u>7.68</u>	<u>395.8</u>	<u>19.1</u>	<u>"</u>	<u>122.7</u>	<u>2.70</u>
<u>1102</u>	<u>50</u>	<u>7.69</u>	<u>395.9</u>	<u>18.9</u>	<u>"</u>	<u>122.4</u>	<u>2.74</u>
<u>1107</u>	<u>60</u>	<u>7.69</u>	<u>396.1</u>	<u>18.9</u>	<u>"</u>	<u>122.4</u>	<u>2.81</u>

Well Integrity: good; blue spigot

Bottle Inventory				Day/Time Sampled: <u>6/11/2024 1110</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>VDA / VCL</u>			
<u>1</u>	<u>Alkalinity</u>			
<u>1</u>	<u>Cl</u>			
<u>1</u>	<u>SO4</u>			
<u>1</u>	<u>Diss metals (FF)</u>			

Signature: AR

GROUNDWATER SAMPLING FIELD DATA SHEET

Well #: DNR Well

Sampling Event: 2024 Q2 + Snipes P1 pre-work

Sample #: _____

[illegible]

Well Integrity:

Day/Time Sampled: 6/11/2024 1205

Bottle Inventory

Quantity: Container: Preservatives: Filtered (type): Remarks:

[illegible]

Signature: _____

PgG Page 1 of 1

GROUNDWATER SAMPLING FIELD DATA SHEET

Well #: Brown Well

Sampling Event: 2024 Q2 + pre-Snipes Pl

Sample #: _____

Project Number: 518300031-003	Date: 6/11/2024
Project Name: Snipes	Location:
Project Address:	Sampled By: AP/AG
Client Name:	Purged By: AP/AG
Laboratory:	Date Sent to Lab:
Chain-of-Custody (yes/no):	Field CC Sample Number:
Shipment Method:	Sample Split:

Depth to Water (feet): _____ Purge Volume Measurement Method: _____
 Depth of Well (feet): _____ Purge Date/Time: 6/11/2024 1320 →
 Reference Point (surveyors notch, etc.): _____ Purging Equipment: _____
 Sampling Equipment: _____ Water Level Probe Used: _____

Three-Casing Volume Constant (CVC): 2-inch = **0.48** gpf ; 4-inch = **1.97** gpf ; 6-inch = **4.41** gpf PV=($\pi r^2 h$) (7.48 gal/ft³)
Purge Volume = ft of water _____ x CVC _____ = _____ gallons Casing diameter (ft/in): _____

TIME (2400 hr)	CUMULATIVE VOLUME (gal / L)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual / NTU)	DO (mg/L)	ORP (mV)
1324	20	8.24	278.8	22.2	Relatively clear	3.46	97.5
1328	40	8.24	277.7	22.1	"	2.88	88.8
1332	60	8.3	277.5	22.0	"	2.85	79.3
1336	80	8.32	277.3	22.2	"	2.78	72.7
1340	100	8.32	277.8	22.2	"	2.75	68.0
1344	120	8.33	277.6	22.2	"	2.75	64.9

Well Integrity:

Bottle Inventory

Day/Time Sampled: 6/1/2024 1350

Quantity:

Container:

Preservatives: Filtered (type):

Remarks:

[illegible]

Signature: _____

PgG

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8/28

0600-0730 @ Cheyne LFG

- CO1 works at Star Rentals
 - Total Cn labels need NaOH preservative
 - get rid of Total Hg from labels & bottle order
- 1545-1630: swap generator for compressor

SMW-2 DTW 220.89 @ 1812

took more photos of supply well pump. See no indication of somewhere to measure DTW

SMW-3 DTW 283.00 @ 1833

8/29

- calibrated YSI at SMW-1 → dry well
- forgot to fill up the suitcase generator, but were going for it @ SMW-4
 - ↳ this is full of gas for GH
- I hate transducers + hydrasteves.
 - cannot get transducers back down w/out a bunch of water, then cannot measure final DTW
 - doubt could even get a clean DTW after hydrasteves
 - ↳ maybe could, but I'm frustrated at the combo
- replace PGG w/ Mott Mac on bottle orders
- 1545-1700: TH LFG

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:		Turn-around Requested:		Page: 1 of 1	
ARI Client Company:		Phone:		Date:	
Client Contact:		No. of Coolers:		Ice Present?	
Client Project Name:		Cooler Temps:		Analysis Requested	
Client Project #:		Samples:		Notes/Comments	
Sample ID		Date	Time	Matrix	No. Containers
SMU-4	8/29/24	0950	W	6	X
SMU-SD	1130	W	6	X	X
SMU-SS	1315	W	6	X	X
Relinquished by: (Signature) Printed Name: Company: Date & Time: Received by: (Signature) Printed Name: Company: Date & Time:					



Analytical Resources, LLC
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-1

Sampling Event: 2024 Q3

Sample #: _____

Project Number: <u>518300030-001</u>	Date: <u>8/29/2024</u>
Project Name: <u>Snipes Mountain Landfill</u>	Location: <u>LVTs</u>
Project Address: <u>Outlook, WA</u>	Sampled By: <u>AP</u>
Client Name: <u>Yakima County</u>	Purged By: <u>AP</u>
Laboratory: <u>ARI</u>	Date Sent to Lab: _____
Chain-of-Custody (yes/no) <u>yes</u>	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>DRY @ 0750</u>	Purge Volume Measurement Method: _____
Depth of Well (feet): <u>250 ft</u>	Purge Date/Time: _____
Reference Point (surveyors notch, etc.): <u>mark TOM</u>	Purging Equipment: <u>Hydrostar</u>
Sampling Equipment: <u>Hydrostar</u>	Water Level Probe Used: <u>Yak coak</u>
Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf	
Purge Volume = ft of water _____ x CVC <u>0.16</u> x Casing Volumes _____ = _____ gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Note: Well has insufficeint water to sample (runs dry) if SWL below 239 ft bgs. → what depth is that? duh

Well Integrity:

Bottle Inventory				Day/Time Sampled: <u>n/a</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
3	40 mL VOAs	HCl		Volatiles
1	500 mL HDPE	HNO3	0.45 um	Dissolved (FF) metals
1	500 mL HDPE			NO3/NO2/Cl/SO4
1	250 mL AG	H2SO4		TOC/COD/NH3

PGG

Signature: h/Re

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GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-4

Sampling Event: 2024 Q3

Sample #: _____

Project Number: <u>518300030-001</u>	Date: <u>8/29/2024</u>
Project Name: <u>Snipes Mountain Landfill</u>	Location: <u>LVT5</u>
Project Address: <u>Outlook, WA</u>	Sampled By: <u>AP</u>
Client Name: <u>Yakima County</u>	Purged By: <u>AP</u>
Laboratory: <u>ARI</u>	Date Sent to Lab: _____
Chain-of-Custody (yes/no) <u>Yes</u>	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>251.81 @ ~0812</u>	Purge Volume Measurement Method: _____
Depth of Well (feet): <u>320 ft</u>	Purge Date/Time: <u>8/29/24 0851</u>
Reference Point (surveyors notch, etc.): <u>mark TDM</u>	Purging Equipment: <u>bladder pump</u>
Sampling Equipment: <u>bladder pump</u>	Water Level Probe Used: <u>Yak. coax</u>
Casing Volume Constants (CVC): 2-inch = 0.16 gpf; 4-inch = 0.656 gpf; 6-inch = 1.47 gpf	
Purge Volume = ft of water <u>68.19</u> x CVC <u>0.16</u> x Casing Volumes <u>1</u> = <u>10.91</u> gallons <u>3 casings = 32.7</u>	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
0904	1.0	7.02	0.407	17.0	clear	152.2	7.10
0909	2.0	7.23	0.408	17.01	clear	137.4	6.17
0914	3.0	7.36	0.410	17.05	clear	127.1	5.88
0919	4.0	7.44	0.411	17.02	clear	117.4	5.57
0924	5.0	7.50	0.412	17.02	clear	108.9	5.03
0931	6.0	7.55	0.412	17.03	clear	96.6	2.63
0936	7.0	7.58	0.412	17.05	clear	87.4	2.40
0941	8.0	7.60	0.412	17.04	clear	79.2	2.51
0946	9.0	7.61	0.412	17.03	clear	73.1	2.43

psi ~180
fill = 30sec
Dis. = 45sec

removed transducer ~0817-0821 ; then DTW 251.81 ft. (I think transducer downloaded data @ 0920 at 250 ft)

Well Integrity: redeployed @ 1002 ; DTW 251.88'

Bottle Inventory				Day/Time Sampled: <u>8/29/2024 0950</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
3	40 mL VOAs	HCl		Volatiles
1	500 mL HDPE	HNO3	0.45 um	Dissolved (FF) metals
1	500 mL HDPE			NO3/NO2/Cl/SO4
1	250 mL AG	H2SO4		TOC/COD/NH3

PGG

Signature: [Signature]

Page 1 of 1

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-5D

Sampling Event: 2024 Q3

Sample #: _____

Project Number: 518300030-001	Date: <u>8/29/2024</u>
Project Name: Snipes Mountain Landfill	Location: LVT5
Project Address: Outlook, WA	Sampled By: AP
Client Name: Yakima County	Purged By: AP
Laboratory: ARI	Date Sent to Lab: _____
Chain-of-Custody (yes/no) _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>200.91 @ 1023</u>	Purge Volume Measurement Method: <u>n/a</u>
Depth of Well (feet): 470.5 ft	Purge Date/Time: <u>n/a</u>
Reference Point (surveyors notch, etc.): <u>mark TOM</u>	Purging Equipment: <u>n/a</u>
Sampling Equipment: <u>high pressure</u>	Water Level Probe Used: <u>42k. coax</u>
Casing Volume Constants (CVC): 2-inch = 0.16 gpf; 4-inch = 0.656 gpf; 6-inch = 1.47 gpf	
PV = (π r ² h) (7.48 gal/ft ³)	
Purge Volume = ft of water <u>269.59</u> x CVC <u>0.16</u> x Casing Volumes _____ = _____ gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	ms EC (μmhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1140</u>	_____	<u>7.84</u>	<u>0.377</u>	<u>22.88</u>	<u>lt brown</u> <u>cloudy</u>	<u>19.6</u>	<u>3.31</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
<u>lots of knots from a slow deploy, not totally sure of sampled interval</u> <u>1st bag: params, 400mL metals & anions, then all of TOC/COD/NH3</u> <u>2nd bag: VOCs, top of metals & anions</u> <u>↳ ~20 ft from bottom</u>							
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

removed transducer & re-measured DTW 200.91 ft @ 1038 (wet casing, lots of mucky)
 re-deployed @ 1013: DTW = _____

Well Integrity: _____

Bottle Inventory					Day/Time Sampled: <u>8/29/2024 1130</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:	
3	40 mL VOAs	HCl		Volatiles	
1	500 mL HDPE	HNO3	0.45 μm	Dissolved (FF) metals	
1	500 mL HDPE			NO3/NO2/Cl/SO4	
1	250 mL AG	H2SO4		TOC/COD/NH3	

PGG

Signature: h RePage 1 of 1

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-5S

Sampling Event: 2004 03

Sample #: _____

Project Number: <u>518300030-001</u>	Date: <u>8/29/2004</u>
Project Name: <u>Snipes Mountain Landfill</u>	Location: <u>LVT5</u>
Project Address: <u>Outlook, WA</u>	Sampled By: <u>AP</u>
Client Name: <u>Yakima County</u>	Purged By: <u>AP</u>
Laboratory: <u>ARI</u>	Date Sent to Lab: _____
Chain-of-Custody (yes/no) <u>yes</u>	Field CC Sample Number: _____
Shipment Method: <u>drop off</u>	Sample Split: _____

Depth to Water (feet): <u>184.05 @ 1234</u>	Purge Volume Measurement Method: <u>n/a</u>
Depth of Well (feet): <u>248 ft</u>	Purge Date/Time: <u>n/a</u>
Reference Point (surveyors notch, etc.): <u>mark TDC</u>	Purging Equipment: <u>n/a</u>
Sampling Equipment: <u>hydrstar</u>	Water Level Probe Used: <u>1/2" coax.</u>
Casing Volume Constants (CVC): 2-inch = 0.16 gpf; 4-inch = 0.656 gpf; 6-inch = 1.47 gpf	
Purge Volume = ft of water <u>63.95</u> x CVC <u>0.16</u> x Casing Volumes _____ = _____ gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	ms EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1319</u>	_____	<u>5.95</u>	<u>0.502</u>	<u>23.39</u>	<u>not too turbid, mostly clear</u>	<u>67.7</u>	<u>1.78</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
<u>1st bag: 95% of nitrates, then VOCs, then TDC/COD/NH3</u>							
<u>aimed for ~10ft above bottom, but think it was a bit higher</u>							
<u>2nd bag: metals</u>							
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

transducer ⁽¹⁰⁴¹⁾ pulled + DTW remeasured: 184.06 ft.transducer did not want to re-deploy: DTW 183.75 ft @ ~1255Well Integrity: good

transducer in water, but not final resting place until 1508

Bottle Inventory					Day/Time Sampled: <u>8/29/2004 1315</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:	
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>	
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (EF) metals</u>	<u>not ff</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>	
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

PGG

Signature: ARPage 1 of 1

Work Sequence

During the November event if one day is going to be warmer, plan on sampling the Hydrostar pumps on the warm day, as the piston develops condensation and freezes up.

Day one:

Leave the hotel aiming to get to CNG around sunrise. At CNG you will use a peristaltic pump and low flow sampling methods to collect groundwater samples at ~~CNGMW-1, CNGMW-3, CNGMW-4~~ and CNGMW-5 sample locations. Take a clear disposable bailers to lower after water levels have been recorded at CNGMW-3 and CNGMW-4 to check for free product and record on field sheets. All purge water is stored in drums on site. We do not have a key to the lot with the drums. The gate to the lot is generally open 8am - 5pm.

Take note of how full each drum is after sampling.

$\frac{1}{10} - \frac{2}{3}$ full

~~Drive to Terrace heights landfill and to pick up small blue hand purge bilge pump (for gas meters) and the GEM LFG meter.~~

~~Drive to Cheyne Landfill, Collect all GP locations, prioritize getting to the location within the gate before they close at 5pm.~~

~~Drive to Snipes. Collect LFG measurements at all GP and GW locations.~~

Get water levels at SMW-3.

Fuel up truck, get gas for compressor (portable gas can), and put ice on samples. If the weather is going to be below freezing bring all sounders and ph meters into the hotel. If the weather is going to be below 20 degrees bring all samples inside and trip blanks from empty coolers

Charge the landfill gas meter in the hotel.

Day two:

~~Before Snipes~~

Head to the Terrace Heights storage shed and PACK THE FOLLOWING:

- Yakima County 1000 ft coaxial sounder
- Hydrostar pump
- Air hose
- Cooler with heater and extension cord
- Cooler with sampling equipment
- Bladder pump control box
- Small (Dewalt) air compressor
- small suitcase generator
- Both grey control boxes (for Cheyne day 3 - optimistic)

~~Return the small blue hand purge bilge pump and the GEM LFG meter~~

~~Now you are off to Snipes mtn Landfill~~

~~Sample SMW-2 and SMW1 (if there is sufficient water) with the air compressor and hydrostar pump~~

Depending on time:

not sufficient water for SMW-1

whoever took my drums crushed my hope of LFG progress

can I get to Cheyne GPs outside before gate closes?
no

get DTW @ SMW-3

- Setup small compressor, small generator, at SMW-4. While it's running, can split tasks with YC staff and begin purging the DNR residence spigot.
- Sample SMW-5s and SMW-5d using hydrasleeves...
- Sample Luther well

Download water level transducer data while sampling SMW-4, SMW-5s, SMW-5d. Download barometric data. MAKE SURE EACH FILE SAVES CORRECTLY AND DON'T OVERWRITE THINGS... Measure DTW before and after removing transducer, and before replacing transducer.

Head to Cheyne Landfill and sample CMW-2 and CMW-1 with the air compressor and hydrostar pump

Return air compressor

Fuel up truck and suitcase generator. Put ice on samples.

Day three:

Head to the Terrace Heights pump house and swap equipment – NEED THE FOLLOWING

- Both grey control boxes
- Cooler with sampling equipment
- Yakima County 1000 ft coaxial sounder
- small suitcase generator
- Bladder pump control box (SMW-4)
- Small (Dewalt) air compressor (SMW-4)

* grab LFG meter & bilge pump
to do Cheyne & TH gas

↳ TH staff doing SB TH probes
on 11/21

Drive back to Cheyne landfill to sample CMW-3 and CMW-4 using the large generator

Drive to Terrace Heights and sample all four groundwater locations and take measurements at all GP locations you can skip GP-6 and GP-7 if GP-3 does not exceed 5% methane.

Complete any outstanding GW or GP sampling. Stay for day 4 if necessary.

Return all sampling gear to the storage shed.

Now you can ice up the coolers and drive to ARI to drop groundwater samples at the night drop door code as of 11/2022 is RDO. Let the lab know of a night drop well ahead of sampling. ARI is currently not accepting night drops

Additional notes

keep coolers full of ice during sampling, at the end of night, and before delivering to the lab. Be sure to coordinate with the lab if you need to drop coolers on a Friday, they may not have anyone Saturday to except the samples, and the coolers will be above temperature, and several analytes will be out of hold time requirements. Check to make sure you have filled out the chain of custody with all samples, dates, times and they match the labels.

11/19 · 0650-0720 : pack & drive to CNG
→ someone removed all of our drums
0805-0920 : pick up drum, do Sthn Band LFG @ TH
1015-1730 : CNG sampling

• lots of our calibration standards are expired; had trouble calibrating EC until finding packets that exp. 2/2025

CNGMW-2	8.43	1608
CNGMW-6	11.41	1102
CNGMW-7	decommissioned w/ concrete	
CNGMW-8	10.39	1053
CNGMW-9	8.36	1604
CNGMW-10	7.96	1428
CNGMW-11	10.46 A	1050

1730-1835 : pick up supplies for tomorrow (food, DI, gas can)
* bring cold-sensitive items into hotel room

11/20 0610-0735 : pack & do Snipes LFG
0735-1530 : get supplies from TH & sample Snipes
1530-1700 : drive to Cheyne & sample w/ hydrastar
→ CMW-1 dry again, leaving compressor at TH tomorrow

1700-1815 : return to hotel, fuel up truck, bring in samples
* cold-sensitive items, lock as much stuff in cab as possible, ice up all samples

745 minutes : COCs + download transducer data in hotel
→ I forgot my laptop charger, so all the transducers were pulled today & will be replaced Friday a.m.

11/21

0630-1330 : pack truck, head to TH, begin sampling
1330-1730 : drive to Cheyue & finish sampling (GLW+C)

not a
battery
problem,
need to help
Yok. Co. find
a new one

- sounder ran out of battery at CMW-4
- calibrated flow thru unit at THMW-4
- think I only collected 3 VDFs at CMW-2
 - didn't update labels for SIM → need to?
- collected 5 at CMW-3 & 4
 - okay, it's not on bottle order, so that's good

bringing back
to Seattle to
troubleshoot /
send for service

1730-1900 : return to hotel, unpack truck, ice
samples, COCs, organize for return

11/22

0600-0645 : calibrate EC, re-up bagged ice for
samples, pack truck, check out

0645-0915 : drive to Snipes, redeploy transducers
& baro, sample OL Luther well

SMW-3

292.39 ft DTW 11/22 @ 0733

0915-1010 : drive TO TH & unload equipment
1010 - : return to Seattle, drop off samples,
return equip. & truck, log time,
scan field sheets

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-1

Sampling Event: _____

Sample #: _____

Project Number: 518300030-001	Date: _____
Project Name: Snipes Mountain Landfill	Location: LVTs
Project Address: Outlook, WA	Sampled By: AP
Client Name: Yakima County	Purged By: AP
Laboratory: ARI	Date Sent to Lab: _____
Chain-of-Custody (yes/no) _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): 242.75	Purge Volume Measurement Method: _____
Depth of Well (feet): 250 ft	Purge Date/Time: _____
Reference Point (surveyors notch, etc.): mark TDM	Purging Equipment: Hydrostar
Sampling Equipment: Hydrostar	Water Level Probe Used: yolk. coax.
Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf PV=($\pi r^2 h$) (7.48 gal/ft ³)	
Purge Volume = ft of water 7.25 x CVC 0.16 x Casing Volumes 3 = 3.48 gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)

Note: Well has insufficeint water to sample (runs dry) if SWL below 239 ft bgs.

ran for 7 minutes to test the theory → no water

Well Integrity: _____

Bottle Inventory				Day/Time Sampled: _____
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
3	40 mL VOAs	HCl		Volatiles
1	500 mL HDPE	HNO3	0.45 um	Dissolved (FF) metals
1	500 mL HDPE			NO3/NO2/Cl/SO4
1	250 mL AG	H2SO4		TOC/COD/NH3

PGG

Signature: 

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GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-2

Sampling Event: 2024 04

Sample #: _____

Project Number: 518300030-001
 Project Name: Snipes Mountain Landfill
 Project Address: Outlook, WA
 Client Name: Yakima County
 Laboratory: ARI
 Chain-of-Custody (yes/no) _____
 Shipment Method: _____

Date: 11/20/2024
 Location: LVTs
 Sampled By: AP
 Purged By: AP
 Date Sent to Lab: _____
 Field CC Sample Number: _____
 Sample Split: _____

Depth to Water (feet): 200.54

Depth of Well (feet): 250 ft

Purge Volume Measurement Method: DL

Purge Date/Time: 11/20/24 1008

Reference Point (surveyors notch, etc.): mark TDM

Purging Equipment: Hydrostar

Sampling Equipment: Hydrostar

Water Level Probe Used: Yak. coax

Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf
 Purge Volume = ft of water 29.46 x CVC 0.16 x Casing Volumes 3 = 14.14 gallons
 PV = ($\pi r^2 h$) (7.48 gal/ft³)

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	mS EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1012</u>	<u>2.0</u>	<u>7.61</u>	<u>0.402</u>	<u>15.75</u>	<u>clear</u>	<u>-14.5</u>	<u>8.166</u>
<u>1016</u>	<u>4.0</u>	<u>7.70</u>	<u>0.403</u>	<u>16.05</u>	<u>clear</u>	<u>-1.8</u>	<u>8.16</u>
<u>1020</u>	<u>6.0</u>	<u>7.66</u>	<u>0.406</u>	<u>16.17</u>	<u>clear</u>	<u>1.4</u>	<u>8.04</u>
<u>1024</u>	<u>8.0</u>	<u>7.57</u>	<u>0.406</u>	<u>16.30</u>	<u>clear</u>	<u>3.7</u>	<u>7.51</u>
<u>1028</u>	<u>10.0</u>	<u>7.50</u>	<u>0.409</u>	<u>16.41</u>	<u>clear</u>	<u>3.7</u>	<u>7.57</u>
<u>1032</u>	<u>12.0</u>	<u>7.44</u>	<u>0.411</u>	<u>16.43</u>	<u>clear</u>	<u>3.1</u>	<u>7.59</u>
<u>1036</u>	<u>14.0</u>	<u>7.39</u>	<u>0.413</u>	<u>16.51</u>	<u>clear</u>	<u>3.9</u>	<u>7.48</u>

Q
(gpm)
0.5
↓

Well Integrity: good - took ~6 min. to get water

Bottle Inventory

Quantity:	Container:	Preservatives:	Filtered (type):	Day/Time Sampled:	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>11/20/2024 1040</u>	<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>		<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>				<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>			<u>TOC/COD/NH3</u>

Pgg

Signature: [Signature]

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GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-4

Sampling Event: 2024 Q4

Sample #: _____

Project Number: 518300030-001Date: 11/20/2024Project Name: Snipes Mountain LandfillLocation: LVTsProject Address: Outlook, WASampled By: APClient Name: Yakima CountyPurged By: APLaboratory: ARI

Date Sent to Lab: _____

Chain-of-Custody (yes/no) _____

Field CC Sample Number: _____

Shipment Method: _____

Sample Split: _____

Depth to Water (feet): 242.28Purge Volume Measurement Method: Q+Depth of Well (feet): 320 ftPurge Date/Time: 11/20/2024 1145Reference Point (surveyors notch, etc.): mark TBMPurging Equipment: bladder pumpSampling Equipment: bladder pump

Water Level Probe Used: _____

Casing Volume Constants (CVC): 2-inch = 0.16 gpf; 4-inch = 0.656 gpf; 6-inch = 1.47 gpfPV = ($\pi r^2 h$) (7.48 gal/ft³)Purge Volume = ft of water 77.72 x CVC 0.16 x Casing Volumes 1 = 12.44 gallons3 casings =

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	ms EC (μ mhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
<u>1155</u>	<u>2.0</u>	<u>6.82</u>	<u>0.358</u>	<u>15.93</u>	<u>clear</u>	<u>86.1</u>	<u>2.87</u>
<u>1218</u>	<u>6.6</u>	<u>7.42</u>	<u>0.351</u>	<u>16.17</u>	<u>" "</u>	<u>49.1</u>	<u>1.63</u>
<u>1234</u>	<u>9.8</u>	<u>7.53</u>	<u>0.349</u>	<u>15.52</u>	<u>" "</u>	<u>72.1</u>	<u>1.52</u>
<u>1252</u>	<u>13.4</u>	<u>7.55</u>	<u>0.351</u>	<u>15.07</u>	<u>" "</u>	<u>56.4</u>	<u>1.50</u>
<u>1259</u>	<u>14.8</u>	<u>7.55</u>	<u>0.351</u>	<u>15.64</u>	<u>" "</u>	<u>45.8</u>	<u>1.43</u>

transducer disturbed 1123 11/20
redeployed 0707-0714 11/22 → DTW 241.14

Well Integrity: _____

Bottle Inventory

Day/Time Sampled: 11/20/2024 1305

Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
<u>3</u>	<u>40 mL VOAs</u>	<u>HCl</u>		<u>Volatiles</u>
<u>1</u>	<u>500 mL HDPE</u>	<u>HNO3</u>	<u>0.45 um</u>	<u>Dissolved (FF) metals</u>
<u>1</u>	<u>500 mL HDPE</u>			<u>NO3/NO2/Cl/SO4</u>
<u>1</u>	<u>250 mL AG</u>	<u>H2SO4</u>		<u>TOC/COD/NH3</u>

PGG

Signature: [Signature]Page 1 of 1

GROUNDWATER SAMPLING FIELD DATA SHEET

SMW-5D

Sampling Event: 2024 Q4

Sample #: _____

Project Number: 518300030-001	Date: <u>11/30/2024</u>
Project Name: Snipes Mountain Landfill	Location: LVTs
Project Address: Outlook, WA	Sampled By: AP
Client Name: Yakima County	Purged By: AP
Laboratory: ARI	Date Sent to Lab: _____
Chain-of-Custody (yes/no) _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>191.20</u>	Purge Volume Measurement Method: _____
Depth of Well (feet): 470.5 ft	Purge Date/Time: <u>11/30</u>
Reference Point (surveyors notch, etc.): _____	Purging Equipment: <u>no</u>
Sampling Equipment: <u>hydra sleeve</u>	Water Level Probe Used: _____
Casing Volume Constants (CVC): 2-inch = 0.16 gpf ; 4-inch = 0.656 gpf ; 6-inch = 1.47 gpf	
Purge Volume = ft of water _____ x CVC 0.16 x Casing Volumes _____ = _____ gallons	

TIME (2400 hr)	CUMULATIVE VOLUME (gal)	pH (units)	EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual)	ORP (mV)	DO (mg/L)
		7.88	0.279	11.92	sandy	46.2	1.53
					↓		
					tried to aim higher.		
					still appear to have		
					hit bottom		

transducer disturbed @ 1339 on 11/30
redeployed 11/30 0756-0758 → DTW 190.23

Well Integrity: good

Bottle Inventory				Day/Time Sampled: <u>11/30/2024 1410</u>
Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
3	40 mL VOAs	HCl		Volatiles
1	500 mL HDPE	HNO3	0.45 um	Dissolved (FF) metals
1	500 mL HDPE			NO3/NO2/Cl/SO4
1	250 mL AG	H2SO4		TOC/COD/NH3

Pgg

Signature: Li RePage 1 of 2

ARI Assigned Number:	Turn-around Requested:	Standard
ARI Client Company:	Phone:	Mat McDough
Client Contact:		Jeff Parker

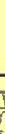
Client Project Name: W11-15-17

Client Project #:	Yakima - James Mtn (571)
Samplers:	Ashley Parkhurst
	54300030-001

Sample ID	Date	Time	Matrix	No. Containers
-----------	------	------	--------	----------------

DNR House	11/20/24	1319	W	3
Q1 1st time	11/23/24	0902	W	3

Comments/Special Instructions	Relinquished by:	Received by:

(Signature)		(Signature)	
Printed Name:	Ashlou Pakhurst	Printed Name:	R. Lee

Company:	Walt McDonald	Company:	W.I.
Date & Time:	11/12/00	Date & Time:	11/12/00

11/22/2024	1502	11-22-24
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Limits of Liability: ARI will perform all requested services in accordance with appropriate professional standards for the industry. The total liability of ARI, its officers, agents, employees or subcontractors shall not exceed the amount of the fee for the services rendered.

move standards for the industry. The total liability of ARI, its officers, agents, employees, or said services. The acceptance by the client of a proposal for services by ARI release ARI from signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than the retention schedules have been established by work-order or contract.

GROUNDWATER SAMPLING FIELD DATA SHEET

Well #: 01 Luther

Sampling Event: 2024 Q4

Sample #: _____

Project Number: 98300030 Date: 11/22/2024
 Project Name: Yakima - Snipes Bl Location: _____
 Project Address: 01 Luther Co Sampled By: AP
 Client Name: _____ Purged By: AP
 Laboratory: AP Date Sent to Lab: _____
 Chain-of-Custody (yes/no): yes Field CC Sample Number: _____
 Shipment Method: drop off Sample Split: _____

Depth to Water (feet): n/a Purge Volume Measurement Method: Qt
 Depth of Well (feet): n/a Purge Date/Time: 11/22/2024 0825
 Reference Point (surveyors notch, etc.): n/a Purging Equipment: _____
 Sampling Equipment: _____ Water Level Probe Used: n/a
 Three-Casing Volume Constant (CVC): 2-inch = **0.48** gpf ; 4-inch = **1.97** gpf ; 6-inch = **4.41** gpf $PV = (\pi r^2 h) (7.48 \text{ gal/ft}^3)$
 Purge Volume = ft of water _____ x CVC _____ = _____ gallons Casing diameter (ft/in): _____

Q
(gpm)
4
↓

TIME (2400 hr)	CUMULATIVE VOLUME (gal / L)	pH (units)	EC ($\mu\text{mhos/cm}$ 25 c)	Temp. (C)	TURBIDITY (visual / NTU)	ORP (mv)	DO (mg/L)
0831	24	7.32	0.752	19.63	clear	69.7	4.70
0835	40	7.40	0.742	19.33	clear	57.8	4.15
0840	60	7.40	0.726	19.24	clear	57.7	3.56
0845	80	7.40	0.718	19.45	clear	57.8	3.24
0850	100	7.40	0.718	19.47	clear	58.6	3.10
0855	120	7.40	0.722	19.45	clear	59.3	3.03
0900	140	7.37	0.723	21.18 21.18	clear	59.6	2.73
0905	160	7.39	0.745	19.45	clear	59.8	2.95

Well Integrity: in a pool of standing water

Bottle Inventory

Day/Time Sampled: 11/22/2024 0902

Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
3	VOCs	-	-	VOCs

Signature: [Signature]

GROUNDWATER SAMPLING FIELD DATA SHEET

Well #: DNR Spigot House

Sampling Event: 2024 Q4

Sample #: _____

Project Number: <u>518360030-003</u>	Date: <u>11/20/2024</u>
Project Name: <u>Snipes Bl</u>	Location: _____
Project Address: _____	Sampled By: <u>AP</u>
Client Name: _____	Purged By: <u>AP</u>
Laboratory: _____	Date Sent to Lab: _____
Chain-of-Custody (yes/no): _____	Field CC Sample Number: _____
Shipment Method: _____	Sample Split: _____

Depth to Water (feet): <u>—</u>	Purge Volume Measurement Method: _____
Depth of Well (feet): <u>—</u>	Purge Date/Time: <u>11/20/24 1206 →</u>
Reference Point (surveyors notch, etc.): _____	Purging Equipment: _____
Sampling Equipment: _____	Water Level Probe Used: _____

Three-Casing Volume Constant (CVC): 2-inch = **0.48** gpf ; 4-inch = **1.97** gpf ; 6-inch = **4.41** gpf $PV = (\pi r^2 h) (7.48 \text{ gal/ft}^3)$
Purge Volume = ft of water _____ x CVC _____ = _____ gallons Casing diameter (ft/in): _____

Q
(gpm)
1.4
↓

TIME (2400 hr)	CUMULATIVE VOLUME (gal / L)	pH (units)	mS EC (umhos/cm 25 c)	Temp. (C)	TURBIDITY (visual / NTU)	ORP (mv)	DO (mg/L)
1223	23.8	7.52	0.448	10.64	clear	118.2	4.76
1229	32.2	7.14	0.447	10.65	clear	106.46	4.02
1239	46.2	7.62	0.449	10.64	clear	74.18 74.18	4.01
1247	57.4	7.42	0.445	10.80	clear	66.0	3.84
1312	92.4	7.50	0.441	10.89	clear	71.6	3.70
1315	96.6	7.37	0.443	10.87	clear	68.2	3.19
1318	100.8	7.38	0.449	10.89	clear	66.7	3.34

Well Integrity: _____

Bottle Inventory

Day/Time Sampled: 11/20/2024 1319

Quantity:	Container:	Preservatives:	Filtered (type):	Remarks:
3	VDA's	HCl	—	VOCs

Signature: [Signature]

Attachment B: Laboratory Data



Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

28 June 2024

Jeff Parker
Mott MacDonald
1601 5th Avenue Suite 800
Seattle, WA 98101

RE: Snipes MTN Landfill 2024 (Snipes MTN Landfill 2024)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
24F0326

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 2480326		Turn-around Requested: standard		Page: 1 of		
ARI Client Company: Pgg / Mott MacDonald		Phone: 303-217-6750		Date:	Ice Present?	
Client Contact: Jeff Parker		No. of Coolers:		Cooler Temps:		
Client Project Name: Yakima - Snipes Mtn				Analysis Requested		
Client Project #: 518300030-003		Samplers: Ashley Parkhurst / Antara Eusewami		Notes/Comments		
Sample ID	Date	Time	Matrix	No. Containers	Volatiles [SUSPENDED] Diss (FF) Fe, Mn, Zn, Ca, Na, Mg, K NO3/NO2 NH3/TOC/COD Chloride Sulfate Alkalinity NH4+ HCLD Diss. (FF) Ca, Na, Mg, K	
Evans Well	6/11/2024	1110	W	7	3	
DNR Well	6/11/2024	1225	W	7	3	
Brown Well	6/11/2024	1350	W	7	3	
SMW-1	6/11/2024	1715	W	10	3	1
SMW-2	6/11/2024	1530	W	9	3	1
SMW-4	6/12/2024	2015	W	10	3	1
SMW-5d	6/12/2024	1910	W	9	3	1*
SMW-5s	6/13/2024	0930	W	9	3	1*
Comments/Special Instructions non-vol samples for SMW-5d and SMW-5s are not 100% full; most ~70% full		Relinquished by: (Signature) [Signature] Printed Name: Ashley Parkhurst Company: Mott MacDonald Date & Time: 6/14/2024 0805		Received by: (Signature) [Signature] Printed Name: Leah McFadden Company: ARI Date & Time: 6/14/2024 08:09		



Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Evans	24F0326-01	Water	11-Jun-2024 11:10	14-Jun-2024 08:09
DNR Well	24F0326-02	Water	11-Jun-2024 12:25	14-Jun-2024 08:09
Brown Well	24F0326-03	Water	11-Jun-2024 13:50	14-Jun-2024 08:09
SMW-1	24F0326-04	Water	11-Jun-2024 17:15	14-Jun-2024 08:09
SMW-2	24F0326-05	Water	11-Jun-2024 15:30	14-Jun-2024 08:09
SMW-4	24F0326-06	Water	12-Jun-2024 20:15	14-Jun-2024 08:09
SMW-5d	24F0326-07	Water	12-Jun-2024 19:10	14-Jun-2024 08:09
SMW-5s	24F0326-08	Water	13-Jun-2024 09:30	14-Jun-2024 08:09



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Work Order Case Narrative

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control low in the CCAL. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Dissolved Metals - EPA Method 6010D

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Wet Chemistry

The sample(s) were prepared and analyzed within the recommended holding times with the exception of nitrate and nitrite which was sent to the lab outside of the holding time.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Hydrocarbon Identification (HCID) - WA-Ecology Method NW-HCID

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received.

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Terrace Heights JE1302

Project Number: Terrace Heights JE1302

24F0326-05 D	HDPE NM, 500 mL	
24F0326-05 E	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-05 F	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-05 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-05 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-05 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-06 A	HDPE NM, 500 mL	
24F0326-06 B	HDPE NM, 500 mL	
24F0326-06 C	HDPE NM, 500 mL	
24F0326-06 D	HDPE NM, 500 mL	
24F0326-06 E	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-06 F	Glass NM, Amber, 500 mL, HCl	L2 pass
24F0326-06 G	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-06 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-06 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-06 J	VOA Vial, Clear, 40 mL, HCL	
24F0326-07 A	HDPE NM, 500 mL	
24F0326-07 B	HDPE NM, 500 mL	
24F0326-07 C	HDPE NM, 500 mL	
24F0326-07 D	HDPE NM, 500 mL	
24F0326-07 E	HDPE NM, 500 mL	72 fail
24F0326-07 F	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-07 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-07 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-07 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-08 A	HDPE NM, 500 mL	
24F0326-08 B	HDPE NM, 500 mL	
24F0326-08 C	HDPE NM, 500 mL	
24F0326-08 D	HDPE NM, 500 mL	
24F0326-08 E	HDPE NM, 500 mL	72 fail
24F0326-08 F	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-08 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-08 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-08 I	VOA Vial, Clear, 40 mL, HCL	



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received.

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Terrace Heights JE1302

Project Number: Terrace Heights JE1302

Preservation Confirmation

Container ID	Container Type	pH
24F0326-01 A	HDPE NM, 500 mL	
24F0326-01 B	HDPE NM, 500 mL	
24F0326-01 C	HDPE NM, 500 mL	
24F0326-01 D	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-01 E	VOA Vial, Clear, 40 mL, HCL	
24F0326-01 F	VOA Vial, Clear, 40 mL, HCL	
24F0326-01 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-02 A	HDPE NM, 500 mL	
24F0326-02 B	HDPE NM, 500 mL	
24F0326-02 C	HDPE NM, 500 mL	
24F0326-02 D	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-02 E	VOA Vial, Clear, 40 mL, HCL	
24F0326-02 F	VOA Vial, Clear, 40 mL, HCL	
24F0326-02 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-03 A	HDPE NM, 500 mL	
24F0326-03 B	HDPE NM, 500 mL	
24F0326-03 C	HDPE NM, 500 mL	
24F0326-03 D	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-03 E	VOA Vial, Clear, 40 mL, HCL	
24F0326-03 F	VOA Vial, Clear, 40 mL, HCL	
24F0326-03 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-04 A	HDPE NM, 500 mL	
24F0326-04 B	HDPE NM, 500 mL	
24F0326-04 C	HDPE NM, 500 mL	
24F0326-04 D	HDPE NM, 500 mL	
24F0326-04 E	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-04 F	Glass NM, Amber, 500 mL, HCl	L2 pass
24F0326-04 G	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-04 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-04 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-04 J	VOA Vial, Clear, 40 mL, HCL	
24F0326-05 A	HDPE NM, 500 mL	
24F0326-05 B	HDPE NM, 500 mL	
24F0326-05 C	HDPE NM, 500 mL	



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received.

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Terrace Heights JE1302

Project Number: Terrace Heights JE1302

Preservation Confirmed By

06/14/24

Date



Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Mottmac

COC No(s): _____ (NA)

Assigned ARI Job No: 24F0326

Project Name: Smiles mtn

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES (NO)

Were custody papers included with the cooler? YES (YES) NO

Were custody papers properly filled out (ink, signed, etc.) YES (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 0807

If cooler temperature is out of compliance fill out form 00070F

7.7 0.6 3.7 5.6 7.5 5.9

Temp Gun ID#: JC09708

Cooler Accepted by: LM

Date: 06/14/24 Time: 0807

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? _____

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: YES (NO)

Was sufficient ice used (if appropriate)? _____

How were bottles sealed in plastic bags? _____

Individually YES (YES) NO (NO)
Grouped YES (YES) NO (NO)

Did all bottles arrive in good condition (unbroken)? _____

Were all bottle labels complete and legible? _____

Did the number of containers listed on COC match with the number of containers received? _____

Did all bottle labels and tags agree with custody papers? _____

Were all bottles used correct for the requested analyses? _____

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... YES (YES) NO

Were all VOC vials free of air bubbles? _____

Was sufficient amount of sample sent in each bottle? _____

Date VOC Trip Blank was made at ARI. _____

Were the sample(s) split by ARI? (NA) YES

Date/Time: _____

Equipment: _____

Split by: _____

Samples Logged by: MD

Date: 06/14/24

Time: 0959

Labels checked by: MD

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____

Date: _____



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: Snipes MTN Landfill 2024

Preservation Confirmation

Container ID	Container Type	pH
24F0326-01 A	HDPE NM, 500 mL	
24F0326-01 B	HDPE NM, 500 mL	
24F0326-01 C	HDPE NM, 500 mL	
24F0326-01 D	HDPE NM, 500 mL, 1:1 HNO3 (FF)	
24F0326-01 E	VOA Vial, Clear, 40 mL, HCL	
24F0326-01 F	VOA Vial, Clear, 40 mL, HCL	
24F0326-01 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-02 A	HDPE NM, 500 mL	
24F0326-02 B	HDPE NM, 500 mL	
24F0326-02 C	HDPE NM, 500 mL	
24F0326-02 D	HDPE NM, 500 mL, 1:1 HNO3 (FF)	
24F0326-02 E	VOA Vial, Clear, 40 mL, HCL	
24F0326-02 F	VOA Vial, Clear, 40 mL, HCL	
24F0326-02 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-03 A	HDPE NM, 500 mL	
24F0326-03 B	HDPE NM, 500 mL	
24F0326-03 C	HDPE NM, 500 mL	
24F0326-03 D	HDPE NM, 500 mL, 1:1 HNO3 (FF)	
24F0326-03 E	VOA Vial, Clear, 40 mL, HCL	
24F0326-03 F	VOA Vial, Clear, 40 mL, HCL	
24F0326-03 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-04 A	HDPE NM, 500 mL	
24F0326-04 B	HDPE NM, 500 mL	
24F0326-04 C	HDPE NM, 500 mL	
24F0326-04 D	HDPE NM, 500 mL	82 fail 1
24F0326-04 E	HDPE NM, 500 mL, 1:1 HNO3 (FF)	
24F0326-04 F	Glass NM, Amber, 500 mL, HCl	
24F0326-04 G	Glass NM, Amber, 250 mL, 9N H2SO4	
24F0326-04 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-04 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-04 J	VOA Vial, Clear, 40 mL, HCL	
24F0326-05 A	HDPE NM, 500 mL	
24F0326-05 B	HDPE NM, 500 mL	
24F0326-05 C	HDPE NM, 500 mL	



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: Snipes MTN Landfill 2024

24F0326-05 D	HDPE NM, 500 mL	72 fail	(1)
24F0326-05 E	HDPE NM, 500 mL, 1:1 HNO3 (FF)		
24F0326-05 F	Glass NM, Amber, 250 mL, 9N H2SO4		
24F0326-05 G	VOA Vial, Clear, 40 mL, HCL		
24F0326-05 H	VOA Vial, Clear, 40 mL, HCL		
24F0326-05 I	VOA Vial, Clear, 40 mL, HCL		
24F0326-06 A	HDPE NM, 500 mL		
24F0326-06 B	HDPE NM, 500 mL		
24F0326-06 C	HDPE NM, 500 mL		
24F0326-06 D	HDPE NM, 500 mL	72 fail	(1)
24F0326-06 E	HDPE NM, 500 mL, 1:1 HNO3 (FF)		
24F0326-06 F	Glass NM, Amber, 500 mL, HCL		
24F0326-06 G	Glass NM, Amber, 250 mL, 9N H2SO4		
24F0326-06 H	VOA Vial, Clear, 40 mL, HCL		
24F0326-06 I	VOA Vial, Clear, 40 mL, HCL		
24F0326-06 J	VOA Vial, Clear, 40 mL, HCL		
24F0326-07 A	HDPE NM, 500 mL		
24F0326-07 B	HDPE NM, 500 mL		
24F0326-07 C	HDPE NM, 500 mL		
24F0326-07 D	HDPE NM, 500 mL	72 fail	(1)
24F0326-07 E	HDPE NM, 500 mL		
24F0326-07 F	Glass NM, Amber, 250 mL, 9N H2SO4		
24F0326-07 G	VOA Vial, Clear, 40 mL, HCL		
24F0326-07 H	VOA Vial, Clear, 40 mL, HCL		
24F0326-07 I	VOA Vial, Clear, 40 mL, HCL		
24F0326-08 A	HDPE NM, 500 mL		
24F0326-08 B	HDPE NM, 500 mL		
24F0326-08 C	HDPE NM, 500 mL		
24F0326-08 D	HDPE NM, 500 mL	72 fail	(1)
24F0326-08 E	HDPE NM, 500 mL		
24F0326-08 F	Glass NM, Amber, 250 mL, 9N H2SO4		
24F0326-08 G	VOA Vial, Clear, 40 mL, HCL		
24F0326-08 H	VOA Vial, Clear, 40 mL, HCL		
24F0326-08 I	VOA Vial, Clear, 40 mL, HCL		

LM

6-14-24



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: Snipes MTN Landfill 2024

Preservation Confirmed By

Date

① = preserved with 2ml H₂SO₄ 9N
pH = 2
clw 6-14-24

Reviewed By

Date



WORK ORDER

24F0326

Samples will be discarded 90 days after submission of a final report unless other instructions are received.

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Terrace Heights JE1302

Project Number: Terrace Heights JE1302

24F0326-05 D	HDPE NM, 500 mL	
24F0326-05 E	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-05 F	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-05 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-05 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-05 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-06 A	HDPE NM, 500 mL	
24F0326-06 B	HDPE NM, 500 mL	
24F0326-06 C	HDPE NM, 500 mL	
24F0326-06 D	HDPE NM, 500 mL	
24F0326-06 E	HDPE NM, 500 mL, 1:1 HNO ₃ (FF)	L2 pass
24F0326-06 F	Glass NM, Amber, 500 mL, HCL	L2 pass
24F0326-06 G	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-06 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-06 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-06 J	VOA Vial, Clear, 40 mL, HCL	
24F0326-07 A	HDPE NM, 500 mL	
24F0326-07 B	HDPE NM, 500 mL	
24F0326-07 C	HDPE NM, 500 mL	
24F0326-07 D	HDPE NM, 500 mL	
24F0326-07 E	HDPE NM, 500 mL	72 fail ①
24F0326-07 F	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-07 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-07 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-07 I	VOA Vial, Clear, 40 mL, HCL	
24F0326-08 A	HDPE NM, 500 mL	
24F0326-08 B	HDPE NM, 500 mL	
24F0326-08 C	HDPE NM, 500 mL	
24F0326-08 D	HDPE NM, 500 mL	
24F0326-08 E	HDPE NM, 500 mL	72 fail ①
24F0326-08 F	Glass NM, Amber, 250 mL, 9N H ₂ SO ₄	L2 pass
24F0326-08 G	VOA Vial, Clear, 40 mL, HCL	
24F0326-08 H	VOA Vial, Clear, 40 mL, HCL	
24F0326-08 I	VOA Vial, Clear, 40 mL, HCL	

① Filtered at 0.45 μ m and
preserved to pH 2.0 with 0.10 ml
conc. HNO₃ (M5180).
ML 06/14/24



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 11:10

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:07

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-01 F

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	0.08	ug/L	J
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 11:10

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:07

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	1.43	ug/L	
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 11:10

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:07

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	97.9	%	
Surrogate: Toluene-d8				80-120 %	99.5	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	100	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	103	%	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/11/2024 11:10

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 19:27

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-01 D

Preparation Batch: BMF0425

Sample Size: 25 mL

Prepared: 06/16/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	40.9	mg/L	
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	12.7	mg/L	
Potassium, Dissolved	7440-09-7	1	0.107	0.500	7.02	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	19.4	mg/L	
Sodium, Dissolved	7440-23-5	1	1.90	50.0	22.2	mg/L	J



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/11/2024 11:10

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-01 A

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	139	mg/L CaCO ₃	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01RE1 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/11/2024 11:10

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:27

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-01RE1 C

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	2	2.00	2.00	13.5	mg/L	D



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Evans
24F0326-01RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/11/2024 11:10

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/24/2024 12:54

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-01RE1 C

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	2	4.00	4.00	40.6	mg/L	D



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 12:25

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:30

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-02 F

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 12:25

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:30

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 12:25

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:30

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	97.5	%	
Surrogate: Toluene-d8				80-120 %	89.3	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	98.9	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	100	%	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/11/2024 12:25

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 18:11

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-02 D

Preparation Batch: BMF0425

Sample Size: 25 mL

Prepared: 06/16/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	24.6	mg/L	
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	6.24	mg/L	
Potassium, Dissolved	7440-09-7	1	0.107	0.500	7.10	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	19.6	mg/L	



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Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/11/2024 12:25

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:10

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-02 C

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	4.28	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/11/2024 12:25

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/21/2024 18:55

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-02 C

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	20.1	mg/L	



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

DNR Well
24F0326-02 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/11/2024 12:25

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-02 A

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	117	mg/L CaCO ₃	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Brown Well
24F0326-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 13:50

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:54

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-03 G

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Brown Well
24F0326-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 13:50

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:54

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Brown Well
24F0326-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 13:50

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 17:54

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	101	%	
Surrogate: Toluene-d8				80-120 %	98.3	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	95.9	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	102	%	



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Reported:
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Brown Well
24F0326-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/11/2024 13:50

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 18:14

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-03 D

Preparation Batch: BMF0425

Sample Size: 25 mL

Prepared: 06/16/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	13.4	mg/L	
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	2.31	mg/L	
Potassium, Dissolved	7440-09-7	1	0.107	0.500	11.8	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	38.0	mg/L	



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Reported:
28-Jun-2024 13:51

Brown Well
24F0326-03 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/11/2024 13:50

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-03 A

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	131	mg/L CaCO ₃	



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Reported:
28-Jun-2024 13:51

Brown Well
24F0326-03RE1 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/11/2024 13:50

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:29

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-03RE1 C

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	2	2.00	2.00	10.5	mg/L	D



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Reported:
28-Jun-2024 13:51

Brown Well
24F0326-03RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/11/2024 13:50

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/24/2024 12:55

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-03RE1 C

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 17:15

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 18:17

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-04 H

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	0.20	ug/L	J
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	0.15	ug/L	J
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	0.14	ug/L	J
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	0.22	ug/L	
Chloroform	67-66-3	1	0.05	0.20	0.09	ug/L	J
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	0.91	ug/L	
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 17:15

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 18:17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	14.5	ug/L	
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	0.56	ug/L	Q
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 17:15

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 18:17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	99.4	%	
Surrogate: Toluene-d8				80-120 %	98.9	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	99.9	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	101	%	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID

Sampled: 06/11/2024 17:15

Instrument: FID4 Analyst: NRB

Analyzed: 06/18/2024 11:04

Sample Preparation:

Preparation Method: EPA 3510C SepF

Extract ID: 24F0326-04 F 01

Preparation Batch: BMF0390

Sample Size: 500 mL

Prepared: 06/17/2024

Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			50-150 %	95.1	%	
Surrogate: n-Triacontane			50-150 %	95.6	%	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/11/2024 17:15

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 19:30

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-04 E

Preparation Batch: BMF0425

Sample Size: 25 mL

Prepared: 06/16/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	72.9	mg/L	
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	0.0426	mg/L	J
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	24.7	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.0038	mg/L	J
Potassium, Dissolved	7440-09-7	1	0.107	0.500	6.84	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	17.7	mg/L	
Sodium, Dissolved	7440-23-5	1	1.90	50.0	21.5	mg/L	J
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	0.0163	mg/L	J



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/11/2024 17:15

Instrument: [CALC] Analyst: Grant Davi

Analyzed: 06/14/2024 20:11

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24F0326-04

Preparation Batch: [CALC]

Prepared: 06/14/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	2	0.0300	1.66	mg/L	H



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Project: Snipes MTN Landfill 2024
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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/11/2024 17:15

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 19:54

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04 C

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	0.016	mg/L	H



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 06/11/2024 17:15

Instrument: UV1800-1 Analyst: kott

Analyzed: 06/28/2024 10:09

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04 G

Preparation Batch: BMF0706

Sample Size: 2 mL

Prepared: 06/27/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 06/11/2024 17:15

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 06/28/2024 02:54

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04 G

Preparation Batch: BMF0704

Sample Size: 20 mL

Prepared: 06/27/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	0.69	mg/L	



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/11/2024 17:15

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04 A

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	209	mg/L CaCO ₃	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 06/11/2024 17:15

Instrument: LACHAT1 Analyst: CB

Analyzed: 06/25/2024 15:31

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04 G

Preparation Batch: BMF0629

Sample Size: 10 mL

Prepared: 06/24/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04RE1 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/11/2024 17:15

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:30

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04RE1 C

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	2	2.00	2.00	16.5	mg/L	D



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04RE1 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/11/2024 17:15

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 20:11

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04RE1 C

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		2	0.020	0.020	1.67	mg/L	D



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-1
24F0326-04RE2 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/11/2024 17:15

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/24/2024 13:30

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-04RE2 C

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	20	40.0	40.0	93.2	mg/L	D



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 15:30

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 18:40

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-05 H

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 15:30

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 18:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/11/2024 15:30

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 18:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	99.7	%	
Surrogate: Toluene-d8				80-120 %	98.6	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	100	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	102	%	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/11/2024 15:30

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 19:33

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-05 E

Preparation Batch: BMF0425

Sample Size: 25 mL

Prepared: 06/16/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	39.8	mg/L	
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	0.184	mg/L	
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	13.2	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.0463	mg/L	
Potassium, Dissolved	7440-09-7	1	0.107	0.500	8.24	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	21.1	mg/L	
Sodium, Dissolved	7440-23-5	1	1.90	50.0	24.4	mg/L	J
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	0.0160	mg/L	J



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/11/2024 15:30

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:13

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05 A

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	8.89	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/11/2024 15:30

Instrument: [CALC] Analyst: Grant Davi

Analyzed: 06/14/2024 19:55

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24F0326-05

Preparation Batch: [CALC]

Prepared: 06/14/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	0.422	mg/L	H



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/11/2024 15:30

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 19:55

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05 A

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	0.434	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	0.012	mg/L	H



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 06/11/2024 15:30

Instrument: UV1800-1 Analyst: kott

Analyzed: 06/28/2024 10:19

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05 F

Preparation Batch: BMF0706

Sample Size: 2 mL

Prepared: 06/27/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 06/11/2024 15:30

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 06/28/2024 03:15

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05 F

Preparation Batch: BMF0704

Sample Size: 20 mL

Prepared: 06/27/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	ND	mg/L	U



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/11/2024 15:30

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05 B

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	108	mg/L CaCO ₃	



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 06/11/2024 15:30

Instrument: LACHAT1 Analyst: CB

Analyzed: 06/25/2024 15:32

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05 F

Preparation Batch: BMF0629

Sample Size: 10 mL

Prepared: 06/24/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-2
24F0326-05RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/11/2024 15:30

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/24/2024 12:58

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-05RE1 A

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	5	10.0	10.0	86.0	mg/L	D



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/12/2024 20:15

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:03

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-06 I

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	0.14	ug/L	J
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	0.06	ug/L	J
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	0.40	ug/L	
Chloroform	67-66-3	1	0.05	0.20	0.11	ug/L	J
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	0.58	ug/L	
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/12/2024 20:15

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:03

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	6.66	ug/L	
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	0.35	ug/L	Q
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/12/2024 20:15

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:03

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	96.0	%	
Surrogate: Toluene-d8				80-120 %	86.5	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	101	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	102	%	



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Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID

Sampled: 06/12/2024 20:15

Instrument: FID4 Analyst: NRB

Analyzed: 06/18/2024 11:24

Sample Preparation:

Preparation Method: EPA 3510C SepF

Extract ID: 24F0326-06 F 01

Preparation Batch: BMF0390

Sample Size: 500 mL

Prepared: 06/17/2024

Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			50-150 %	92.9	%	
Surrogate: n-Triacontane			50-150 %	93.4	%	



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Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/12/2024 20:15

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 18:17

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-06 E

Preparation Batch: BMF0425

Sample Size: 25 mL

Prepared: 06/16/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	34.8	mg/L	
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	11.2	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	ND	mg/L	U
Potassium, Dissolved	7440-09-7	1	0.107	0.500	6.75	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	19.5	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/12/2024 20:15

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:15

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 C

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	7.65	mg/L	



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Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/12/2024 20:15

Instrument: [CALC] Analyst: Grant Davi

Analyzed: 06/14/2024 19:56

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24F0326-06

Preparation Batch: [CALC]

Prepared: 06/14/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	0.775	mg/L	



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Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/12/2024 20:15

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 19:56

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 C

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	0.775	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	U



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Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/12/2024 20:15

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/21/2024 19:02

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 C

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	27.1	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 06/12/2024 20:15

Instrument: UV1800-1 Analyst: kott

Analyzed: 06/28/2024 10:20

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 G

Preparation Batch: BMF0706

Sample Size: 2 mL

Prepared: 06/27/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 06/12/2024 20:15

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 06/28/2024 04:16

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 G

Preparation Batch: BMF0704

Sample Size: 20 mL

Prepared: 06/27/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/12/2024 20:15

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 A

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	144	mg/L CaCO ₃	



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-4
24F0326-06 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 06/12/2024 20:15

Instrument: LACHAT1 Analyst: CB

Analyzed: 06/25/2024 15:33

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-06 G

Preparation Batch: BMF0629

Sample Size: 10 mL

Prepared: 06/24/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/12/2024 19:10

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:26

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-07 I

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/12/2024 19:10

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:26

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	0.08	ug/L	J
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/12/2024 19:10

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:26

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	99.3	%	
Surrogate: Toluene-d8				80-120 %	88.3	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	99.5	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	102	%	



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D	Sampled: 06/12/2024 19:10	
Instrument: ICP3 Analyst: SH	Analyzed: 06/22/2024 18:57	
Sample Preparation:	Preparation Method: WMN (No Prep)	Extract ID: 24F0326-07 E 01
	Preparation Batch: BMF0424	Filtration Batch: BMF0393
	Prepared: 06/16/2024	Filtration Date: 06/14/2024 14:47
	Sample Size: 25 mL	
	Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	25.3	mg/L	
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	7.08	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	ND	mg/L	U
Potassium, Dissolved	7440-09-7	1	0.107	0.500	5.26	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	19.3	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/12/2024 19:10

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 11:16

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07 C

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	4.04	mg/L	



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Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/12/2024 19:10

Instrument: [CALC] Analyst: Grant Davi

Analyzed: 06/14/2024 19:58

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24F0326-07

Preparation Batch: [CALC]

Prepared: 06/14/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	ND	mg/L	U, H



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/12/2024 19:10

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 19:58

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07 C

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	H, U



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Project Number: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/12/2024 19:10

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/21/2024 19:03

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07 C

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	24.4	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 06/12/2024 19:10

Instrument: UV1800-1 Analyst: kott

Analyzed: 06/28/2024 10:21

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07 F

Preparation Batch: BMF0706

Sample Size: 2 mL

Prepared: 06/27/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 06/12/2024 19:10

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 06/28/2024 04:45

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07 F

Preparation Batch: BMF0704

Sample Size: 20 mL

Prepared: 06/27/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	ND	mg/L	U



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Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/12/2024 19:10

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07 B

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	111	mg/L CaCO ₃	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5d
24F0326-07RE1 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 06/12/2024 19:10

Instrument: LACHAT1 Analyst: CB

Analyzed: 06/25/2024 16:05

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-07RE1 F

Preparation Batch: BMF0629

Sample Size: 10 mL

Prepared: 06/24/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/13/2024 09:30

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:49

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24F0326-08 H

Preparation Batch: BMF0379

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	0.16	ug/L	J
Acetone	67-64-1	1	1.91	5.00	2.13	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	0.10	ug/L	J
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/13/2024 09:30

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	1.56	ug/L	
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.26	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	0.18	ug/L	J
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 06/13/2024 09:30

Instrument: NT20 Analyst: LN

Analyzed: 06/14/2024 19:49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	99.7	%	
Surrogate: Toluene-d8				80-120 %	87.5	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	98.1	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	102	%	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 06/13/2024 09:30

Instrument: ICP3 Analyst: SH

Analyzed: 06/22/2024 18:20

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24F0326-08 E 01

Preparation Batch: BMF0424

Sample Size: 25 mL

Filtration Batch: BMF0393

Prepared: 06/16/2024

Final Volume: 25 mL

Filtration Date: 06/14/2024 14:47

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Calcium, Dissolved	7440-70-2	1	0.0220	0.0500	51.7	mg/L	
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Magnesium, Dissolved	7439-95-4	1	0.0209	0.0500	15.2	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.135	mg/L	
Potassium, Dissolved	7440-09-7	1	0.107	0.500	4.26	mg/L	
Sodium, Dissolved	7440-23-5	1	0.105	0.500	23.1	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/13/2024 09:30

Instrument: [CALC] Analyst: Grant Davi

Analyzed: 06/14/2024 20:12

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24F0326-08

Preparation Batch: [CALC]

Prepared: 06/14/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	2	0.0300	1.45	mg/L	



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Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/13/2024 09:30

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 19:59

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08 D

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	0.015	mg/L	



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 06/13/2024 09:30

Instrument: UV1800-1 Analyst: kott

Analyzed: 06/28/2024 10:21

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08 F

Preparation Batch: BMF0706

Sample Size: 2 mL

Prepared: 06/27/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 06/13/2024 09:30

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 06/28/2024 05:10

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08 F

Preparation Batch: BMF0704

Sample Size: 20 mL

Prepared: 06/27/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	2.10	mg/L	



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Project Number: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08 (Water)

Wet Chemistry

Method: SM 2320 B-11

Sampled: 06/13/2024 09:30

Instrument: Accumet AB150 Analyst: UW

Analyzed: 06/19/2024 11:04

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08 C

Preparation Batch: BMF0497

Sample Size: 100 mL

Prepared: 06/19/2024

Final Volume: 100 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Alkalinity, Total		1	1.00	1.00	172	mg/L CaCO ₃	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08RE1 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 06/13/2024 09:30

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/26/2024 12:05

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08RE1 A

Preparation Batch: BMF0675

Sample Size: 10 mL

Prepared: 06/26/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	5	5.00	5.00	21.8	mg/L	D



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08RE1 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 06/13/2024 09:30

Instrument: LACHAT2 Analyst: Grant Davi

Analyzed: 06/14/2024 20:12

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08RE1 D

Preparation Batch: BMF0381

Sample Size: 10 mL

Prepared: 06/14/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		2	0.020	0.020	1.46	mg/L	D



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 06/13/2024 09:30

Instrument: LACHAT2 Analyst: CB

Analyzed: 06/24/2024 12:59

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08RE1 D

Preparation Batch: BMF0580

Sample Size: 10 mL

Prepared: 06/21/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	5	10.0	10.0	74.5	mg/L	D



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SMW-5s
24F0326-08RE1 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 06/13/2024 09:30

Instrument: LACHAT1 Analyst: CB

Analyzed: 06/25/2024 16:06

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24F0326-08RE1 F

Preparation Batch: BMF0629

Sample Size: 10 mL

Prepared: 06/24/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	0.044	mg/L	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0379-BLK1)						Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 13:59					
Chloromethane	ND	0.27	0.50	ug/L							U
Vinyl Chloride	ND	0.08	0.20	ug/L							U
Bromomethane	ND	0.23	1.00	ug/L							U
Chloroethane	ND	0.05	0.20	ug/L							U
Trichlorofluoromethane	ND	0.13	0.20	ug/L							U
Acrolein	ND	2.70	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.11	0.20	ug/L							U
Acetone	ND	1.91	5.00	ug/L							U
1,1-Dichloroethene	ND	0.08	0.20	ug/L							U
Iodomethane	ND	0.15	1.00	ug/L							U
Methylene Chloride	ND	0.53	1.00	ug/L							U
Acrylonitrile	ND	0.40	1.00	ug/L							U
Carbon Disulfide	ND	0.06	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.07	0.20	ug/L							U
Vinyl Acetate	ND	0.12	0.20	ug/L							U
1,1-Dichloroethane	ND	0.04	0.20	ug/L							U
2-Butanone	ND	1.77	5.00	ug/L							U
2,2-Dichloropropane	ND	0.11	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.08	0.20	ug/L							U
Chloroform	ND	0.05	0.20	ug/L							U
Bromochloromethane	ND	0.09	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.08	0.20	ug/L							U
1,1-Dichloropropene	ND	0.09	0.20	ug/L							U
Carbon tetrachloride	ND	0.09	0.20	ug/L							U
1,2-Dichloroethane	ND	0.08	0.20	ug/L							U
Benzene	ND	0.05	0.20	ug/L							U
Trichloroethene	ND	0.07	0.20	ug/L							U
1,2-Dichloropropane	ND	0.07	0.20	ug/L							U
Bromodichloromethane	ND	0.09	0.20	ug/L							U
Dibromomethane	ND	0.06	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	0.55	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	1.90	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.09	0.20	ug/L							U
Toluene	ND	0.05	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.09	0.20	ug/L							U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0379-BLK1)					Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 13:59					
2-Hexanone	ND	2.06	5.00	ug/L						U
1,1,2-Trichloroethane	ND	0.10	0.20	ug/L						U
1,3-Dichloropropane	ND	0.07	0.20	ug/L						U
Tetrachloroethene	ND	0.09	0.20	ug/L						U
Dibromochloromethane	ND	0.09	0.20	ug/L						U
1,2-Dibromoethane	ND	0.09	0.20	ug/L						U
Chlorobenzene	ND	0.06	0.20	ug/L						U
Ethylbenzene	ND	0.05	0.20	ug/L						U
1,1,1,2-Tetrachloroethane	ND	0.09	0.20	ug/L						U
m,p-Xylene	ND	0.14	0.40	ug/L						U
o-Xylene	ND	0.08	0.20	ug/L						U
Xylenes, total	ND	0.22	0.60	ug/L						U
Styrene	ND	0.09	0.20	ug/L						U
Bromoform	ND	0.15	0.20	ug/L						U
1,1,2,2-Tetrachloroethane	ND	0.03	0.20	ug/L						U
1,2,3-Trichloropropane	ND	0.16	0.50	ug/L						U
trans-1,4-Dichloro 2-Butene	ND	0.60	1.00	ug/L						U
n-Propylbenzene	ND	0.07	0.20	ug/L						U
Bromobenzene	ND	0.07	0.20	ug/L						U
Isopropyl Benzene	ND	0.07	0.20	ug/L						U
2-Chlorotoluene	ND	0.06	0.20	ug/L						U
4-Chlorotoluene	ND	0.06	0.20	ug/L						U
t-Butylbenzene	ND	0.07	0.20	ug/L						U
1,3,5-Trimethylbenzene	ND	0.07	0.20	ug/L						U
1,2,4-Trimethylbenzene	ND	0.05	0.20	ug/L						U
s-Butylbenzene	ND	0.06	0.20	ug/L						U
4-Isopropyl Toluene	ND	0.08	0.20	ug/L						U
1,3-Dichlorobenzene	ND	0.08	0.20	ug/L						U
1,4-Dichlorobenzene	ND	0.10	0.20	ug/L						U
n-Butylbenzene	ND	0.18	0.20	ug/L						U
1,2-Dichlorobenzene	ND	0.08	0.20	ug/L						U
1,2-Dibromo-3-chloropropane	ND	0.39	0.50	ug/L						U
1,2,4-Trichlorobenzene	ND	0.21	0.50	ug/L						U
Hexachloro-1,3-Butadiene	ND	0.26	0.50	ug/L						U
Naphthalene	ND	0.27	0.50	ug/L						U



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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0379-BLK1)										
Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 13:59										
1,2,3-Trichlorobenzene	ND	0.25	0.50	ug/L						U
Dichlorodifluoromethane	ND	0.13	0.20	ug/L						U
Methyl tert-butyl Ether	ND	0.14	0.50	ug/L						U
2-Pentanone	ND	2.34	5.00	ug/L						U
Surrogate: 1,2-Dichloroethane-d4	4.75			ug/L	5.00		95.0	80-129		
Surrogate: Toluene-d8	4.45			ug/L	5.00		89.0	80-120		
Surrogate: 4-Bromofluorobenzene	5.08			ug/L	5.00		102	80-120		
Surrogate: 1,2-Dichlorobenzene-d4	4.97			ug/L	5.00		99.3	80-120		



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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMF0379-BS1)						Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 12:01					
Chloromethane	6.74	0.27	0.50	ug/L	10.0		67.4	60-138			Q
Vinyl Chloride	7.94	0.08	0.20	ug/L	10.0		79.4	66-133			Q
Bromomethane	7.99	0.23	1.00	ug/L	10.0		79.9	72-131			Q
Chloroethane	8.73	0.05	0.20	ug/L	10.0		87.3	60-155			
Trichlorofluoromethane	7.94	0.13	0.20	ug/L	10.0		79.4	62-141			Q
Acrolein	41.7	2.70	5.00	ug/L	50.0		83.3	52-190			
1,1,2-Trichloro-1,2,2-Trifluoroethane	8.84	0.11	0.20	ug/L	10.0		88.4	76-129			
Acetone	40.1	1.91	5.00	ug/L	50.0		80.2	58-142			
1,1-Dichloroethene	8.67	0.08	0.20	ug/L	10.0		86.7	69-135			
Iodomethane	8.85	0.15	1.00	ug/L	10.0		88.5	56-147			
Methylene Chloride	8.42	0.53	1.00	ug/L	10.0		84.2	65-135			
Acrylonitrile	8.41	0.40	1.00	ug/L	10.0		84.1	64-134			
Carbon Disulfide	8.49	0.06	0.20	ug/L	10.0		84.9	78-125			
trans-1,2-Dichloroethene	8.63	0.07	0.20	ug/L	10.0		86.3	78-128			
Vinyl Acetate	8.77	0.12	0.20	ug/L	10.0		87.7	55-138			
1,1-Dichloroethane	8.81	0.04	0.20	ug/L	10.0		88.1	76-124			
2-Butanone	42.6	1.77	5.00	ug/L	50.0		85.2	61-140			
2,2-Dichloropropane	8.26	0.11	0.20	ug/L	10.0		82.6	66-147			
cis-1,2-Dichloroethene	8.58	0.08	0.20	ug/L	10.0		85.8	80-121			
Chloroform	8.83	0.05	0.20	ug/L	10.0		88.3	80-122			
Bromochloromethane	8.97	0.09	0.20	ug/L	10.0		89.7	80-121			
1,1,1-Trichloroethane	8.81	0.08	0.20	ug/L	10.0		88.1	79-123			
1,1-Dichloropropene	9.12	0.09	0.20	ug/L	10.0		91.2	80-127			
Carbon tetrachloride	10.1	0.09	0.20	ug/L	10.0		101	53-137			
1,2-Dichloroethane	8.89	0.08	0.20	ug/L	10.0		88.9	75-123			
Benzene	9.07	0.05	0.20	ug/L	10.0		90.7	80-120			
Trichloroethene	9.43	0.07	0.20	ug/L	10.0		94.3	80-120			
1,2-Dichloropropane	8.99	0.07	0.20	ug/L	10.0		89.9	80-120			
Bromodichloromethane	9.17	0.09	0.20	ug/L	10.0		91.7	80-121			
Dibromomethane	11.9	0.06	0.20	ug/L	10.0		119	80-120			
2-Chloroethyl vinyl ether	8.51	0.55	1.00	ug/L	10.0		85.1	64-120			
4-Methyl-2-Pentanone	45.5	1.90	5.00	ug/L	50.0		90.9	67-133			
cis-1,3-Dichloropropene	9.41	0.09	0.20	ug/L	10.0		94.1	80-124			
Toluene	9.00	0.05	0.20	ug/L	10.0		90.0	80-120			
trans-1,3-Dichloropropene	8.58	0.09	0.20	ug/L	10.0		85.8	71-127			



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
LCS (BMF0379-BS1)										
Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 12:01										
2-Hexanone	42.7	2.06	5.00	ug/L	50.0		85.4	69-133		
1,1,2-Trichloroethane	8.93	0.10	0.20	ug/L	10.0		89.3	80-121		
1,3-Dichloropropane	8.85	0.07	0.20	ug/L	10.0		88.5	80-120		
Tetrachloroethene	9.08	0.09	0.20	ug/L	10.0		90.8	80-120		
Dibromochloromethane	8.20	0.09	0.20	ug/L	10.0		82.0	65-135		
1,2-Dibromoethane	9.17	0.09	0.20	ug/L	10.0		91.7	80-121		
Chlorobenzene	8.81	0.06	0.20	ug/L	10.0		88.1	80-120		
Ethylbenzene	8.98	0.05	0.20	ug/L	10.0		89.8	80-120		
1,1,1,2-Tetrachloroethane	8.93	0.09	0.20	ug/L	10.0		89.3	80-120		
m,p-Xylene	18.4	0.14	0.40	ug/L	20.0		92.0	80-121		
o-Xylene	9.18	0.08	0.20	ug/L	10.0		91.8	80-121		
Xylenes, total	27.6	0.22	0.60	ug/L	30.0		91.9	76-127		
Styrene	8.66	0.09	0.20	ug/L	10.0		86.6	80-124		
Bromoform	8.85	0.15	0.20	ug/L	10.0		88.5	51-134		
1,1,2,2-Tetrachloroethane	8.34	0.03	0.20	ug/L	10.0		83.4	77-123		
1,2,3-Trichloropropane	8.08	0.16	0.50	ug/L	10.0		80.8	76-125		
trans-1,4-Dichloro 2-Butene	8.00	0.60	1.00	ug/L	10.0		80.0	55-129		
n-Propylbenzene	8.72	0.07	0.20	ug/L	10.0		87.2	78-130		
Bromobenzene	8.56	0.07	0.20	ug/L	10.0		85.6	80-120		
Isopropyl Benzene	8.66	0.07	0.20	ug/L	10.0		86.6	80-128		
2-Chlorotoluene	8.75	0.06	0.20	ug/L	10.0		87.5	78-122		
4-Chlorotoluene	8.58	0.06	0.20	ug/L	10.0		85.8	80-121		
t-Butylbenzene	8.88	0.07	0.20	ug/L	10.0		88.8	78-125		
1,3,5-Trimethylbenzene	8.91	0.07	0.20	ug/L	10.0		89.1	80-129		
1,2,4-Trimethylbenzene	8.99	0.05	0.20	ug/L	10.0		89.9	80-127		
s-Butylbenzene	8.87	0.06	0.20	ug/L	10.0		88.7	78-129		
4-Isopropyl Toluene	9.16	0.08	0.20	ug/L	10.0		91.6	79-130		
1,3-Dichlorobenzene	8.47	0.08	0.20	ug/L	10.0		84.7	80-120		
1,4-Dichlorobenzene	8.26	0.10	0.20	ug/L	10.0		82.6	80-120		
n-Butylbenzene	8.78	0.18	0.20	ug/L	10.0		87.8	74-129		
1,2-Dichlorobenzene	8.32	0.08	0.20	ug/L	10.0		83.2	80-120		
1,2-Dibromo-3-chloropropane	8.31	0.39	0.50	ug/L	10.0		83.1	62-123		
1,2,4-Trichlorobenzene	8.53	0.21	0.50	ug/L	10.0		85.3	64-124		
Hexachloro-1,3-Butadiene	8.47	0.26	0.50	ug/L	10.0		84.7	65-145		
Naphthalene	7.60	0.27	0.50	ug/L	10.0		76.0	50-134		Q



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
LCS (BMF0379-BS1)										
Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 12:01										
1,2,3-Trichlorobenzene	8.71	0.25	0.50	ug/L	10.0		87.1 49-133			
Dichlorodifluoromethane	5.89	0.13	0.20	ug/L	10.0		58.9 48-147			Q
Methyl tert-butyl Ether	8.69	0.14	0.50	ug/L	10.0		86.9 71-132			
2-Pentanone	44.2	2.34	5.00	ug/L	50.0		88.3 69-134			
Surrogate: 1,2-Dichloroethane-d4	4.79			ug/L	5.00		95.9 80-129			
Surrogate: Toluene-d8	5.15			ug/L	5.00		103 80-120			
Surrogate: 4-Bromofluorobenzene	5.41			ug/L	5.00		108 80-120			
Surrogate: 1,2-Dichlorobenzene-d4	4.95			ug/L	5.00		99.1 80-120			



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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMF0379-BSD1)						Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 12:48					
Chloromethane	6.57	0.27	0.50	ug/L	10.0		65.7	60-138	2.57	30	Q
Vinyl Chloride	8.04	0.08	0.20	ug/L	10.0		80.4	66-133	1.28	30	Q
Bromomethane	8.22	0.23	1.00	ug/L	10.0		82.2	72-131	2.73	30	Q
Chloroethane	8.71	0.05	0.20	ug/L	10.0		87.1	60-155	0.20	30	
Trichlorofluoromethane	8.01	0.13	0.20	ug/L	10.0		80.1	62-141	0.95	30	Q
Acrolein	42.7	2.70	5.00	ug/L	50.0		85.4	52-190	2.44	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.00	0.11	0.20	ug/L	10.0		90.0	76-129	1.74	30	
Acetone	42.1	1.91	5.00	ug/L	50.0		84.1	58-142	4.78	30	
1,1-Dichloroethene	8.97	0.08	0.20	ug/L	10.0		89.7	69-135	3.34	30	
Iodomethane	8.91	0.15	1.00	ug/L	10.0		89.1	56-147	0.68	30	
Methylene Chloride	8.62	0.53	1.00	ug/L	10.0		86.2	65-135	2.40	30	
Acrylonitrile	9.11	0.40	1.00	ug/L	10.0		91.1	64-134	7.96	30	
Carbon Disulfide	8.64	0.06	0.20	ug/L	10.0		86.4	78-125	1.75	30	
trans-1,2-Dichloroethene	8.81	0.07	0.20	ug/L	10.0		88.1	78-128	2.01	30	
Vinyl Acetate	8.97	0.12	0.20	ug/L	10.0		89.7	55-138	2.25	30	
1,1-Dichloroethane	9.13	0.04	0.20	ug/L	10.0		91.3	76-124	3.47	30	
2-Butanone	44.5	1.77	5.00	ug/L	50.0		88.9	61-140	4.22	30	
2,2-Dichloropropane	8.32	0.11	0.20	ug/L	10.0		83.2	66-147	0.66	30	
cis-1,2-Dichloroethene	8.72	0.08	0.20	ug/L	10.0		87.2	80-121	1.57	30	
Chloroform	9.17	0.05	0.20	ug/L	10.0		91.7	80-122	3.78	30	
Bromochloromethane	9.38	0.09	0.20	ug/L	10.0		93.8	80-121	4.45	30	
1,1,1-Trichloroethane	8.81	0.08	0.20	ug/L	10.0		88.1	79-123	0.05	30	
1,1-Dichloropropene	9.51	0.09	0.20	ug/L	10.0		95.1	80-127	4.17	30	
Carbon tetrachloride	10.4	0.09	0.20	ug/L	10.0		104	53-137	3.69	30	
1,2-Dichloroethane	9.24	0.08	0.20	ug/L	10.0		92.4	75-123	3.82	30	
Benzene	9.51	0.05	0.20	ug/L	10.0		95.1	80-120	4.76	30	
Trichloroethene	9.80	0.07	0.20	ug/L	10.0		98.0	80-120	3.91	30	
1,2-Dichloropropane	9.57	0.07	0.20	ug/L	10.0		95.7	80-120	6.21	30	
Bromodichloromethane	9.54	0.09	0.20	ug/L	10.0		95.4	80-121	3.94	30	
Dibromomethane	9.62	0.06	0.20	ug/L	10.0		96.2	80-120	20.90	30	
2-Chloroethyl vinyl ether	9.17	0.55	1.00	ug/L	10.0		91.7	64-120	7.52	30	
4-Methyl-2-Pentanone	48.6	1.90	5.00	ug/L	50.0		97.2	67-133	6.62	30	
cis-1,3-Dichloropropene	9.75	0.09	0.20	ug/L	10.0		97.5	80-124	3.59	30	
Toluene	9.62	0.05	0.20	ug/L	10.0		96.2	80-120	6.65	30	
trans-1,3-Dichloropropene	8.91	0.09	0.20	ug/L	10.0		89.1	71-127	3.81	30	



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Project: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMF0379-BSD1)					Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 12:48						
2-Hexanone	46.5	2.06	5.00	ug/L	50.0		93.0	69-133	8.57	30	
1,1,2-Trichloroethane	9.40	0.10	0.20	ug/L	10.0		94.0	80-121	5.11	30	
1,3-Dichloropropane	9.49	0.07	0.20	ug/L	10.0		94.9	80-120	7.04	30	
Tetrachloroethene	9.42	0.09	0.20	ug/L	10.0		94.2	80-120	3.71	30	
Dibromochloromethane	8.64	0.09	0.20	ug/L	10.0		86.4	65-135	5.21	30	
1,2-Dibromoethane	10.1	0.09	0.20	ug/L	10.0		101	80-121	9.29	30	
Chlorobenzene	9.45	0.06	0.20	ug/L	10.0		94.5	80-120	7.03	30	
Ethylbenzene	9.58	0.05	0.20	ug/L	10.0		95.8	80-120	6.49	30	
1,1,1,2-Tetrachloroethane	9.55	0.09	0.20	ug/L	10.0		95.5	80-120	6.72	30	
m,p-Xylene	19.7	0.14	0.40	ug/L	20.0		98.4	80-121	6.75	30	
o-Xylene	9.59	0.08	0.20	ug/L	10.0		95.9	80-121	4.35	30	
Xylenes, total	29.3	0.22	0.60	ug/L	30.0		97.6	76-127	5.96	30	
Styrene	9.15	0.09	0.20	ug/L	10.0		91.5	80-124	5.46	30	
Bromoform	11.0	0.15	0.20	ug/L	10.0		110	51-134	21.40	30	
1,1,2,2-Tetrachloroethane	10.2	0.03	0.20	ug/L	10.0		102	77-123	19.90	30	
1,2,3-Trichloropropane	9.67	0.16	0.50	ug/L	10.0		96.7	76-125	18.00	30	
trans-1,4-Dichloro 2-Butene	9.29	0.60	1.00	ug/L	10.0		92.9	55-129	15.00	30	
n-Propylbenzene	10.2	0.07	0.20	ug/L	10.0		102	78-130	15.60	30	
Bromobenzene	10.2	0.07	0.20	ug/L	10.0		102	80-120	17.30	30	
Isopropyl Benzene	10.3	0.07	0.20	ug/L	10.0		103	80-128	17.20	30	
2-Chlorotoluene	10.2	0.06	0.20	ug/L	10.0		102	78-122	15.40	30	
4-Chlorotoluene	9.95	0.06	0.20	ug/L	10.0		99.5	80-121	14.80	30	
t-Butylbenzene	10.4	0.07	0.20	ug/L	10.0		104	78-125	16.20	30	
1,3,5-Trimethylbenzene	10.4	0.07	0.20	ug/L	10.0		104	80-129	15.60	30	
1,2,4-Trimethylbenzene	10.5	0.05	0.20	ug/L	10.0		105	80-127	15.50	30	
s-Butylbenzene	10.3	0.06	0.20	ug/L	10.0		103	78-129	15.00	30	
4-Isopropyl Toluene	10.7	0.08	0.20	ug/L	10.0		107	79-130	15.60	30	
1,3-Dichlorobenzene	9.93	0.08	0.20	ug/L	10.0		99.3	80-120	15.90	30	
1,4-Dichlorobenzene	9.67	0.10	0.20	ug/L	10.0		96.7	80-120	15.70	30	
n-Butylbenzene	10.1	0.18	0.20	ug/L	10.0		101	74-129	14.20	30	
1,2-Dichlorobenzene	9.78	0.08	0.20	ug/L	10.0		97.8	80-120	16.10	30	
1,2-Dibromo-3-chloropropane	10.0	0.39	0.50	ug/L	10.0		100	62-123	18.40	30	
1,2,4-Trichlorobenzene	10.1	0.21	0.50	ug/L	10.0		101	64-124	17.20	30	
Hexachloro-1,3-Butadiene	9.96	0.26	0.50	ug/L	10.0		99.6	65-145	16.20	30	
Naphthalene	9.13	0.27	0.50	ug/L	10.0		91.3	50-134	18.20	30	Q



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Project: Snipes MTN Landfill 2024
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Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMF0379 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMF0379-BSD1)											
						Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 12:48					
1,2,3-Trichlorobenzene	10.2	0.25	0.50	ug/L	10.0		102	49-133	16.00	30	
Dichlorodifluoromethane	6.07	0.13	0.20	ug/L	10.0		60.7	48-147	2.99	30	Q
Methyl tert-butyl Ether	9.14	0.14	0.50	ug/L	10.0		91.4	71-132	5.02	30	
2-Pentanone	48.7	2.34	5.00	ug/L	50.0		97.4	69-134	9.77	30	
Surrogate: 1,2-Dichloroethane-d4	4.71			ug/L	5.00		94.2	80-129			
Surrogate: Toluene-d8	5.16			ug/L	5.00		103	80-120			
Surrogate: 4-Bromofluorobenzene	5.13			ug/L	5.00		103	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.07			ug/L	5.00		101	80-120			



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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMF0390 - NWTPH-HCID

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0390-BLK1)		Prepared: 17-Jun-2024 Analyzed: 18-Jun-2024 10:03								
Gasoline Range Organics (Tol-C12)	ND	0.25	mg/L							U
Diesel Range Organics (C12-C24)	ND	0.50	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	1.00	mg/L							U
Surrogate: o-Terphenyl	0.197		mg/L	0.225		87.6	50-150			
Surrogate: n-Triacontane	0.201		mg/L	0.225		89.2	50-150			



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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BMF0424 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0424-BLK1) Prepared: 16-Jun-2024 Analyzed: 22-Jun-2024 17:43											
Calcium, Dissolved	ND	0.0220	0.0500	mg/L							U
Iron, Dissolved	ND	0.0107	0.0500	mg/L							U
Magnesium, Dissolved	ND	0.0209	0.0500	mg/L							U
Manganese, Dissolved	ND	0.0016	0.0040	mg/L							U
Potassium, Dissolved	ND	0.107	0.500	mg/L							U
Sodium, Dissolved	ND	0.105	0.500	mg/L							U
Zinc, Dissolved	ND	0.0080	0.0200	mg/L							U
LCS (BMF0424-BS1) Prepared: 16-Jun-2024 Analyzed: 22-Jun-2024 17:46											
Calcium, Dissolved	10.0	0.0222	0.0505	mg/L	10.0		100	80-120			
Iron, Dissolved	2.08	0.0108	0.0505	mg/L	2.00		104	80-120			
Magnesium, Dissolved	10.0	0.0211	0.0505	mg/L	10.0		100	80-120			
Manganese, Dissolved	0.487	0.0016	0.0040	mg/L	0.500		97.4	80-120			
Potassium, Dissolved	10.1	0.108	0.505	mg/L	10.0		101	80-120			
Sodium, Dissolved	9.77	0.106	0.505	mg/L	10.0		97.7	80-120			
Zinc, Dissolved	0.470	0.0081	0.0202	mg/L	0.500		94.1	80-120			
Duplicate (BMF0424-DUP1) Source: 24F0326-07 Prepared: 16-Jun-2024 Analyzed: 22-Jun-2024 19:00											
Calcium, Dissolved	25.3	0.0220	0.0500	mg/L		25.3			0.15	20	
Iron, Dissolved	ND	0.0107	0.0500	mg/L		ND					U
Magnesium, Dissolved	7.09	0.0209	0.0500	mg/L		7.08			0.22	20	
Manganese, Dissolved	ND	0.0016	0.0040	mg/L		ND					U
Potassium, Dissolved	5.28	0.107	0.500	mg/L		5.26			0.35	20	
Sodium, Dissolved	19.3	0.105	0.500	mg/L		19.3			0.04	20	
Zinc, Dissolved	ND	0.0080	0.0200	mg/L		ND					U
Matrix Spike (BMF0424-MS1) Source: 24F0326-07 Prepared: 16-Jun-2024 Analyzed: 22-Jun-2024 19:03											
Calcium, Dissolved	35.1	0.0222	0.0505	mg/L	10.0	25.3	98.2	75-125			
Iron, Dissolved	2.06	0.0108	0.0505	mg/L	2.00	ND	103	75-125			
Magnesium, Dissolved	17.1	0.0211	0.0505	mg/L	10.0	7.08	101	75-125			
Manganese, Dissolved	0.479	0.0016	0.0040	mg/L	0.500	ND	95.8	75-125			
Potassium, Dissolved	15.3	0.108	0.505	mg/L	10.0	5.26	101	75-125			
Sodium, Dissolved	28.9	0.106	0.505	mg/L	10.0	19.3	95.6	75-125			
Zinc, Dissolved	0.468	0.0081	0.0202	mg/L	0.500	ND	93.6	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



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Project: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BMF0424 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMF0424-MSD1)		Source: 24F0326-07		Prepared: 16-Jun-2024 Analyzed: 22-Jun-2024 19:06							
Calcium, Dissolved	35.0	0.0222	0.0505	mg/L	10.0	25.3	97.5	75-125	0.19	20	
Iron, Dissolved	2.06	0.0108	0.0505	mg/L	2.00	ND	103	75-125	0.00		
Magnesium, Dissolved	17.1	0.0211	0.0505	mg/L	10.0	7.08	100	75-125	0.10	20	
Manganese, Dissolved	0.480	0.0016	0.0040	mg/L	0.500	ND	96.1	75-125	0.23	20	
Potassium, Dissolved	15.3	0.108	0.505	mg/L	10.0	5.26	101	75-125	0.01	20	
Sodium, Dissolved	28.9	0.106	0.505	mg/L	10.0	19.3	95.4	75-125	0.05	20	
Zinc, Dissolved	0.453	0.0081	0.0202	mg/L	0.500	ND	90.7	75-125	3.11	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BMF0425 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0425-BLK1) Prepared: 16-Jun-2024 Analyzed: 18-Jun-2024 19:22											
Calcium, Dissolved	ND	0.0220	0.0500	mg/L							U
Iron, Dissolved	ND	0.0107	0.0500	mg/L							U
Magnesium, Dissolved	ND	0.0209	0.0500	mg/L							U
Manganese, Dissolved	ND	0.0016	0.0040	mg/L							U
Potassium, Dissolved	ND	0.107	0.500	mg/L							U
Sodium, Dissolved	ND	0.105	0.500	mg/L							U
Sodium, Dissolved	ND	1.90	50.0	mg/L							U
Zinc, Dissolved	ND	0.0080	0.0200	mg/L							U
LCS (BMF0425-BS1) Prepared: 16-Jun-2024 Analyzed: 18-Jun-2024 19:25											
Calcium, Dissolved	9.89	0.0222	0.0505	mg/L	10.0		98.9	80-120			
Iron, Dissolved	2.12	0.0108	0.0505	mg/L	2.00		106	80-120			
Magnesium, Dissolved	10.3	0.0211	0.0505	mg/L	10.0		103	80-120			
Manganese, Dissolved	0.493	0.0016	0.0040	mg/L	0.500		98.6	80-120			
Potassium, Dissolved	10.2	0.108	0.505	mg/L	10.0		102	80-120			
Sodium, Dissolved	10.1	0.106	0.505	mg/L	10.0		101	80-120			
Sodium, Dissolved	11.6	1.92	50.5	mg/L	10.0		116	80-120			J
Zinc, Dissolved	0.463	0.0081	0.0202	mg/L	0.500		92.6	80-120			



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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0381 - EPA 353.2

Instrument: LACHAT2 Analyst: Grant Davi

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0381-BLK1) Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 19:32										
Nitrate + Nitrite as N	ND	0.010	0.010	mg/L						U
Nitrite-N	ND	0.010	0.010	mg/L						U
LCS (BMF0381-BS1) Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 19:33										
Nitrate + Nitrite as N	0.512	0.010	0.010	mg/L	0.500		102 90-110			
LCS (BMF0381-BS2) Prepared: 14-Jun-2024 Analyzed: 14-Jun-2024 19:34										
Nitrite-N	0.488	0.010	0.010	mg/L	0.500		97.6 90-110			



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0497 - SM 2320 B-11

Instrument: Accumet AB150 Analyst: UW

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0497-BLK1)										
Prepared: 19-Jun-2024 Analyzed: 19-Jun-2024 11:04										
Alkalinity, Total	ND	1.00	1.00	mg/L CaCO ₃						U
Reference (BMF0497-SRM1)										
Prepared: 19-Jun-2024 Analyzed: 19-Jun-2024 11:04										
Alkalinity, Total	126	1.00	1.00	mg/L CaCO ₃	128		98.5 85-114.06			



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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0580 - EPA 375.2

Instrument: LACHAT2 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0580-BLK1)					Prepared: 21-Jun-2024 Analyzed: 21-Jun-2024 18:37					
Sulfate	ND	2.00	2.00	mg/L						U
Blank (BMF0580-BLK2)					Prepared: 21-Jun-2024 Analyzed: 24-Jun-2024 12:49					
Sulfate	ND	2.00	2.00	mg/L						U
LCS (BMF0580-BS1)					Prepared: 21-Jun-2024 Analyzed: 21-Jun-2024 18:39					
Sulfate	15.1	2.00	2.00	mg/L	15.0	101	90-110			
LCS (BMF0580-BS2)					Prepared: 21-Jun-2024 Analyzed: 24-Jun-2024 12:51					
Sulfate	15.4	2.00	2.00	mg/L	15.0	103	90-110			



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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0629 - SM 4500-NH3 H-11

Instrument: LACHAT1 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0629-BLK1)										
Prepared: 24-Jun-2024 Analyzed: 25-Jun-2024 14:49										
Ammonia-N	ND	0.040	0.040	mg/L						U
LCS (BMF0629-BS1)										
Prepared: 24-Jun-2024 Analyzed: 25-Jun-2024 14:50										
Ammonia-N	0.482	0.040	0.040	mg/L	0.500		96.4 90-110			



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0675 - EPA 325.2

Instrument: LACHAT2 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Blank (BMF0675-BLK1)									
Prepared: 26-Jun-2024 Analyzed: 26-Jun-2024 10:53									
Chloride	ND	1.00	1.00	mg/L					U
LCS (BMF0675-BS1)									
Prepared: 26-Jun-2024 Analyzed: 26-Jun-2024 10:54									
Chloride	4.83	1.00	1.00	mg/L	5.00	96.6	90-110		



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0704 - EPA 9060A

Instrument: TOC-LCSH Analyst: RMS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0704-BLK1)										
					Prepared: 27-Jun-2024 Analyzed: 27-Jun-2024 21:00					
Total Organic Carbon	ND	0.50	0.50	mg/L						U
LCS (BMF0704-BS1)										
					Prepared: 27-Jun-2024 Analyzed: 27-Jun-2024 21:22					
Total Organic Carbon	20.58	0.50	0.50	mg/L	20.00	103	90-110			



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Reported:
28-Jun-2024 13:51

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMF0706 - EPA 410.4

Instrument: UV1800-1 Analyst: kott

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMF0706-BLK1)					Prepared: 27-Jun-2024 Analyzed: 28-Jun-2024 09:59						
COD	ND	10.0	10.0	mg/L							U
DL (BMF0706-BLK2)					Prepared: 27-Jun-2024 Analyzed: 28-Jun-2024 10:25						
COD	ND	10.0	10.0	mg/L							U
LCS (BMF0706-BS1)					Prepared: 27-Jun-2024 Analyzed: 28-Jun-2024 10:02						
COD	108	10.0	10.0	mg/L	100		108	90-110			
DL (BMF0706-BS2)					Prepared: 27-Jun-2024 Analyzed: 28-Jun-2024 10:26						
COD	107	10.0	10.0	mg/L	100		107	90-110			
Duplicate (BMF0706-DUP1)					Source: 24F0326-04 Prepared: 27-Jun-2024 Analyzed: 28-Jun-2024 10:10						
COD	ND	10.0	10.0	mg/L		ND					U
Matrix Spike (BMF0706-MS1)					Source: 24F0326-04 Prepared: 27-Jun-2024 Analyzed: 28-Jun-2024 10:11						
COD	102	20.0	20.0	mg/L	100	ND	102	90-110			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Certified Analyses included in this Report

Analyte	Certifications
EPA 353.2 in Water	
Nitrate + Nitrite as N	NELAP,DoD-ELAP,WADOE
Nitrite-N	WADOE,NELAP,DoD-ELAP
EPA 375.2 in Water	
Sulfate	WADOE,NELAP
EPA 410.4 in Water	
COD	DoD-ELAP,NELAP,WADOE
EPA 6010D in Water	
Calcium	WADOE,NELAP,DoD-ELAP
Iron	WADOE,NELAP,DoD-ELAP
Potassium	WADOE,NELAP,DoD-ELAP
Magnesium	WADOE,NELAP,DoD-ELAP
Manganese	WADOE,NELAP,DoD-ELAP
Sodium	DoD-ELAP,WADOE,NELAP
Sodium-1	DoD-ELAP
Zinc	WADOE,NELAP,DoD-ELAP
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroeth	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE



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Reported:
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trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE



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Reported:
28-Jun-2024 13:51

Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
2-Pentanone	WADOE

EPA 9060A in Water

Total Organic Carbon	DoD-ELAP,WADOE,NELAP
----------------------	----------------------

NWTPH-HCID in Water

Gasoline Range Organics (Tol-C	NELAP,DoD-ELAP,WADOE
Diesel Range Organics (C12-C2	NELAP,DoD-ELAP,WADOE
Motor Oil Range Organics (C24-	NELAP,DoD-ELAP,WADOE



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

SM 2320 B-11 in Water

Alkalinity, Total DoD-ELAP,WADOE,WA-DW,NELAP

SM 4500-NH3 H-11 in Water

Ammonia-N WADOE,DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2025
WADOE	WA Dept of Ecology	C558	06/30/2024
WA-DW	Ecology - Drinking Water	C558	06/30/2024



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Project Number: Snipes MTN Landfill 2024
Project Manager: Jeff Parker

Reported:
28-Jun-2024 13:51

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
H	Hold time violation - Hold time was exceeded.
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.



Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

02 October 2024

Jeff Parker
Mott MacDonald
1601 5th Avenue Suite 800
Seattle, WA 98101

RE: Snipes MTN Landfill 2024 (518300030-001)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
24H0687

Associated SDG ID(s)
N/A

Shelly Fishel

Digitally signed by Shelly
Fishel
Date: 2024.10.02 18:37:44
-07'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Shelly Fishel For Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24H0687		Turn-around Requested: Standard		Page: 1 of 1		 Analytical Resources, LLC Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)																																																																																																																			
ARI Client Company: Mott MacDonald		Phone: 303-217-6756		Date:				Ice Present? Y																																																																																																																	
Client Contact: Jeff Parker				No. of Coolers: 5				Cooler Temps: See CRF																																																																																																																	
Client Project Name: Yakima - Snipes Mountain				Analysis Requested								Notes/Comments																																																																																																													
Client Project #: 518300030-001		Samplers: Ashley Parkhurst		<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td>TRC/COP/ NH3</td> <td>1/CON/CON</td> <td>HOS/H</td> <td>Diss metals Fe, Mn, Zn</td> <td>VOLs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>								TRC/COP/ NH3	1/CON/CON	HOS/H	Diss metals Fe, Mn, Zn	VOLs								X	X	X	X	X								X	X	X	X	X																																																																																	
TRC/COP/ NH3	1/CON/CON	HOS/H	Diss metals Fe, Mn, Zn	VOLs																																																																																																																					
X	X	X	X	X																																																																																																																					
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Sample ID	Date	Time	Matrix	No. Containers																																																																																																																					
SMW-4	8/29/24	0950	W	6	X	X	X	X					Field Filtered																																																																																																												
SMW-SD	↓	1130	W	6	X	X	X	X					not FF																																																																																																												
SMW-SS	↓	1315	W	6	X	X	X	X					not FF																																																																																																												
Comments/Special Instructions				Relinquished by: (Signature) APR				Received by: (Signature) R. Vesemann				Relinquished by: (Signature)				Received by: (Signature)																																																																																																									
				Printed Name: Ashley Parkhurst				Printed Name: R. Vesemann				Printed Name:				Printed Name:																																																																																																									
				Company: Mott MacDonald				Company: ARI				Company:				Company:																																																																																																									
				Date & Time: 8/30/2024 0830				Date & Time: 8-30-24 0830				Date & Time:				Date & Time:																																																																																																									

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SMW-4	24H0687-01	Water	29-Aug-2024 09:50	30-Aug-2024 08:30
SMW-5D	24H0687-02	Water	29-Aug-2024 11:30	30-Aug-2024 08:30
SMW-5S	24H0687-03	Water	29-Aug-2024 13:15	30-Aug-2024 08:30



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Work Order Case Narrative

Client: Mott MacDonald
Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Work Order: 24H0687

Sample receipt

Sample(s) as listed on the preceding page were received 30-Aug-2024 08:30 under ARI work order 24H0687. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Dissolved Metals - EPA Method 6010D

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Wet Chemistry

The sample(s) were prepared and analyzed within the recommended holding times.



Mott MacDonald

1601 5th Avenue Suite 800

Seattle WA, 98101

Project: Snipes MTN Landfill 2024

Project Number: 518300030-001

Project Manager: Jeff Parker

Reported:

02-Oct-2024 18:34

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.



WORK ORDER

24H0687

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: 518300030-001

Analysis	Due	TAT	Expires	Comments
Met Diss 6010D - Zn	09/13/2024	10	2/25/2025	
Metals Prep Diss ICP	09/13/2024	10	8/29/2025	
Nitrate + Nitrite-N, EPA 353.2	09/13/2024	10	9/26/2024	
Nitrate-N Calc EPA 353.2	09/13/2024	10	8/31/2024	
Nitrite-N, EPA 353.2	09/13/2024	10	8/31/2024	
Sulfate, EPA 375.2	09/13/2024	10	9/26/2024	

Analysis groups included in this work order

Nitrate-N Calc EPA 353.2

Nitrite-N, EPA 353.2

Nitrate + Nitrite-N, EPA 353.2

Preservation Confirmation

Container ID	Container Type	pH
24H0687-01 A	HDPE NM, 500 mL	
24H0687-01 B	HDPE NM, 500 mL, 1:1 HNO3 (FF)	L2 pass
24H0687-01 C	Glass NM, Amber, 250 mL, 9N H2SO4	L2 pass
24H0687-01 D	VOA Vial, Clear, 40 mL, HCL	
24H0687-01 E	VOA Vial, Clear, 40 mL, HCL	
24H0687-01 F	VOA Vial, Clear, 40 mL, HCL	
24H0687-02 A	HDPE NM, 500 mL	
24H0687-02 B	HDPE NM, 500 mL	72 fail
24H0687-02 C	Glass NM, Amber, 250 mL, 9N H2SO4	L2 pass
24H0687-02 D	VOA Vial, Clear, 40 mL, HCL	
24H0687-02 E	VOA Vial, Clear, 40 mL, HCL	
24H0687-02 F	VOA Vial, Clear, 40 mL, HCL	
24H0687-03 A	HDPE NM, 500 mL	
24H0687-03 B	HDPE NM, 500 mL	72 fail
24H0687-03 C	Glass NM, Amber, 250 mL, 9N H2SO4	L2 pass
24H0687-03 D	VOA Vial, Clear, 40 mL, HCL	
24H0687-03 E	VOA Vial, Clear, 40 mL, HCL	
24H0687-03 F	VOA Vial, Clear, 40 mL, HCL	

mn

Preservation Confirmed By

08/30/24

Date



Cooler Receipt Form

ARI Client: Mott MacDonald

Project Name: Yakima - Cascade MG

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 24H0687

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? _____

YES NO

Were custody papers included with the cooler? _____

YES NO

Were custody papers properly filled out (ink, signed, etc.) _____

YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 0830

8.9 (9.2) 7.1 6.8 4.3

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: J009708

Cooler Accepted by: RL Date: 8-30-24 Time: 0830

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? _____

YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? _____

NA YES NO

How were bottles sealed in plastic bags? _____

Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? _____

YES NO

Were all bottle labels complete and legible? _____

YES NO

Did the number of containers listed on COC match with the number of containers received? _____

YES NO

Did all bottle labels and tags agree with custody papers? _____

YES NO

Were all bottles used correct for the requested analyses? _____

YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...

NA YES NO

Were all VOC vials free of air bubbles? _____

NA YES NO

Was sufficient amount of sample sent in each bottle? _____

YES NO

Date VOC Trip Blank was made at ARI _____

NA

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: MO Date: 08/30/24 Time: 0910 Labels checked by: MO

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Cooler Temperature Compliance Form

ARI Work Order: 24170687

Cooler#: 1 Temperature(°C): 8.9

Sample ID	Bottle Count	Bottle Type
-----------	--------------	-------------

*samples
received over
6°C*

Cooler#: 2 Temperature(°C): 9.2

Sample ID	Bottle Count	Bottle Type
-----------	--------------	-------------

Cooler#: 3 Temperature(°C): 7.1

Sample ID	Bottle Count	Bottle Type
-----------	--------------	-------------

Cooler#: 4 Temperature(°C): 6.8

Sample ID	Bottle Count	Bottle Type
-----------	--------------	-------------

Completed by: RL Date: 8-30-24 Time: 0830



WORK ORDER

24H0687

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Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: 518300030-001

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Nitrate-N Calc EPA 353.2	09/13/2024	10	8/31/2024	
Nitrite-N, EPA 353.2	09/13/2024	10	8/31/2024	
Sulfate, EPA 375.2	09/13/2024	10	9/26/2024	

Analysis groups included in this work order

Nitrate-N Calc EPA 353.2

Nitrite-N, EPA 353.2

Nitrate + Nitrite-N, EPA 353.2

Preservation Confirmation

Container ID	Container Type	pH
24H0687-01 A	HDPE NM, 500 mL	
24H0687-01 B	HDPE NM, 500 mL, 1:1 HNO3 (FF)	L2 pass
24H0687-01 C	Glass NM, Amber, 250 mL, 9N H2SO4	L2 pass
24H0687-01 D	VOA Vial, Clear, 40 mL, HCL	
24H0687-01 E	VOA Vial, Clear, 40 mL, HCL	
24H0687-01 F	VOA Vial, Clear, 40 mL, HCL	
24H0687-02 A	HDPE NM, 500 mL	
24H0687-02 B	HDPE NM, 500 mL	7.2 fail 15
24H0687-02 C	Glass NM, Amber, 250 mL, 9N H2SO4	L2 pass
24H0687-02 D	VOA Vial, Clear, 40 mL, HCL	
24H0687-02 E	VOA Vial, Clear, 40 mL, HCL	
24H0687-02 F	VOA Vial, Clear, 40 mL, HCL	
24H0687-03 A	HDPE NM, 500 mL	
24H0687-03 B	HDPE NM, 500 mL	7.2 fail 1
24H0687-03 C	Glass NM, Amber, 250 mL, 9N H2SO4	L2 pass
24H0687-03 D	VOA Vial, Clear, 40 mL, HCL	
24H0687-03 E	VOA Vial, Clear, 40 mL, HCL	
24H0687-03 F	VOA Vial, Clear, 40 mL, HCL	

MD

Preservation Confirmed By

08/30/24
Date

① filtered at 0.45um and
preserved to pH < 2 with
0.5ml concentrated HNO3.
8/30/24 JS (M9229)

Reviewed By

Date



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-4
24H0687-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 09:50

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 16:59

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24H0687-01 D

Preparation Batch: BMI0067

Sample Size: 10 mL

Prepared: 09/04/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	0.33	ug/L	
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	0.43	ug/L	
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U



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SMW-4
24H0687-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 09:50

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 16:59

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	4.50	ug/L	
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-4
24H0687-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 09:50

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 16:59

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	0.47	ug/L	
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	107	%	
Surrogate: Toluene-d8				80-120 %	98.5	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	98.0	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	101	%	



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Reported:
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SMW-4
24H0687-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 08/29/2024 09:50

Instrument: ICP3 Analyst: DOE

Analyzed: 09/18/2024 13:05

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24H0687-01 B 01

Preparation Batch: BMI0192

Sample Size: 25 mL

Prepared: 09/10/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	ND	mg/L	U
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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SMW-4
24H0687-01 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 08/29/2024 09:50

Instrument: LACHAT1 Analyst: CB

Analyzed: 09/12/2024 17:06

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-01 A

Preparation Batch: BMI0293

Sample Size: 10 mL

Prepared: 09/12/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	8.29	mg/L	



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Reported:
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SMW-4
24H0687-01 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 08/29/2024 09:50

Instrument: [CALC] Analyst: CB

Analyzed: 08/30/2024 11:22

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24H0687-01

Preparation Batch: [CALC]

Prepared: 08/30/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	0.625	mg/L	



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Reported:
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SMW-4
24H0687-01 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 08/29/2024 09:50

Instrument: LACHAT2 Analyst: CB

Analyzed: 08/30/2024 11:22

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-01 A

Preparation Batch: BMH0684

Sample Size: 10 mL

Prepared: 08/30/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	0.625	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	U



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Reported:
02-Oct-2024 18:34

SMW-4
24H0687-01 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 08/29/2024 09:50

Instrument: LACHAT2 Analyst: CB

Analyzed: 09/09/2024 18:20

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-01 A

Preparation Batch: BMI0178

Sample Size: 10 mL

Prepared: 09/09/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	27.9	mg/L	



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Reported:
02-Oct-2024 18:34

SMW-4
24H0687-01 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 08/29/2024 09:50

Instrument: UV1800-1 Analyst: kott

Analyzed: 09/10/2024 10:28

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-01 C

Preparation Batch: BMI0142

Sample Size: 2 mL

Prepared: 09/09/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	11.1	mg/L	



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Reported:
02-Oct-2024 18:34

SMW-4
24H0687-01 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 08/29/2024 09:50

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 09/16/2024 11:38

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-01 C

Preparation Batch: BMI0253

Sample Size: 20 mL

Prepared: 09/11/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	9.45	mg/L	



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-4
24H0687-01RE1 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 08/29/2024 09:50

Instrument: LACHAT1 Analyst: GD

Analyzed: 09/05/2024 15:37

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-01RE1 C

Preparation Batch: BM10073

Sample Size: 10 mL

Prepared: 09/05/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 11:30

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 17:21

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24H0687-02 D

Preparation Batch: BM10067

Sample Size: 10 mL

Prepared: 09/04/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U



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1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 11:30

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 17:21

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	0.14	ug/L	J
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 11:30

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 17:21

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	101	%	
Surrogate: Toluene-d8				80-120 %	97.1	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	96.4	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	103	%	



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
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SMW-5D
24H0687-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D			Sampled: 08/29/2024 11:30				
Instrument: ICP3 Analyst: DOE			Analyzed: 09/20/2024 08:56				
Sample Preparation:	Preparation Method: WMN (No Prep)		Extract ID: 24H0687-02 B 02				
	Preparation Batch: BMI0193		Sample Size: 25 mL		Filtration Batch: BMH0689		
	Prepared: 09/10/2024		Final Volume: 25 mL		Filtration Date: 08/30/2024 13:18		
Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	ND	mg/L	U
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 08/29/2024 11:30

Instrument: LACHAT1 Analyst: CB

Analyzed: 09/12/2024 17:07

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-02 A

Preparation Batch: BMI0293

Sample Size: 10 mL

Prepared: 09/12/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	4.11	mg/L	



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Reported:
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SMW-5D
24H0687-02 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 08/29/2024 11:30

Instrument: [CALC] Analyst: CB

Analyzed: 08/30/2024 11:27

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24H0687-02

Preparation Batch: [CALC]

Prepared: 08/30/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	ND	mg/L	U



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Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 08/29/2024 11:30

Instrument: LACHAT2 Analyst: CB

Analyzed: 08/30/2024 11:27

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-02 A

Preparation Batch: BMH0684

Sample Size: 10 mL

Prepared: 08/30/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	0.012	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	U



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 08/29/2024 11:30

Instrument: LACHAT2 Analyst: CB

Analyzed: 09/09/2024 18:21

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-02 A

Preparation Batch: BMI0178

Sample Size: 10 mL

Prepared: 09/09/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	22.8	mg/L	



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 08/29/2024 11:30

Instrument: UV1800-1 Analyst: kott

Analyzed: 09/10/2024 10:37

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-02 C

Preparation Batch: BMI0142

Sample Size: 2 mL

Prepared: 09/09/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 08/29/2024 11:30

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 09/16/2024 11:56

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-02 C

Preparation Batch: BMI0253

Sample Size: 20 mL

Prepared: 09/11/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	8.18	mg/L	



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5D
24H0687-02RE1 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 08/29/2024 11:30

Instrument: LACHAT1 Analyst: GD

Analyzed: 09/05/2024 15:39

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-02RE1 C

Preparation Batch: BM10073

Sample Size: 10 mL

Prepared: 09/05/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 13:15

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 17:43

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24H0687-03 D

Preparation Batch: BM10067

Sample Size: 10 mL

Prepared: 09/04/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	1.49	ug/L	
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	0.26	ug/L	
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 13:15

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 17:43

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	0.57	ug/L	
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 08/29/2024 13:15

Instrument: NT3 Analyst: LN

Analyzed: 09/04/2024 17:43

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	106	%	
Surrogate: Toluene-d8				80-120 %	98.9	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	97.8	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	103	%	



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D					Sampled: 08/29/2024 13:15		
Instrument: ICP3 Analyst: DOE					Analyzed: 09/20/2024 08:53		
Sample Preparation:	Preparation Method: WMN (No Prep)				Extract ID: 24H0687-03 B 02		
	Preparation Batch: BMI0193		Sample Size: 25 mL		Filtration Batch: BMH0689		
	Prepared: 09/10/2024		Final Volume: 25 mL		Filtration Date: 08/30/2024 13:18		
Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.0905	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Project Number: 518300030-001
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Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 08/29/2024 13:15

Instrument: [CALC] Analyst: CB

Analyzed: 08/30/2024 11:26

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24H0687-03

Preparation Batch: [CALC]

Prepared: 08/30/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	ND	mg/L	U



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Project Manager: Jeff Parker

Reported:
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SMW-5S
24H0687-03 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 08/29/2024 13:15

Instrument: LACHAT2 Analyst: CB

Analyzed: 08/30/2024 11:26

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-03 A

Preparation Batch: BMH0684

Sample Size: 10 mL

Prepared: 08/30/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	U



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Project Number: 518300030-001
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Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 08/29/2024 13:15

Instrument: UV1800-1 Analyst: kott

Analyzed: 09/10/2024 10:38

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-03 C

Preparation Batch: BMI0142

Sample Size: 2 mL

Prepared: 09/09/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	31.2	mg/L	



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Reported:
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SMW-5S
24H0687-03 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 08/29/2024 13:15

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 09/16/2024 12:15

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-03 C

Preparation Batch: BMI0253

Sample Size: 20 mL

Prepared: 09/11/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	28.28	mg/L	



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Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03RE1 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 08/29/2024 13:15

Instrument: LACHAT1 Analyst: CB

Analyzed: 09/12/2024 17:59

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-03RE1 A

Preparation Batch: BMI0293

Sample Size: 10 mL

Prepared: 09/12/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	5	5.00	5.00	43.7	mg/L	D



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

SMW-5S
24H0687-03RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 08/29/2024 13:15

Instrument: LACHAT2 Analyst: CB

Analyzed: 09/09/2024 18:39

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-03RE1 A

Preparation Batch: BMI0178

Sample Size: 10 mL

Prepared: 09/09/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	5	10.0	10.0	58.5	mg/L	D



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Project Number: 518300030-001
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Reported:
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SMW-5S
24H0687-03RE1 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 08/29/2024 13:15

Instrument: LACHAT1 Analyst: GD

Analyzed: 09/05/2024 15:40

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24H0687-03RE1 C

Preparation Batch: BM10073

Sample Size: 10 mL

Prepared: 09/05/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	0.072	mg/L	



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0067-BLK1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:59					
Chloromethane	ND	0.50	0.50	ug/L							U
Vinyl Chloride	ND	0.10	0.20	ug/L							U
Bromomethane	ND	1.00	1.00	ug/L							U
Chloroethane	ND	0.20	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	0.20	ug/L							U
Acrolein	ND	5.00	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	0.20	ug/L							U
Acetone	ND	5.00	5.00	ug/L							U
1,1-Dichloroethene	ND	0.10	0.20	ug/L							U
Iodomethane	ND	0.50	1.00	ug/L							U
Methylene Chloride	ND	1.00	1.00	ug/L							U
Acrylonitrile	ND	0.50	1.00	ug/L							U
Carbon Disulfide	ND	0.20	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.10	0.20	ug/L							U
Vinyl Acetate	ND	0.20	0.20	ug/L							U
1,1-Dichloroethane	ND	0.10	0.20	ug/L							U
2-Butanone	ND	2.50	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.10	0.20	ug/L							U
Chloroform	ND	0.10	0.20	ug/L							U
Bromochloromethane	ND	0.10	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.10	0.20	ug/L							U
1,1-Dichloropropene	ND	0.10	0.20	ug/L							U
Carbon tetrachloride	ND	0.10	0.20	ug/L							U
1,2-Dichloroethane	ND	0.10	0.20	ug/L							U
Benzene	ND	0.10	0.20	ug/L							U
Trichloroethene	ND	0.10	0.20	ug/L							U
1,2-Dichloropropane	ND	0.10	0.20	ug/L							U
Bromodichloromethane	ND	0.10	0.20	ug/L							U
Dibromomethane	ND	0.10	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	2.50	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.10	0.20	ug/L							U
Toluene	ND	0.10	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.10	0.20	ug/L							U



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Reported:
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0067-BLK1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:59					
2-Hexanone	ND	2.50	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	0.20	ug/L							U
1,3-Dichloropropane	ND	0.10	0.20	ug/L							U
Tetrachloroethene	ND	0.10	0.20	ug/L							U
Dibromochloromethane	ND	0.10	0.20	ug/L							U
1,2-Dibromoethane	ND	0.10	0.20	ug/L							U
Chlorobenzene	ND	0.10	0.20	ug/L							U
Ethylbenzene	ND	0.10	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.10	0.20	ug/L							U
m,p-Xylene	ND	0.20	0.40	ug/L							U
o-Xylene	ND	0.10	0.20	ug/L							U
Xylenes, total	ND	0.30	0.60	ug/L							U
Styrene	ND	0.10	0.20	ug/L							U
Bromoform	ND	0.20	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.25	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	1.00	ug/L							U
n-Propylbenzene	ND	0.10	0.20	ug/L							U
Bromobenzene	ND	0.10	0.20	ug/L							U
Isopropyl Benzene	ND	0.10	0.20	ug/L							U
2-Chlorotoluene	ND	0.10	0.20	ug/L							U
4-Chlorotoluene	ND	0.10	0.20	ug/L							U
t-Butylbenzene	ND	0.10	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.10	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.10	0.20	ug/L							U
s-Butylbenzene	ND	0.10	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.10	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.10	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	0.20	ug/L							U
n-Butylbenzene	ND	0.20	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.10	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.25	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	0.50	ug/L							U
Naphthalene	ND	0.50	0.50	ug/L							U



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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0067-BLK1)											
Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:59											
1,2,3-Trichlorobenzene	ND	0.50	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.25	0.50	ug/L							U
2-Pentanone	ND	2.50	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.79			ug/L	5.00		95.9	80-129			
Surrogate: Toluene-d8	4.90			ug/L	5.00		97.9	80-120			
Surrogate: 4-Bromofluorobenzene	4.71			ug/L	5.00		94.2	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.05			ug/L	5.00		101	80-120			



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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0067-BS1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 09:31					
Chloromethane	10.5	0.50	0.50	ug/L	10.0		105	60-138			
Vinyl Chloride	10.2	0.10	0.20	ug/L	10.0		102	66-133			
Bromomethane	10.4	1.00	1.00	ug/L	10.0		104	72-131			
Chloroethane	10.2	0.20	0.20	ug/L	10.0		102	60-155			
Trichlorofluoromethane	11.1	0.20	0.20	ug/L	10.0		111	62-141			
Acrolein	48.8	5.00	5.00	ug/L	50.0		97.6	52-190			
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.5	0.20	0.20	ug/L	10.0		105	76-129			
Acetone	49.5	5.00	5.00	ug/L	50.0		99.0	58-142			
1,1-Dichloroethene	10.1	0.10	0.20	ug/L	10.0		101	69-135			
Iodomethane	10.1	0.50	1.00	ug/L	10.0		101	56-147			
Methylene Chloride	9.55	1.00	1.00	ug/L	10.0		95.5	65-135			
Acrylonitrile	10.3	0.50	1.00	ug/L	10.0		103	64-134			
Carbon Disulfide	9.48	0.20	0.20	ug/L	10.0		94.8	78-125			
trans-1,2-Dichloroethene	10.2	0.10	0.20	ug/L	10.0		102	78-128			
Vinyl Acetate	10.5	0.20	0.20	ug/L	10.0		105	55-138			
1,1-Dichloroethane	10.4	0.10	0.20	ug/L	10.0		104	76-124			
2-Butanone	49.8	2.50	5.00	ug/L	50.0		99.7	61-140			
2,2-Dichloropropane	11.4	0.20	0.20	ug/L	10.0		114	66-147			
cis-1,2-Dichloroethene	10.3	0.10	0.20	ug/L	10.0		103	80-121			
Chloroform	10.3	0.10	0.20	ug/L	10.0		103	80-122			
Bromochloromethane	11.0	0.10	0.20	ug/L	10.0		110	80-121			
1,1,1-Trichloroethane	10.5	0.10	0.20	ug/L	10.0		105	79-123			
1,1-Dichloropropene	10.1	0.10	0.20	ug/L	10.0		101	80-127			
Carbon tetrachloride	10.4	0.10	0.20	ug/L	10.0		104	53-137			
1,2-Dichloroethane	10.2	0.10	0.20	ug/L	10.0		102	75-123			
Benzene	10.4	0.10	0.20	ug/L	10.0		104	80-120			
Trichloroethene	9.99	0.10	0.20	ug/L	10.0		99.9	80-120			
1,2-Dichloropropane	10.4	0.10	0.20	ug/L	10.0		104	80-120			
Bromodichloromethane	10.2	0.10	0.20	ug/L	10.0		102	80-121			
Dibromomethane	9.99	0.10	0.20	ug/L	10.0		99.9	80-120			
2-Chloroethyl vinyl ether	9.85	1.00	1.00	ug/L	10.0		98.5	64-120			
4-Methyl-2-Pentanone	48.4	2.50	5.00	ug/L	50.0		96.8	67-133			
cis-1,3-Dichloropropene	10.6	0.10	0.20	ug/L	10.0		106	80-124			
Toluene	10.2	0.10	0.20	ug/L	10.0		102	80-120			
trans-1,3-Dichloropropene	11.0	0.10	0.20	ug/L	10.0		110	71-127			



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0067-BS1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 09:31					
2-Hexanone	48.1	2.50	5.00	ug/L	50.0		96.3	69-133			
1,1,2-Trichloroethane	9.99	0.20	0.20	ug/L	10.0		99.9	80-121			
1,3-Dichloropropane	9.95	0.10	0.20	ug/L	10.0		99.5	80-120			
Tetrachloroethene	10.2	0.10	0.20	ug/L	10.0		102	80-120			
Dibromochloromethane	10.2	0.10	0.20	ug/L	10.0		102	65-135			
1,2-Dibromoethane	10.4	0.10	0.20	ug/L	10.0		104	80-121			
Chlorobenzene	10.1	0.10	0.20	ug/L	10.0		101	80-120			
Ethylbenzene	10.1	0.10	0.20	ug/L	10.0		101	80-120			
1,1,1,2-Tetrachloroethane	10.5	0.10	0.20	ug/L	10.0		105	80-120			
m,p-Xylene	20.6	0.20	0.40	ug/L	20.0		103	80-121			
o-Xylene	10.5	0.10	0.20	ug/L	10.0		105	80-121			
Xylenes, total	31.2	0.30	0.60	ug/L	30.0		104	76-127			
Styrene	10.8	0.10	0.20	ug/L	10.0		108	80-124			
Bromoform	7.90	0.20	0.20	ug/L	10.0		79.0	51-134			Q
1,1,2,2-Tetrachloroethane	9.83	0.20	0.20	ug/L	10.0		98.3	77-123			
1,2,3-Trichloropropane	9.38	0.25	0.50	ug/L	10.0		93.8	76-125			
trans-1,4-Dichloro 2-Butene	9.95	1.00	1.00	ug/L	10.0		99.5	55-129			
n-Propylbenzene	10.6	0.10	0.20	ug/L	10.0		106	78-130			
Bromobenzene	10.5	0.10	0.20	ug/L	10.0		105	80-120			
Isopropyl Benzene	10.6	0.10	0.20	ug/L	10.0		106	80-128			
2-Chlorotoluene	10.7	0.10	0.20	ug/L	10.0		107	78-122			
4-Chlorotoluene	10.4	0.10	0.20	ug/L	10.0		104	80-121			
t-Butylbenzene	10.6	0.10	0.20	ug/L	10.0		106	78-125			
1,3,5-Trimethylbenzene	10.6	0.10	0.20	ug/L	10.0		106	80-129			
1,2,4-Trimethylbenzene	10.6	0.10	0.20	ug/L	10.0		106	80-127			
s-Butylbenzene	10.5	0.10	0.20	ug/L	10.0		105	78-129			
4-Isopropyl Toluene	10.8	0.10	0.20	ug/L	10.0		108	79-130			
1,3-Dichlorobenzene	10.1	0.10	0.20	ug/L	10.0		101	80-120			
1,4-Dichlorobenzene	10.1	0.20	0.20	ug/L	10.0		101	80-120			
n-Butylbenzene	10.7	0.20	0.20	ug/L	10.0		107	74-129			
1,2-Dichlorobenzene	9.79	0.10	0.20	ug/L	10.0		97.9	80-120			
1,2-Dibromo-3-chloropropane	9.23	0.50	0.50	ug/L	10.0		92.3	62-123			
1,2,4-Trichlorobenzene	10.4	0.25	0.50	ug/L	10.0		104	64-124			
Hexachloro-1,3-Butadiene	10.2	0.50	0.50	ug/L	10.0		102	65-145			
Naphthalene	9.83	0.50	0.50	ug/L	10.0		98.3	50-134			



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Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0067-BS1)										
Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 09:31										
1,2,3-Trichlorobenzene	9.96	0.50	0.50	ug/L	10.0		99.6	49-133		
Dichlorodifluoromethane	10.4	0.20	0.20	ug/L	10.0		104	48-147		
Methyl tert-butyl Ether	10.1	0.25	0.50	ug/L	10.0		101	71-132		
2-Pentanone	47.2	2.50	5.00	ug/L	50.0		94.4	69-134		
Surrogate: 1,2-Dichloroethane-d4	4.71			ug/L	5.00		94.1	80-129		
Surrogate: Toluene-d8	5.01			ug/L	5.00		100	80-120		
Surrogate: 4-Bromofluorobenzene	4.83			ug/L	5.00		96.6	80-120		
Surrogate: 1,2-Dichlorobenzene-d4	4.96			ug/L	5.00		99.3	80-120		



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0067-BSD1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:15					
Chloromethane	10.5	0.50	0.50	ug/L	10.0		105	60-138	0.30	30	
Vinyl Chloride	10.1	0.10	0.20	ug/L	10.0		101	66-133	1.10	30	
Bromomethane	10.6	1.00	1.00	ug/L	10.0		106	72-131	1.63	30	
Chloroethane	10.8	0.20	0.20	ug/L	10.0		108	60-155	5.35	30	
Trichlorofluoromethane	11.4	0.20	0.20	ug/L	10.0		114	62-141	2.70	30	
Acrolein	49.8	5.00	5.00	ug/L	50.0		99.6	52-190	2.04	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.4	0.20	0.20	ug/L	10.0		104	76-129	0.42	30	
Acetone	50.2	5.00	5.00	ug/L	50.0		100	58-142	1.39	30	
1,1-Dichloroethene	10.4	0.10	0.20	ug/L	10.0		104	69-135	2.89	30	
Iodomethane	10.6	0.50	1.00	ug/L	10.0		106	56-147	4.74	30	
Methylene Chloride	9.82	1.00	1.00	ug/L	10.0		98.2	65-135	2.79	30	
Acrylonitrile	10.3	0.50	1.00	ug/L	10.0		103	64-134	0.03	30	
Carbon Disulfide	9.91	0.20	0.20	ug/L	10.0		99.1	78-125	4.38	30	
trans-1,2-Dichloroethene	10.6	0.10	0.20	ug/L	10.0		106	78-128	3.47	30	
Vinyl Acetate	11.2	0.20	0.20	ug/L	10.0		112	55-138	6.77	30	
1,1-Dichloroethane	10.7	0.10	0.20	ug/L	10.0		107	76-124	3.17	30	
2-Butanone	53.2	2.50	5.00	ug/L	50.0		106	61-140	6.50	30	
2,2-Dichloropropane	11.3	0.20	0.20	ug/L	10.0		113	66-147	0.60	30	
cis-1,2-Dichloroethene	10.8	0.10	0.20	ug/L	10.0		108	80-121	5.27	30	
Chloroform	10.6	0.10	0.20	ug/L	10.0		106	80-122	2.48	30	
Bromochloromethane	11.2	0.10	0.20	ug/L	10.0		112	80-121	1.45	30	
1,1,1-Trichloroethane	11.1	0.10	0.20	ug/L	10.0		111	79-123	5.87	30	
1,1-Dichloropropene	10.2	0.10	0.20	ug/L	10.0		102	80-127	1.56	30	
Carbon tetrachloride	10.9	0.10	0.20	ug/L	10.0		109	53-137	4.94	30	
1,2-Dichloroethane	10.4	0.10	0.20	ug/L	10.0		104	75-123	1.98	30	
Benzene	10.5	0.10	0.20	ug/L	10.0		105	80-120	0.51	30	
Trichloroethene	10.2	0.10	0.20	ug/L	10.0		102	80-120	1.84	30	
1,2-Dichloropropane	10.4	0.10	0.20	ug/L	10.0		104	80-120	0.36	30	
Bromodichloromethane	10.3	0.10	0.20	ug/L	10.0		103	80-121	1.17	30	
Dibromomethane	9.99	0.10	0.20	ug/L	10.0		99.9	80-120	0.02	30	
2-Chloroethyl vinyl ether	9.98	1.00	1.00	ug/L	10.0		99.8	64-120	1.31	30	
4-Methyl-2-Pentanone	48.8	2.50	5.00	ug/L	50.0		97.5	67-133	0.72	30	
cis-1,3-Dichloropropene	10.9	0.10	0.20	ug/L	10.0		109	80-124	2.24	30	
Toluene	10.3	0.10	0.20	ug/L	10.0		103	80-120	1.33	30	
trans-1,3-Dichloropropene	11.1	0.10	0.20	ug/L	10.0		111	71-127	0.54	30	



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0067-BSD1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:15					
2-Hexanone	51.1	2.50	5.00	ug/L	50.0		102	69-133	5.93	30	
1,1,2-Trichloroethane	10.3	0.20	0.20	ug/L	10.0		103	80-121	3.04	30	
1,3-Dichloropropane	10.4	0.10	0.20	ug/L	10.0		104	80-120	4.23	30	
Tetrachloroethene	10.5	0.10	0.20	ug/L	10.0		105	80-120	2.74	30	
Dibromochloromethane	11.0	0.10	0.20	ug/L	10.0		110	65-135	7.44	30	
1,2-Dibromoethane	10.3	0.10	0.20	ug/L	10.0		103	80-121	0.44	30	
Chlorobenzene	10.4	0.10	0.20	ug/L	10.0		104	80-120	3.35	30	
Ethylbenzene	10.5	0.10	0.20	ug/L	10.0		105	80-120	3.77	30	
1,1,1,2-Tetrachloroethane	11.3	0.10	0.20	ug/L	10.0		113	80-120	7.35	30	
m,p-Xylene	21.8	0.20	0.40	ug/L	20.0		109	80-121	5.31	30	
o-Xylene	10.9	0.10	0.20	ug/L	10.0		109	80-121	3.61	30	
Xylenes, total	32.7	0.30	0.60	ug/L	30.0		109	76-127	4.74	30	
Styrene	11.5	0.10	0.20	ug/L	10.0		115	80-124	5.98	30	
Bromoform	8.64	0.20	0.20	ug/L	10.0		86.4	51-134	8.98	30	Q
1,1,2,2-Tetrachloroethane	10.5	0.20	0.20	ug/L	10.0		105	77-123	6.72	30	
1,2,3-Trichloropropane	9.66	0.25	0.50	ug/L	10.0		96.6	76-125	2.91	30	
trans-1,4-Dichloro 2-Butene	10.6	1.00	1.00	ug/L	10.0		106	55-129	6.23	30	
n-Propylbenzene	10.9	0.10	0.20	ug/L	10.0		109	78-130	3.55	30	
Bromobenzene	10.7	0.10	0.20	ug/L	10.0		107	80-120	2.21	30	
Isopropyl Benzene	11.0	0.10	0.20	ug/L	10.0		110	80-128	3.98	30	
2-Chlorotoluene	11.1	0.10	0.20	ug/L	10.0		111	78-122	4.41	30	
4-Chlorotoluene	10.8	0.10	0.20	ug/L	10.0		108	80-121	4.48	30	
t-Butylbenzene	10.8	0.10	0.20	ug/L	10.0		108	78-125	2.04	30	
1,3,5-Trimethylbenzene	11.0	0.10	0.20	ug/L	10.0		110	80-129	3.58	30	
1,2,4-Trimethylbenzene	11.0	0.10	0.20	ug/L	10.0		110	80-127	3.85	30	
s-Butylbenzene	10.8	0.10	0.20	ug/L	10.0		108	78-129	2.50	30	
4-Isopropyl Toluene	11.1	0.10	0.20	ug/L	10.0		111	79-130	1.99	30	
1,3-Dichlorobenzene	10.4	0.10	0.20	ug/L	10.0		104	80-120	2.62	30	
1,4-Dichlorobenzene	10.3	0.20	0.20	ug/L	10.0		103	80-120	1.51	30	
n-Butylbenzene	11.1	0.20	0.20	ug/L	10.0		111	74-129	3.57	30	
1,2-Dichlorobenzene	10.3	0.10	0.20	ug/L	10.0		103	80-120	4.59	30	
1,2-Dibromo-3-chloropropane	10.2	0.50	0.50	ug/L	10.0		102	62-123	9.81	30	
1,2,4-Trichlorobenzene	10.8	0.25	0.50	ug/L	10.0		108	64-124	3.77	30	
Hexachloro-1,3-Butadiene	10.6	0.50	0.50	ug/L	10.0		106	65-145	3.69	30	
Naphthalene	10.3	0.50	0.50	ug/L	10.0		103	50-134	5.14	30	



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0067 - EPA 8260D

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0067-BSD1)						Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:15					
1,2,3-Trichlorobenzene	10.2	0.50	0.50	ug/L	10.0		102	49-133	1.89	30	
Dichlorodifluoromethane	11.4	0.20	0.20	ug/L	10.0		114	48-147	9.05	30	
Methyl tert-butyl Ether	10.4	0.25	0.50	ug/L	10.0		104	71-132	2.46	30	
2-Pentanone	48.7	2.50	5.00	ug/L	50.0		97.4	69-134	3.10	30	
Surrogate: 1,2-Dichloroethane-d4	4.85			ug/L	5.00		97.0	80-129			
Surrogate: Toluene-d8	5.07			ug/L	5.00		101	80-120			
Surrogate: 4-Bromofluorobenzene	4.84			ug/L	5.00		96.7	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	4.85			ug/L	5.00		97.1	80-120			



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BMI0192 - EPA 6010D

Instrument: ICP3 Analyst: DOE

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0192-BLK1)					Prepared: 10-Sep-2024 Analyzed: 18-Sep-2024 12:37						
Iron, Dissolved	ND	0.0107	0.0500	mg/L							U
Manganese, Dissolved	ND	0.0016	0.0040	mg/L							U
Zinc, Dissolved	ND	0.0080	0.0200	mg/L							U
LCS (BMI0192-BS1)					Prepared: 10-Sep-2024 Analyzed: 18-Sep-2024 12:40						
Iron, Dissolved	2.07	0.0110	0.0515	mg/L	2.00		103	80-120			
Manganese, Dissolved	0.497	0.0016	0.0041	mg/L	0.500		99.5	80-120			
Zinc, Dissolved	0.481	0.0082	0.0206	mg/L	0.500		96.2	80-120			



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
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Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BMI0193 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0193-BLK1)					Prepared: 10-Sep-2024 Analyzed: 18-Sep-2024 19:01						
Manganese, Dissolved	ND	0.0016	0.0040	mg/L							U
Zinc, Dissolved	ND	0.0080	0.0200	mg/L							U
Blank (BMI0193-BLK2)					Prepared: 10-Sep-2024 Analyzed: 20-Sep-2024 08:47						
Iron, Dissolved	ND	0.0107	0.0500	mg/L							U
LCS (BMI0193-BS1)					Prepared: 10-Sep-2024 Analyzed: 18-Sep-2024 19:04						
Manganese, Dissolved	0.500	0.0016	0.0040	mg/L	0.500		100	80-120			
Zinc, Dissolved	0.485	0.0081	0.0202	mg/L	0.500		97.1	80-120			
LCS (BMI0193-BS2)					Prepared: 10-Sep-2024 Analyzed: 20-Sep-2024 08:50						
Iron, Dissolved	2.23	0.0108	0.0505	mg/L	2.00		111	80-120			
Duplicate (BMI0193-DUP1)					Source: 24H0687-02		Prepared: 10-Sep-2024 Analyzed: 18-Sep-2024 19:13				
Manganese, Dissolved	0.0018	0.0016	0.0040	mg/L		ND			20		J
Zinc, Dissolved	ND	0.0080	0.0200	mg/L		ND			20		U
Duplicate (BMI0193-DUP2)					Source: 24H0687-02		Prepared: 10-Sep-2024 Analyzed: 20-Sep-2024 08:59				
Iron, Dissolved	ND	0.0107	0.0500	mg/L		ND			20		U
Matrix Spike (BMI0193-MS1)					Source: 24H0687-02		Prepared: 10-Sep-2024 Analyzed: 18-Sep-2024 19:16				
Manganese, Dissolved	0.499	0.0016	0.0040	mg/L	0.500	ND	99.8	75-125			
Zinc, Dissolved	0.485	0.0081	0.0202	mg/L	0.500	ND	97.0	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike (BMI0193-MS2)					Source: 24H0687-02		Prepared: 10-Sep-2024 Analyzed: 20-Sep-2024 09:02				
Iron, Dissolved	2.14	0.0108	0.0505	mg/L	2.00	ND	107	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
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Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMH0684 - EPA 353.2

Instrument: LACHAT2 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMH0684-BLK1)					Prepared: 30-Aug-2024 Analyzed: 30-Aug-2024 11:39						
Nitrate + Nitrite as N	ND	0.010	0.010	mg/L							U
Nitrite-N	ND	0.010	0.010	mg/L							U
LCS (BMH0684-BS1)					Prepared: 30-Aug-2024 Analyzed: 30-Aug-2024 11:41						
Nitrate + Nitrite as N	0.470	0.010	0.010	mg/L	0.500		94.0	90-110			
LCS (BMH0684-BS2)					Prepared: 30-Aug-2024 Analyzed: 30-Aug-2024 11:42						
Nitrite-N	0.498	0.010	0.010	mg/L	0.500		99.6	90-110			
Duplicate (BMH0684-DUP1)					Source: 24H0687-01 Prepared: 30-Aug-2024 Analyzed: 30-Aug-2024 11:23						
Nitrate + Nitrite as N	0.626	0.010	0.010	mg/L		0.625			0.16	20	
Nitrite-N	ND	0.010	0.010	mg/L		ND				20	U
Matrix Spike (BMH0684-MS2)					Source: 24H0687-01 Prepared: 30-Aug-2024 Analyzed: 30-Aug-2024 11:25						
Nitrite-N	0.528	0.010	0.010	mg/L	0.500	ND	106	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Matrix Spike (BMH0684-MS3)					Source: 24H0687-01 Prepared: 30-Aug-2024 Analyzed: 30-Aug-2024 11:46						
Nitrate + Nitrite as N	3.23	0.050	0.050	mg/L	2.47	0.625	105	75-125			D
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
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Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMI0073 - SM 4500-NH3 H-11

Instrument: LACHAT1 Analyst: GD

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0073-BLK1)					Prepared: 05-Sep-2024 Analyzed: 05-Sep-2024 14:37					
Ammonia-N	ND	0.040	0.040	mg/L						U
LCS (BMI0073-BS1)					Prepared: 05-Sep-2024 Analyzed: 05-Sep-2024 14:38					
Ammonia-N	0.470	0.040	0.040	mg/L	0.500		94.0 90-110			



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Reported:
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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMI0142 - EPA 410.4

Instrument: UV1800-1 Analyst: kott

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0142-BLK1)					Prepared: 09-Sep-2024 Analyzed: 10-Sep-2024 09:54						
COD	ND	10.0	10.0	mg/L							U
DL (BMI0142-BLK2)					Prepared: 09-Sep-2024 Analyzed: 10-Sep-2024 11:37						
COD	ND	10.0	10.0	mg/L							U
LCS (BMI0142-BS1)					Prepared: 09-Sep-2024 Analyzed: 10-Sep-2024 09:56						
COD	96.8	10.0	10.0	mg/L	100		96.8	90-110			
DL (BMI0142-BS2)					Prepared: 09-Sep-2024 Analyzed: 10-Sep-2024 11:38						
COD	97.2	10.0	10.0	mg/L	100		97.2	90-110			
Duplicate (BMI0142-DUP1)					Source: 24H0687-01 Prepared: 09-Sep-2024 Analyzed: 10-Sep-2024 10:31						
COD	10.8	10.0	10.0	mg/L		11.1			2.68	10	
Matrix Spike (BMI0142-MS1)					Source: 24H0687-01 Prepared: 09-Sep-2024 Analyzed: 10-Sep-2024 10:35						
COD	114	10.0	20.0	mg/L	100	11.1	102	90-110			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



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Reported:
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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMI0178 - EPA 375.2

Instrument: LACHAT2 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0178-BLK1)										
					Prepared: 09-Sep-2024 Analyzed: 09-Sep-2024 18:01					
Sulfate	ND	2.00	2.00	mg/L						U
LCS (BMI0178-BS1)										
					Prepared: 09-Sep-2024 Analyzed: 09-Sep-2024 18:03					
Sulfate	14.3	2.00	2.00	mg/L	15.0		95.3	90-110		



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMI0253 - EPA 9060A

Instrument: TOC-LCSH Analyst: RMS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0253-BLK1)					Prepared: 11-Sep-2024 Analyzed: 16-Sep-2024 08:18					
Total Organic Carbon	ND	0.50	0.50	mg/L						U
LCS (BMI0253-BS1)					Prepared: 11-Sep-2024 Analyzed: 16-Sep-2024 08:36					
Total Organic Carbon	21.02	0.50	0.50	mg/L	20.00	105	90-110			



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Project: Snipes MTN Landfill 2024
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Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMI0293 - EPA 325.2

Instrument: LACHAT1 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0293-BLK1)										
					Prepared: 12-Sep-2024 Analyzed: 12-Sep-2024 16:59					
Chloride	ND	1.00	1.00	mg/L						U
LCS (BMI0293-BS1)										
					Prepared: 12-Sep-2024 Analyzed: 12-Sep-2024 17:00					
Chloride	4.94	1.00	1.00	mg/L	5.00		98.8 90-110			



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
Project Manager: Jeff Parker

Reported:
02-Oct-2024 18:34

Certified Analyses included in this Report

Analyte	Certifications
EPA 353.2 in Water	
Nitrate + Nitrite as N	NELAP,DoD-ELAP,WADOE
Nitrite-N	WADOE,NELAP,DoD-ELAP
EPA 375.2 in Water	
Sulfate	WADOE,NELAP
EPA 410.4 in Water	
COD	DoD-ELAP,NELAP,WADOE
EPA 6010D in Water	
Iron	WADOE,NELAP,DoD-ELAP
Manganese	WADOE,NELAP,DoD-ELAP
Zinc	WADOE,NELAP,DoD-ELAP
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroeth	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE



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02-Oct-2024 18:34

cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE



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Reported:
02-Oct-2024 18:34

n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
2-Pentanone	WADOE

EPA 9060A in Water

Total Organic Carbon	DoD-ELAP,WADOE,NELAP
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SM 4500-NH3 H-11 in Water

Ammonia-N	WADOE,DoD-ELAP,NELAP
-----------	----------------------

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2025
WADOE	WA Dept of Ecology	C558	06/30/2025
WA-DW	Ecology - Drinking Water	C558	06/30/2025



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Project: Snipes MTN Landfill 2024
Project Number: 518300030-001
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Reported:
02-Oct-2024 18:34

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.



Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

15 January 2025

Eric Cutler
Mott MacDonald
1601 5th Avenue Suite 800
Seattle, WA 98101

RE: Snipes MTN Landfill 2024 (Snipes MTN Landfill 2024)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
24K0578

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24K0578		Turn-around Requested: standard		Page: 1 of	
ARI Client Company: Mott MacDonald		Phone: 303-217-6756		Date:	Ice Present? Y
Client Contact: Jeff Parker		No. of Coolers: 5		Cooler Temps: SEP CFF	
Client Project Name: Yakima - Snipes Mtn				Analysis Requested	
Client Project #: 518300030-001		Samplers: Ashley Parkhurst		Notes/Comments	

Sample ID	Date	Time	Matrix	No. Containers	VOCs	Dis. (H)	Fe, Mn, Zn	NO ₂ , NO ₃	Cl, SO ₄	TOC, COD, NH ₃					
SMW-2	11/20/24	1040	W	6	X	X	X	X							
SMW-4	↓	1305	W	6	Y	X	X	X							
SMW-5D	↓	1410	W	6	Y	X	X	X							
SMW-5S	↓	1500	W	6	X	X	X	X							

Comments/Special Instructions	Relinquished by: (Signature) [Signature]	Received by: (Signature) [Signature]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ashley Parkhurst	Printed Name: R Leeseemann	Printed Name:	Printed Name:
	Company: Mott MacDonald	Company: ARI	Company:	Company:
	Date & Time: 11/22/2024 1302	Date & Time: 11-22-24 1302	Date & Time:	Date & Time:



Analytical Resources, LLC
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SMW-2	24K0578-01	Water	20-Nov-2024 10:40	22-Nov-2024 13:02
SMW-4	24K0578-02	Water	20-Nov-2024 13:05	22-Nov-2024 13:02
SMW-5D	24K0578-03	Water	20-Nov-2024 14:10	22-Nov-2024 13:02
SMW-5S	24K0578-04	Water	20-Nov-2024 15:00	22-Nov-2024 13:02



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

Work Order Case Narrative

Client: Mott MacDonald
Project: Snipes
Work Order: 24K0578

Sample receipt

Samples as listed on the preceding page were received November 22, 2024 under ARI work order 24K0578. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control low and acrolein is out of control high in the ICV. Samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) contained methylene chloride. Samples that contain methylene chloride have been flagged with a "B" qualifier.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Dissolved Metals - EPA Method 6010D

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Wet Chemistry



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

The sample(s) were prepared and analyzed within the recommended holding times with the exception of nitrate and nitrite which were sent to the lab outside of the holding times and have been flagged with an "H" qualifier.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.



WORK ORDER

24K0578

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: Snipes MTN Landfill 2024

Preservation Confirmation

Container ID	Container Type	pH	
24K0578-01 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
24K0578-01 B	HDPE NM, 500 mL		
24K0578-01 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-01 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-01 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-01 F	VOA Vial, Clear, 40 mL, HCL		
24K0578-02 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
24K0578-02 B	HDPE NM, 500 mL		
24K0578-02 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-02 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-02 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-02 F	VOA Vial, Clear, 40 mL, HCL		
24K0578-03 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	> 2	Fail
24K0578-03 B	HDPE NM, 500 mL		
24K0578-03 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-03 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-03 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-03 F	VOA Vial, Clear, 40 mL, HCL		
24K0578-04 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	> 2	Fail
24K0578-04 B	HDPE NM, 500 mL		
24K0578-04 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-04 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-04 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-04 F	VOA Vial, Clear, 40 mL, HCL		

Preservation Confirmed By HA

Date 11/22/24



Cooler Receipt Form

ARI Client:

Mott MacDonald

Project Name:

Yakima
Snipes Mtn

COC No(s):

NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No:

24K0578

Tracking No:

NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? _____

YES

NO

Were custody papers included with the cooler? _____

YES

NO

Were custody papers properly filled out (ink, signed, etc.) _____

YES

NO

Temperature of Cooler(s) (°C) Time 1304 5.4 7.3 5.8 5.6 3.7

Temp Gun ID#: 04

Was a temperature blank included in the cooler? _____

YES

NO

Were coolers received between 0° - 6° (°C) _____

YES

NO

Was sufficient ice used (if appropriate)? _____

NA

YES

NO

Cooler Accepted by:

RL

Date:

11-22-24

Time:

1302

Complete custody forms and attach all shipping documents

Log-In Phase:

What kind of packing material was used?

Bubble Wrap Wet Ice Gel Packs Baggies Foam Block N/A Other: _____

Are any samples that were out of temperature compliance documented in LIMS? _____

YES

NO

How were bottles sealed in plastic bags? _____

Individually

Grouped

Not

Did all bottles arrive in good condition (unbroken)? _____

YES

NO

Were all bottle labels complete and legible? _____

YES

NO

Did the number of containers listed on COC match with the number of containers received? _____

YES

NO

Did all bottle labels and tags agree with custody papers? _____

YES

NO

Were all bottles used correct for the requested analyses? _____

YES

NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...

NA

YES

NO

Were all VOC vials free of air bubbles? _____

NA

YES

NO

Was sufficient amount of sample sent in each bottle? _____

YES

NO

Date VOC Trip Blank was made at ARI: _____

NA

Were the sample(s) split by ARI? _____

NA

YES

Date/Time: _____

Equipment: _____

Split by: _____

Samples Logged by:

ES

Date: 11/22/24

Time: 14:50

Labels checked by:

ES

**** Notify Project Manager of discrepancies or concerns ****

Additional Notes, Discrepancies, & Resolutions:

By:

Date:



WORK ORDER

24K0578

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Mott MacDonald

Project Manager: Kelly Bottem

Project: Snipes MTN Landfill 2024

Project Number: Snipes MTN Landfill 2024

Preservation Confirmation

Container ID	Container Type	pH	
24K0578-01 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
24K0578-01 B	HDPE NM, 500 mL		
24K0578-01 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-01 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-01 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-01 F	VOA Vial, Clear, 40 mL, HCL		
24K0578-02 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	< 2	Pass
24K0578-02 B	HDPE NM, 500 mL		
24K0578-02 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-02 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-02 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-02 F	VOA Vial, Clear, 40 mL, HCL		
24K0578-03 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	> 2	Fail (1)
24K0578-03 B	HDPE NM, 500 mL		
24K0578-03 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-03 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-03 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-03 F	VOA Vial, Clear, 40 mL, HCL		
24K0578-04 A	HDPE NM, 500 mL, 1:1 HNO3 (FF)	> 2	Fail (1)
24K0578-04 B	HDPE NM, 500 mL		
24K0578-04 C	Glass NM, Amber, 250 mL, 9N H2SO4	< 2	Pass
24K0578-04 D	VOA Vial, Clear, 40 mL, HCL		
24K0578-04 E	VOA Vial, Clear, 40 mL, HCL		
24K0578-04 F	VOA Vial, Clear, 40 mL, HCL		

Preservation Confirmed By ES

Date 11/22/24

① preserved to pH < 2
w/ 10.5ml concentrated HNO₃
(M10548)
11/22/24 AB
@1700



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 10:40

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 15:51

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24K0578-01 D

Preparation Batch: BMK0670

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U



Mott MacDonald
1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 10:40

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 15:51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 10:40

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 15:51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	129	%	
Surrogate: Toluene-d8				80-120 %	109	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	94.2	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	98.5	%	



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Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 11/20/2024 10:40

Instrument: ICP3 Analyst: SH

Analyzed: 12/06/2024 08:49

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24K0578-01 A 01

Preparation Batch: BMK0652

Sample Size: 25 mL

Prepared: 11/24/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	0.266	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.0499	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	0.0176	mg/L	J



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Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 11/20/2024 10:40

Instrument: LACHAT2 Analyst: CB

Analyzed: 12/03/2024 13:29

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01 B

Preparation Batch: BML0045

Sample Size: 10 mL

Prepared: 12/03/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	9.18	mg/L	



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Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 10:40

Instrument: [CALC] Analyst: SRB

Analyzed: 11/26/2024 11:35

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24K0578-01

Preparation Batch: [CALC]

Prepared: 11/25/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	0.435	mg/L	H



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Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 10:40

Instrument: LACHAT2 Analyst: SRB

Analyzed: 11/22/2024 16:19

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01 B

Preparation Batch: BMK0630

Sample Size: 10 mL

Prepared: 11/22/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	H, U



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Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 10:40

Instrument: LACHAT2 Analyst: CB

Analyzed: 11/26/2024 11:35

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01 C

Preparation Batch: BMK0682

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	0.435	mg/L	



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Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 11/20/2024 10:40

Instrument: UV1800-1 Analyst: KOTT

Analyzed: 12/09/2024 10:57

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01 C

Preparation Batch: BML0146

Sample Size: 2 mL

Prepared: 12/06/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 11/20/2024 10:40

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 12/10/2024 10:26

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01 C

Preparation Batch: BML0202

Sample Size: 20 mL

Prepared: 12/10/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	ND	mg/L	U



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Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 11/20/2024 10:40

Instrument: LACHAT1 Analyst: CB

Analyzed: 12/02/2024 17:19

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01 C

Preparation Batch: BML0026

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-2
24K0578-01RE2 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 11/20/2024 10:40

Instrument: LACHAT2 Analyst: GD

Analyzed: 12/03/2024 10:03

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-01RE2 B

Preparation Batch: BML0027

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	5	10.0	10.0	85.0	mg/L	D



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 13:05

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 16:14

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24K0578-02 D

Preparation Batch: BMK0670

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	0.58	ug/L	
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	0.87	ug/L	
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 13:05

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 16:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	4.53	ug/L	
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 13:05

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 16:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	114	%	
Surrogate: Toluene-d8				80-120 %	100	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	93.4	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	100	%	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 11/20/2024 13:05

Instrument: LACHAT2 Analyst: CB

Analyzed: 12/03/2024 13:30

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02 B

Preparation Batch: BML0045

Sample Size: 10 mL

Prepared: 12/03/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	7.77	mg/L	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 13:05

Instrument: [CALC] Analyst: SRB

Analyzed: 11/26/2024 11:38

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24K0578-02

Preparation Batch: [CALC]

Prepared: 11/25/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	ND	mg/L	U, H



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 13:05

Instrument: LACHAT2 Analyst: SRB

Analyzed: 11/22/2024 16:21

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02 B

Preparation Batch: BMK0630

Sample Size: 10 mL

Prepared: 11/22/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	H, U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 13:05

Instrument: LACHAT2 Analyst: CB

Analyzed: 11/26/2024 11:38

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02 C

Preparation Batch: BMK0682

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 11/20/2024 13:05

Instrument: UV1800-1 Analyst: KOTT

Analyzed: 12/09/2024 11:00

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02 C

Preparation Batch: BML0146

Sample Size: 2 mL

Prepared: 12/06/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 11/20/2024 13:05

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 12/10/2024 11:30

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02 C

Preparation Batch: BML0202

Sample Size: 20 mL

Prepared: 12/10/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	ND	mg/L	U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 11/20/2024 13:05

Instrument: LACHAT1 Analyst: CB

Analyzed: 12/02/2024 17:21

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02 C

Preparation Batch: BML0026

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02RE1 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 11/20/2024 13:05

Instrument: ICP3 Analyst: SH

Analyzed: 12/11/2024 08:49

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24K0578-02RE1 A 01

Preparation Batch: BMK0652

Sample Size: 25 mL

Prepared: 11/24/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	ND	mg/L	U
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	ND	mg/L	U
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-4
24K0578-02RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 11/20/2024 13:05

Instrument: LACHAT2 Analyst: GD

Analyzed: 12/03/2024 09:50

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-02RE1 B

Preparation Batch: BML0027

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	2	4.00	4.00	33.2	mg/L	D



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 14:10

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 16:37

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24K0578-03 E

Preparation Batch: BMK0670

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 14:10

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 16:37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 14:10

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 16:37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	111	%	
Surrogate: Toluene-d8				80-120 %	99.2	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	94.2	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	101	%	



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Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 11/20/2024 14:10

Instrument: LACHAT2 Analyst: CB

Analyzed: 12/03/2024 13:36

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 B

Preparation Batch: BML0045

Sample Size: 10 mL

Prepared: 12/03/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	1	1.00	1.00	4.08	mg/L	



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Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 14:10

Instrument: [CALC] Analyst: SRB

Analyzed: 11/26/2024 11:39

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24K0578-03

Preparation Batch: [CALC]

Prepared: 11/25/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	0.907	mg/L	H



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 14:10

Instrument: LACHAT2 Analyst: SRB

Analyzed: 11/22/2024 16:26

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 B

Preparation Batch: BMK0630

Sample Size: 10 mL

Prepared: 11/22/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	H, U



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 14:10

Instrument: LACHAT2 Analyst: CB

Analyzed: 11/26/2024 11:39

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 C

Preparation Batch: BMK0682

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	0.907	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 11/20/2024 14:10

Instrument: LACHAT2 Analyst: GD

Analyzed: 12/03/2024 09:43

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 B

Preparation Batch: BML0027

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	1	2.00	2.00	23.9	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 11/20/2024 14:10

Instrument: UV1800-1 Analyst: KOTT

Analyzed: 12/09/2024 11:00

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 C

Preparation Batch: BML0146

Sample Size: 2 mL

Prepared: 12/06/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 11/20/2024 14:10

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 12/10/2024 12:03

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 C

Preparation Batch: BML0202

Sample Size: 20 mL

Prepared: 12/10/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	2.70	mg/L	



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Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 11/20/2024 14:10

Instrument: LACHAT1 Analyst: CB

Analyzed: 12/02/2024 17:22

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-03 C

Preparation Batch: BML0026

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5D
24K0578-03RE1 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 11/20/2024 14:10

Instrument: ICP3 Analyst: SH

Analyzed: 12/11/2024 08:52

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24K0578-03RE1 A 01

Preparation Batch: BMK0652

Sample Size: 25 mL

Prepared: 11/24/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	0.126	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.0075	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 15:00

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 17:00

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24K0578-04 D

Preparation Batch: BMK0670

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	14.2	ug/L	
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U



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1601 5th Avenue Suite 800
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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 15:00

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 17:00

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	0.88	ug/L	
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U



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Project: Snipes MTN Landfill 2024
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Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 11/20/2024 15:00

Instrument: NT20 Analyst: LN

Analyzed: 11/25/2024 17:00

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				80-129 %	116	%	
Surrogate: Toluene-d8				80-120 %	100	%	
Surrogate: 4-Bromofluorobenzene				80-120 %	93.6	%	
Surrogate: 1,2-Dichlorobenzene-d4				80-120 %	101	%	



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Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 6010D

Sampled: 11/20/2024 15:00

Instrument: ICP3 Analyst: SH

Analyzed: 12/06/2024 08:52

Sample Preparation:

Preparation Method: WMN (No Prep)

Extract ID: 24K0578-04 A 01

Preparation Batch: BMK0652

Sample Size: 25 mL

Prepared: 11/24/2024

Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Iron, Dissolved	7439-89-6	1	0.0107	0.0500	0.591	mg/L	
Manganese, Dissolved	7439-96-5	1	0.0016	0.0040	0.278	mg/L	
Zinc, Dissolved	7440-66-6	1	0.0080	0.0200	0.0249	mg/L	



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 15:00

Instrument: [CALC] Analyst: SRB

Analyzed: 11/26/2024 11:40

Sample Preparation:

Preparation Method: [CALC]

Extract ID: 24K0578-04

Preparation Batch: [CALC]

Prepared: 11/25/2024

Final Volume: 1

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.0200	ND	mg/L	U, H



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 15:00

Instrument: LACHAT2 Analyst: SRB

Analyzed: 11/22/2024 16:27

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04 B

Preparation Batch: BMK0630

Sample Size: 10 mL

Prepared: 11/22/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.010	0.010	ND	mg/L	H, U



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Wet Chemistry

Method: EPA 353.2

Sampled: 11/20/2024 15:00

Instrument: LACHAT2 Analyst: CB

Analyzed: 11/26/2024 11:40

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04 C

Preparation Batch: BMK0682

Sample Size: 10 mL

Prepared: 11/25/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate + Nitrite as N		1	0.010	0.010	ND	mg/L	U



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Wet Chemistry

Method: EPA 410.4

Sampled: 11/20/2024 15:00

Instrument: UV1800-1 Analyst: KOTT

Analyzed: 12/09/2024 11:01

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04 C

Preparation Batch: BML0146

Sample Size: 2 mL

Prepared: 12/06/2024

Final Volume: 2 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
COD		1	10.0	10.0	ND	mg/L	U



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Wet Chemistry

Method: EPA 9060A

Sampled: 11/20/2024 15:00

Instrument: TOC-LCSH Analyst: RMS

Analyzed: 12/10/2024 12:25

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04 C

Preparation Batch: BML0202

Sample Size: 20 mL

Prepared: 12/10/2024

Final Volume: 20 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.50	0.50	0.91	mg/L	



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04 (Water)

Wet Chemistry

Method: SM 4500-NH3 H-11

Sampled: 11/20/2024 15:00

Instrument: LACHAT1 Analyst: CB

Analyzed: 12/02/2024 17:23

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04 C

Preparation Batch: BML0026

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Ammonia-N	7664-41-7	1	0.040	0.040	ND	mg/L	U



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04RE1 (Water)

Wet Chemistry

Method: EPA 325.2

Sampled: 11/20/2024 15:00

Instrument: LACHAT2 Analyst: CB

Analyzed: 12/03/2024 13:52

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04RE1 B

Preparation Batch: BML0045

Sample Size: 10 mL

Prepared: 12/03/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloride	16887-00-6	5	5.00	5.00	26.8	mg/L	D



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Reported:
15-Jan-2025 15:52

SMW-5S
24K0578-04RE1 (Water)

Wet Chemistry

Method: EPA 375.2

Sampled: 11/20/2024 15:00

Instrument: LACHAT2 Analyst: GD

Analyzed: 12/03/2024 10:05

Sample Preparation:

Preparation Method: No Prep Wet Chem

Extract ID: 24K0578-04RE1 B

Preparation Batch: BML0027

Sample Size: 10 mL

Prepared: 12/02/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Sulfate	14808-79-8	5	10.0	10.0	67.0	mg/L	D



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0670-BLK2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 11:14					
Chloromethane	ND	0.50	0.50	ug/L							U
Vinyl Chloride	ND	0.10	0.20	ug/L							U
Bromomethane	ND	1.00	1.00	ug/L							U
Chloroethane	ND	0.20	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	0.20	ug/L							U
Acrolein	ND	5.00	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	0.20	ug/L							U
Acetone	ND	5.00	5.00	ug/L							U
1,1-Dichloroethene	ND	0.10	0.20	ug/L							U
Iodomethane	ND	0.50	1.00	ug/L							U
Methylene Chloride	1.00	1.00	1.00	ug/L							B
Acrylonitrile	ND	0.50	1.00	ug/L							U
Carbon Disulfide	ND	0.20	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.10	0.20	ug/L							U
Vinyl Acetate	ND	0.20	0.20	ug/L							U
1,1-Dichloroethane	ND	0.10	0.20	ug/L							U
2-Butanone	ND	2.50	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.10	0.20	ug/L							U
Chloroform	ND	0.10	0.20	ug/L							U
Bromochloromethane	ND	0.10	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.10	0.20	ug/L							U
1,1-Dichloropropene	ND	0.10	0.20	ug/L							U
Carbon tetrachloride	ND	0.10	0.20	ug/L							U
1,2-Dichloroethane	ND	0.10	0.20	ug/L							U
Benzene	ND	0.10	0.20	ug/L							U
Trichloroethene	ND	0.10	0.20	ug/L							U
1,2-Dichloropropane	ND	0.10	0.20	ug/L							U
Bromodichloromethane	ND	0.10	0.20	ug/L							U
Dibromomethane	ND	0.10	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	2.50	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.10	0.20	ug/L							U
Toluene	ND	0.10	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.10	0.20	ug/L							U



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Reported:
15-Jan-2025 15:52

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0670-BLK2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 11:14					
2-Hexanone	ND	2.50	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	0.20	ug/L							U
1,3-Dichloropropane	ND	0.10	0.20	ug/L							U
Tetrachloroethene	ND	0.10	0.20	ug/L							U
Dibromochloromethane	ND	0.10	0.20	ug/L							U
1,2-Dibromoethane	ND	0.10	0.20	ug/L							U
Chlorobenzene	ND	0.10	0.20	ug/L							U
Ethylbenzene	ND	0.10	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.10	0.20	ug/L							U
m,p-Xylene	ND	0.20	0.40	ug/L							U
o-Xylene	ND	0.10	0.20	ug/L							U
Xylenes, total	ND	0.30	0.60	ug/L							U
Styrene	ND	0.10	0.20	ug/L							U
Bromoform	ND	0.20	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.25	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	1.00	ug/L							U
n-Propylbenzene	ND	0.10	0.20	ug/L							U
Bromobenzene	ND	0.10	0.20	ug/L							U
Isopropyl Benzene	ND	0.10	0.20	ug/L							U
2-Chlorotoluene	ND	0.10	0.20	ug/L							U
4-Chlorotoluene	ND	0.10	0.20	ug/L							U
t-Butylbenzene	ND	0.10	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.10	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.10	0.20	ug/L							U
s-Butylbenzene	ND	0.10	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.10	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.10	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	0.20	ug/L							U
n-Butylbenzene	ND	0.20	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.10	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.25	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	0.50	ug/L							U
Naphthalene	ND	0.50	0.50	ug/L							U



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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0670-BLK2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 11:14					
1,2,3-Trichlorobenzene	ND	0.50	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.25	0.50	ug/L							U
2-Pentanone	ND	2.50	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.30			ug/L	5.00		106	80-129			
Surrogate: Toluene-d8	4.96			ug/L	5.00		99.2	80-120			
Surrogate: 4-Bromofluorobenzene	4.60			ug/L	5.00		92.1	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	4.88			ug/L	5.00		97.6	80-120			



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Reported:
15-Jan-2025 15:52

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0670-BS2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 09:42					
Chloromethane	11.1	0.50	0.50	ug/L	10.0		111	60-138			
Vinyl Chloride	10.9	0.10	0.20	ug/L	10.0		109	66-133			
Bromomethane	10.9	1.00	1.00	ug/L	10.0		109	72-131			
Chloroethane	11.1	0.20	0.20	ug/L	10.0		111	60-155			
Trichlorofluoromethane	11.2	0.20	0.20	ug/L	10.0		112	62-141			
Acrolein	70.5	5.00	5.00	ug/L	50.0		141	52-190			Q
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.5	0.20	0.20	ug/L	10.0		105	76-129			
Acetone	52.5	5.00	5.00	ug/L	50.0		105	58-142			
1,1-Dichloroethene	11.4	0.10	0.20	ug/L	10.0		114	69-135			
Iodomethane	10.6	0.50	1.00	ug/L	10.0		106	56-147			
Methylene Chloride	11.7	1.00	1.00	ug/L	10.0		117	65-135			B
Acrylonitrile	10.7	0.50	1.00	ug/L	10.0		107	64-134			
Carbon Disulfide	10.6	0.20	0.20	ug/L	10.0		106	78-125			
trans-1,2-Dichloroethene	10.7	0.10	0.20	ug/L	10.0		107	78-128			
Vinyl Acetate	10.2	0.20	0.20	ug/L	10.0		102	55-138			
1,1-Dichloroethane	11.2	0.10	0.20	ug/L	10.0		112	76-124			
2-Butanone	52.4	2.50	5.00	ug/L	50.0		105	61-140			
2,2-Dichloropropane	10.8	0.20	0.20	ug/L	10.0		108	66-147			
cis-1,2-Dichloroethene	10.6	0.10	0.20	ug/L	10.0		106	80-121			
Chloroform	11.2	0.10	0.20	ug/L	10.0		112	80-122			
Bromochloromethane	10.1	0.10	0.20	ug/L	10.0		101	80-121			
1,1,1-Trichloroethane	10.6	0.10	0.20	ug/L	10.0		106	79-123			
1,1-Dichloropropene	10.3	0.10	0.20	ug/L	10.0		103	80-127			
Carbon tetrachloride	9.25	0.10	0.20	ug/L	10.0		92.5	53-137			
1,2-Dichloroethane	10.4	0.10	0.20	ug/L	10.0		104	75-123			
Benzene	10.5	0.10	0.20	ug/L	10.0		105	80-120			
Trichloroethene	10.1	0.10	0.20	ug/L	10.0		101	80-120			
1,2-Dichloropropane	10.8	0.10	0.20	ug/L	10.0		108	80-120			
Bromodichloromethane	9.88	0.10	0.20	ug/L	10.0		98.8	80-121			
Dibromomethane	9.57	0.10	0.20	ug/L	10.0		95.7	80-120			
2-Chloroethyl vinyl ether	9.39	1.00	1.00	ug/L	10.0		93.9	64-120			
4-Methyl-2-Pentanone	46.7	2.50	5.00	ug/L	50.0		93.5	67-133			
cis-1,3-Dichloropropene	9.79	0.10	0.20	ug/L	10.0		97.9	80-124			
Toluene	10.4	0.10	0.20	ug/L	10.0		104	80-120			
trans-1,3-Dichloropropene	9.40	0.10	0.20	ug/L	10.0		94.0	71-127			



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1601 5th Avenue Suite 800
Seattle WA, 98101

Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0670-BS2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 09:42					
2-Hexanone	47.3	2.50	5.00	ug/L	50.0		94.6	69-133			
1,1,2-Trichloroethane	9.67	0.20	0.20	ug/L	10.0		96.7	80-121			
1,3-Dichloropropane	9.60	0.10	0.20	ug/L	10.0		96.0	80-120			
Tetrachloroethene	9.63	0.10	0.20	ug/L	10.0		96.3	80-120			
Dibromochloromethane	8.80	0.10	0.20	ug/L	10.0		88.0	65-135			
1,2-Dibromoethane	9.49	0.10	0.20	ug/L	10.0		94.9	80-121			
Chlorobenzene	10.0	0.10	0.20	ug/L	10.0		100	80-120			
Ethylbenzene	10.1	0.10	0.20	ug/L	10.0		101	80-120			
1,1,1,2-Tetrachloroethane	8.96	0.10	0.20	ug/L	10.0		89.6	80-120			
m,p-Xylene	20.4	0.20	0.40	ug/L	20.0		102	80-121			
o-Xylene	9.96	0.10	0.20	ug/L	10.0		99.6	80-121			
Xylenes, total	30.3	0.30	0.60	ug/L	30.0		101	76-127			
Styrene	10.2	0.10	0.20	ug/L	10.0		102	80-124			
Bromoform	7.94	0.20	0.20	ug/L	10.0		79.4	51-134			Q
1,1,2,2-Tetrachloroethane	8.78	0.20	0.20	ug/L	10.0		87.8	77-123			
1,2,3-Trichloropropane	8.91	0.25	0.50	ug/L	10.0		89.1	76-125			
trans-1,4-Dichloro 2-Butene	8.97	1.00	1.00	ug/L	10.0		89.7	55-129			
n-Propylbenzene	10.3	0.10	0.20	ug/L	10.0		103	78-130			
Bromobenzene	9.41	0.10	0.20	ug/L	10.0		94.1	80-120			
Isopropyl Benzene	9.84	0.10	0.20	ug/L	10.0		98.4	80-128			
2-Chlorotoluene	9.62	0.10	0.20	ug/L	10.0		96.2	78-122			
4-Chlorotoluene	9.78	0.10	0.20	ug/L	10.0		97.8	80-121			
t-Butylbenzene	9.77	0.10	0.20	ug/L	10.0		97.7	78-125			
1,3,5-Trimethylbenzene	9.90	0.10	0.20	ug/L	10.0		99.0	80-129			
1,2,4-Trimethylbenzene	10.0	0.10	0.20	ug/L	10.0		100	80-127			
s-Butylbenzene	10.1	0.10	0.20	ug/L	10.0		101	78-129			
4-Isopropyl Toluene	9.97	0.10	0.20	ug/L	10.0		99.7	79-130			
1,3-Dichlorobenzene	9.71	0.10	0.20	ug/L	10.0		97.1	80-120			
1,4-Dichlorobenzene	9.62	0.20	0.20	ug/L	10.0		96.2	80-120			
n-Butylbenzene	10.3	0.20	0.20	ug/L	10.0		103	74-129			
1,2-Dichlorobenzene	9.50	0.10	0.20	ug/L	10.0		95.0	80-120			
1,2-Dibromo-3-chloropropane	7.95	0.50	0.50	ug/L	10.0		79.5	62-123			Q
1,2,4-Trichlorobenzene	9.79	0.25	0.50	ug/L	10.0		97.9	64-124			
Hexachloro-1,3-Butadiene	9.64	0.50	0.50	ug/L	10.0		96.4	65-145			
Naphthalene	9.31	0.50	0.50	ug/L	10.0		93.1	50-134			



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Project Manager: Eric Cutler

Reported:
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0670-BS2)					Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 09:42					
1,2,3-Trichlorobenzene	9.45	0.50	0.50	ug/L	10.0		94.5	49-133		
Dichlorodifluoromethane	8.99	0.20	0.20	ug/L	10.0		89.9	48-147		
Methyl tert-butyl Ether	10.1	0.25	0.50	ug/L	10.0		101	71-132		
2-Pentanone	44.0	2.50	5.00	ug/L	50.0		88.0	69-134		
Surrogate: 1,2-Dichloroethane-d4	5.44			ug/L	5.00		109	80-129		
Surrogate: Toluene-d8	5.00			ug/L	5.00		100	80-120		
Surrogate: 4-Bromofluorobenzene	4.89			ug/L	5.00		97.8	80-120		
Surrogate: 1,2-Dichlorobenzene-d4	4.93			ug/L	5.00		98.6	80-120		



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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0670-BSD2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 10:28					
Chloromethane	11.1	0.50	0.50	ug/L	10.0		111	60-138	0.55	30	
Vinyl Chloride	10.8	0.10	0.20	ug/L	10.0		108	66-133	0.43	30	
Bromomethane	10.7	1.00	1.00	ug/L	10.0		107	72-131	1.77	30	
Chloroethane	11.2	0.20	0.20	ug/L	10.0		112	60-155	0.82	30	
Trichlorofluoromethane	11.2	0.20	0.20	ug/L	10.0		112	62-141	0.59	30	
Acrolein	73.6	5.00	5.00	ug/L	50.0		147	52-190	4.21	30	Q
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.4	0.20	0.20	ug/L	10.0		104	76-129	1.44	30	
Acetone	53.8	5.00	5.00	ug/L	50.0		108	58-142	2.53	30	
1,1-Dichloroethene	11.3	0.10	0.20	ug/L	10.0		113	69-135	1.29	30	
Iodomethane	10.5	0.50	1.00	ug/L	10.0		105	56-147	0.89	30	
Methylene Chloride	12.0	1.00	1.00	ug/L	10.0		120	65-135	2.54	30	B
Acrylonitrile	11.0	0.50	1.00	ug/L	10.0		110	64-134	3.11	30	
Carbon Disulfide	10.6	0.20	0.20	ug/L	10.0		106	78-125	0.30	30	
trans-1,2-Dichloroethene	10.6	0.10	0.20	ug/L	10.0		106	78-128	0.75	30	
Vinyl Acetate	10.5	0.20	0.20	ug/L	10.0		105	55-138	3.26	30	
1,1-Dichloroethane	11.2	0.10	0.20	ug/L	10.0		112	76-124	0.51	30	
2-Butanone	54.7	2.50	5.00	ug/L	50.0		109	61-140	4.40	30	
2,2-Dichloropropane	10.6	0.20	0.20	ug/L	10.0		106	66-147	2.67	30	
cis-1,2-Dichloroethene	10.7	0.10	0.20	ug/L	10.0		107	80-121	1.00	30	
Chloroform	11.2	0.10	0.20	ug/L	10.0		112	80-122	0.18	30	
Bromochloromethane	10.4	0.10	0.20	ug/L	10.0		104	80-121	2.83	30	
1,1,1-Trichloroethane	9.39	0.10	0.20	ug/L	10.0		93.9	79-123	12.40	30	
1,1-Dichloropropene	10.3	0.10	0.20	ug/L	10.0		103	80-127	0.21	30	
Carbon tetrachloride	9.25	0.10	0.20	ug/L	10.0		92.5	53-137	0.05	30	
1,2-Dichloroethane	10.6	0.10	0.20	ug/L	10.0		106	75-123	1.50	30	
Benzene	10.5	0.10	0.20	ug/L	10.0		105	80-120	0.51	30	
Trichloroethene	10.2	0.10	0.20	ug/L	10.0		102	80-120	0.14	30	
1,2-Dichloropropane	10.7	0.10	0.20	ug/L	10.0		107	80-120	0.69	30	
Bromodichloromethane	10.0	0.10	0.20	ug/L	10.0		100	80-121	1.42	30	
Dibromomethane	9.87	0.10	0.20	ug/L	10.0		98.7	80-120	3.06	30	
2-Chloroethyl vinyl ether	9.81	1.00	1.00	ug/L	10.0		98.1	64-120	4.42	30	
4-Methyl-2-Pentanone	49.0	2.50	5.00	ug/L	50.0		98.0	67-133	4.72	30	
cis-1,3-Dichloropropene	9.94	0.10	0.20	ug/L	10.0		99.4	80-124	1.58	30	
Toluene	10.4	0.10	0.20	ug/L	10.0		104	80-120	0.25	30	
trans-1,3-Dichloropropene	9.65	0.10	0.20	ug/L	10.0		96.5	71-127	2.59	30	



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Project: Snipes MTN Landfill 2024
Project Number: Snipes MTN Landfill 2024
Project Manager: Eric Cutler

Reported:
15-Jan-2025 15:52

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0670-BSD2)						Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 10:28					
2-Hexanone	50.5	2.50	5.00	ug/L	50.0		101	69-133	6.45	30	
1,1,2-Trichloroethane	9.75	0.20	0.20	ug/L	10.0		97.5	80-121	0.85	30	
1,3-Dichloropropane	10.0	0.10	0.20	ug/L	10.0		100	80-120	4.11	30	
Tetrachloroethene	9.89	0.10	0.20	ug/L	10.0		98.9	80-120	2.70	30	
Dibromochloromethane	9.13	0.10	0.20	ug/L	10.0		91.3	65-135	3.64	30	
1,2-Dibromoethane	9.69	0.10	0.20	ug/L	10.0		96.9	80-121	2.14	30	
Chlorobenzene	10.2	0.10	0.20	ug/L	10.0		102	80-120	1.94	30	
Ethylbenzene	10.2	0.10	0.20	ug/L	10.0		102	80-120	0.47	30	
1,1,1,2-Tetrachloroethane	9.25	0.10	0.20	ug/L	10.0		92.5	80-120	3.17	30	
m,p-Xylene	20.8	0.20	0.40	ug/L	20.0		104	80-121	1.87	30	
o-Xylene	10.2	0.10	0.20	ug/L	10.0		102	80-121	2.63	30	
Xylenes, total	31.0	0.30	0.60	ug/L	30.0		103	76-127	2.12	30	
Styrene	10.7	0.10	0.20	ug/L	10.0		107	80-124	4.99	30	
Bromoform	8.47	0.20	0.20	ug/L	10.0		84.7	51-134	6.55	30	Q
1,1,2,2-Tetrachloroethane	9.44	0.20	0.20	ug/L	10.0		94.4	77-123	7.20	30	
1,2,3-Trichloropropane	9.74	0.25	0.50	ug/L	10.0		97.4	76-125	8.93	30	
trans-1,4-Dichloro 2-Butene	9.84	1.00	1.00	ug/L	10.0		98.4	55-129	9.18	30	
n-Propylbenzene	10.8	0.10	0.20	ug/L	10.0		108	78-130	4.98	30	
Bromobenzene	10.1	0.10	0.20	ug/L	10.0		101	80-120	7.23	30	
Isopropyl Benzene	10.4	0.10	0.20	ug/L	10.0		104	80-128	5.78	30	
2-Chlorotoluene	10.2	0.10	0.20	ug/L	10.0		102	78-122	5.79	30	
4-Chlorotoluene	10.3	0.10	0.20	ug/L	10.0		103	80-121	5.30	30	
t-Butylbenzene	10.2	0.10	0.20	ug/L	10.0		102	78-125	4.80	30	
1,3,5-Trimethylbenzene	10.5	0.10	0.20	ug/L	10.0		105	80-129	5.64	30	
1,2,4-Trimethylbenzene	10.5	0.10	0.20	ug/L	10.0		105	80-127	4.72	30	
s-Butylbenzene	10.5	0.10	0.20	ug/L	10.0		105	78-129	4.54	30	
4-Isopropyl Toluene	10.5	0.10	0.20	ug/L	10.0		105	79-130	4.91	30	
1,3-Dichlorobenzene	10.3	0.10	0.20	ug/L	10.0		103	80-120	5.50	30	
1,4-Dichlorobenzene	10.2	0.20	0.20	ug/L	10.0		102	80-120	5.39	30	
n-Butylbenzene	10.9	0.20	0.20	ug/L	10.0		109	74-129	5.24	30	
1,2-Dichlorobenzene	10.0	0.10	0.20	ug/L	10.0		100	80-120	5.62	30	
1,2-Dibromo-3-chloropropane	8.99	0.50	0.50	ug/L	10.0		89.9	62-123	12.30	30	Q
1,2,4-Trichlorobenzene	10.4	0.25	0.50	ug/L	10.0		104	64-124	6.39	30	
Hexachloro-1,3-Butadiene	10.1	0.50	0.50	ug/L	10.0		101	65-145	4.99	30	
Naphthalene	10.0	0.50	0.50	ug/L	10.0		100	50-134	7.46	30	



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Project: Snipes MTN Landfill 2024
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Project Manager: Eric Cutler

Reported:
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0670 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0670-BSD2)										
Prepared: 25-Nov-2024 Analyzed: 25-Nov-2024 10:28										
1,2,3-Trichlorobenzene	10.2	0.50	0.50	ug/L	10.0	102	49-133	8.03	30	
Dichlorodifluoromethane	8.49	0.20	0.20	ug/L	10.0	84.9	48-147	5.76	30	
Methyl tert-butyl Ether	10.3	0.25	0.50	ug/L	10.0	103	71-132	1.95	30	
2-Pentanone	45.3	2.50	5.00	ug/L	50.0	90.6	69-134	2.88	30	
Surrogate: 1,2-Dichloroethane-d4	5.45			ug/L	5.00	109	80-129			
Surrogate: Toluene-d8	5.02			ug/L	5.00	100	80-120			
Surrogate: 4-Bromofluorobenzene	4.76			ug/L	5.00	95.3	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.02			ug/L	5.00	100	80-120			



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Project: Snipes MTN Landfill 2024
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Reported:
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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BMK0652 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0652-BLK2) Prepared: 24-Nov-2024 Analyzed: 11-Dec-2024 08:31											
Iron, Dissolved	ND	0.0107	0.0500	mg/L							U
Manganese, Dissolved	ND	0.0016	0.0040	mg/L							U
Zinc, Dissolved	ND	0.0080	0.0200	mg/L							U
LCS (BMK0652-BS2) Prepared: 24-Nov-2024 Analyzed: 11-Dec-2024 08:34											
Iron, Dissolved	2.12	0.0109	0.0510	mg/L	2.00		106	80-120			
Manganese, Dissolved	0.469	0.0016	0.0041	mg/L	0.500		93.7	80-120			
Zinc, Dissolved	0.481	0.0082	0.0204	mg/L	0.500		96.1	80-120			



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Reported:
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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMK0630 - EPA 353.2

Instrument: LACHAT2 Analyst: SRB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0630-BLK1)					Prepared: 22-Nov-2024 Analyzed: 22-Nov-2024 16:11					
Nitrite-N	ND	0.010	0.010	mg/L						U
LCS (BMK0630-BS1)					Prepared: 22-Nov-2024 Analyzed: 22-Nov-2024 16:13					
Nitrite-N	0.480	0.010	0.010	mg/L	0.500	96.0	90-110			



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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BMK0682 - EPA 353.2

Instrument: LACHAT2 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0682-BLK1)					Prepared: 25-Nov-2024 Analyzed: 26-Nov-2024 11:32						
Nitrate + Nitrite as N	ND	0.010	0.010	mg/L							U
LCS (BMK0682-BS1)					Prepared: 25-Nov-2024 Analyzed: 26-Nov-2024 11:34						
Nitrate + Nitrite as N	0.487	0.010	0.010	mg/L	0.500		97.4	90-110			
Duplicate (BMK0682-DUP1)					Source: 24K0578-01 Prepared: 25-Nov-2024 Analyzed: 26-Nov-2024 11:36						
Nitrate + Nitrite as N	0.434	0.010	0.010	mg/L		0.435			0.23	20	
Matrix Spike (BMK0682-MS1)					Source: 24K0578-01 Prepared: 25-Nov-2024 Analyzed: 26-Nov-2024 11:37						
Nitrate + Nitrite as N	0.921	0.010	0.010	mg/L	0.494	0.435	98.3	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



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Project: Snipes MTN Landfill 2024
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Reported:
15-Jan-2025 15:52

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BML0026 - SM 4500-NH3 H-11

Instrument: LACHAT1 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BML0026-BLK1)						Prepared: 02-Dec-2024 Analyzed: 02-Dec-2024 16:57					
Ammonia-N	ND	0.040	0.040	mg/L							U
LCS (BML0026-BS1)						Prepared: 02-Dec-2024 Analyzed: 02-Dec-2024 16:58					
Ammonia-N	0.467	0.040	0.040	mg/L	0.500		93.4	90-110			



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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BML0027 - EPA 375.2

Instrument: LACHAT2 Analyst: GD

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BML0027-BLK1)										
Prepared: 02-Dec-2024 Analyzed: 03-Dec-2024 09:01										
Sulfate	ND	2.00	2.00	mg/L						U
LCS (BML0027-BS1)										
Prepared: 02-Dec-2024 Analyzed: 03-Dec-2024 09:02										
Sulfate	14.2	2.00	2.00	mg/L	15.0	94.7	90-110			



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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BML0045 - EPA 325.2

Instrument: LACHAT2 Analyst: CB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Blank (BML0045-BLK1)					Prepared: 03-Dec-2024 Analyzed: 03-Dec-2024 13:20					
Chloride	ND	1.00	1.00	mg/L						U
LCS (BML0045-BS1)					Prepared: 03-Dec-2024 Analyzed: 03-Dec-2024 13:21					
Chloride	4.82	1.00	1.00	mg/L	5.00	96.4	90-110			



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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BML0146 - EPA 410.4

Instrument: UV1800-1 Analyst: KOTT

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BML0146-BLK1)					Prepared: 06-Dec-2024 Analyzed: 09-Dec-2024 10:46						
COD	ND	10.0	10.0	mg/L							U
DL (BML0146-BLK2)					Prepared: 06-Dec-2024 Analyzed: 09-Dec-2024 11:03						
COD	ND	10.0	10.0	mg/L							U
LCS (BML0146-BS1)					Prepared: 06-Dec-2024 Analyzed: 09-Dec-2024 10:48						
COD	99.0	10.0	10.0	mg/L	100		99.0	90-110			
DL (BML0146-BS2)					Prepared: 06-Dec-2024 Analyzed: 09-Dec-2024 11:04						
COD	98.3	10.0	10.0	mg/L	100		98.3	90-110			
Duplicate (BML0146-DUP1)					Source: 24K0578-01 Prepared: 06-Dec-2024 Analyzed: 09-Dec-2024 10:57						
COD	ND	10.0	10.0	mg/L		ND			10		U
Matrix Spike (BML0146-MS1)					Source: 24K0578-01 Prepared: 06-Dec-2024 Analyzed: 09-Dec-2024 10:59						
COD	96.6	10.0	20.0	mg/L	100	ND	96.5	90-110			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



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Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BML0202 - EPA 9060A

Instrument: TOC-LCSH Analyst: RMS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Blank (BML0202-BLK1)					Prepared: 10-Dec-2024 Analyzed: 10-Dec-2024 07:39				
Total Organic Carbon	ND	0.50	0.50	mg/L					U
LCS (BML0202-BS1)					Prepared: 10-Dec-2024 Analyzed: 10-Dec-2024 08:05				
Total Organic Carbon	21.10	0.50	0.50	mg/L	20.00	106	90-110		



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Certified Analyses included in this Report

Analyte	Certifications
EPA 353.2 in Water	
Nitrate + Nitrite as N	NELAP,DoD-ELAP,WADOE
Nitrite-N	WADOE,NELAP,DoD-ELAP
EPA 375.2 in Water	
Sulfate	WADOE,NELAP
EPA 410.4 in Water	
COD	DoD-ELAP,NELAP,WADOE
EPA 6010D in Water	
Iron	WADOE,NELAP,DoD-ELAP
Manganese	WADOE,NELAP,DoD-ELAP
Zinc	WADOE,NELAP,DoD-ELAP
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroeth	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE



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cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE



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n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
2-Pentanone	WADOE

EPA 9060A in Water

Total Organic Carbon	DoD-ELAP,WADOE,NELAP
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SM 4500-NH3 H-11 in Water

Ammonia-N	WADOE,DoD-ELAP,NELAP
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Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2025
WADOE	WA Dept of Ecology	C558	06/30/2025
WA-DW	Ecology - Drinking Water	C558	06/30/2025



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Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
H	Hold time violation - Hold time was exceeded.
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

