

MEMO

To: Greg Rudloff, USEPA
From: Thomas E. Peters, CPG, CHMM
CC: David Favero, RACER Trust
Date: June 20, 2023

Project #: R2330031
Re: RACER Van Buren Landfill Site – Spring 2023 Semi-Annual Ground Water Monitoring Results

Tables, Figures and Attachments Included in this Memo are:

- Table 1, Analytes for Semi-Annual Ground Water Monitoring
- Table 2, Summary of Groundwater Sample Results (Non-Residential)
- Table 3, Summary of Groundwater Sample Results (Residential)
- Table 4, Total Depth to Bottom of Wells and Estimated Sediment Accumulation
- Figure 1, Site Location Map
- Figure 2, Groundwater Elevation Contour Map
- Figure 3, Monitoring Well Analytical Summary
- Figure 4, Dissolved Iron Concentration Map
- Attachment 1, Low Flow Ground Water Field Sampling Forms
- Attachment 2, Laboratory Analytical Data Reports

The Mannik & Smith Group, Inc. (MSG) has been performing ground water sampling activities at the Van Buren Landfill (VBL) Property located northeast of the Ecorse Road / Michigan Avenue intersection in Van Buren Township, Wayne County, Michigan (Site) on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust. *Figure 1, Site Location Map*, depicts the location of the Site relative to nearby roads and major topographic features.

Previous phases of investigation and associated findings were documented in the following reports: Phase IA Site Investigation, dated February 19, 2013; *RACER Van Buren Landfill Site – Phase IB Site Investigation*, dated November 20, 2013; *Phase II Site Investigation*, dated March 12, 2014; *Phase III Site Investigation*, dated September 4, 2014; and *RACER Van Buren Landfill Site – Phase IV Site Investigation*, dated July 23, 2015. Previous Semi-Annual Ground Water Sampling reports for the Fall, 2015, Spring and Fall 2016, Spring and Fall 2017, Spring and Fall 2018, Spring and Fall 2019, and Spring and Fall 2020 semi-annual ground water sampling events were sent in 2016, 2017, 2018, 2019, 2020, 2021 and 2022 respectively (results for all other semi-annual sampling events were discussed in the investigation reports).

Since September 2012, MSG has conducted semi-annual ground water monitoring in accordance with *USEPA Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures and the Site Sampling Analysis Plan (SAP)*. Proposed modifications to the Semi-Annual Ground Water Sampling Plan were approved by the USEPA Project Manager, Christopher Black via email on November 10, 2015. Since October, 2022, sampling has been completed pursuant to the ground water monitoring plan in the USEPA approved May 2022 Corrective Measures Implementation Plan and the sampling is now also completed in accordance with the February 2023 Quality Assurance Project Plan (QAPP). The Spring sampling event includes more wells than the Fall event.

Per the access agreement with General Motors LLC (GM), the Spring 2023 Semi Annual Ground Water Sampling activities completed on the General Motors Property are summarized in a separate memo.

SPRING 2023 SEMI-ANNUAL GROUND WATER MONITORING

The Spring 2023 Semi-Annual Ground Water Sampling event which was completed between April 14, 2023 to May 5, 2023 by Eric Robinson and Andrew Hildebrandt. *Table 1, Analytes for Semi-Annual Ground Water Monitoring* depicts the analyte list utilized during sampling of the monitoring wells associated with the Site. Total well depths were measured at every well to calculate the amount of sediment accumulation in each well.

Ground water sampling field sheets can be found in *Attachment 1, Low Flow Ground Water Field Sampling Forms*. Ground water sampling activities were conducted in general accordance with *USEPA Low-flow (Minimal Drawdown) Ground-Water Sampling Procedures and the Site SAP/QAPP*. Samples were analyzed for total and dissolved Aluminum, Iron and Manganese. Samples from MW-23 and MW-10 were analyzed for VOCs in addition to the dissolved metals listed above.

HYDROGEOLOGY

Depth to groundwater was measured in the approved set of existing monitoring wells located on the Van Buren Landfill Site and associated adjacent properties. Groundwater elevations in the monitored wells were similar to previous elevations in these wells, with slightly lower elevations (approximately 1.0 foot) of groundwater noted.

A total of 19 monitoring wells were gauged during this event to assess the ground water fluctuations at the Site. Inadvertently, five (5) monitoring wells were not gauged (MW-13, MW-14, MW-15, MW-16, and MW-28). While these measurements were not collected, it is believed there is still good representation of ground water movement at the Site due to the distribution of and data from the other wells. The absence of the five (5) wells is not believed to drastically impact the results of the contours and the overall understanding of the ground water on Site.

GROUND WATER SAMPLE RESULTS

A summary of ground water sample analytical results compared to generic non-residential cleanup criteria are summarized in *Table 2, Summary of Ground Water Sample Results (Non-Residential)*. Results compared to generic residential cleanup criteria are summarized in *Table 3 Summary of Ground Water Sample Results (Residential)*. In addition, total well depths along with estimated sediment accumulation for each well monitored this event are summarized in *Table 4, Total Depth to Bottom of Wells and Estimated Sediment Accumulation*. The laboratory reports can be found in *Attachment 2, Laboratory Analytical Data Reports*. The reported concentrations for the most recent five (5) monitoring events for the wells monitored during this event are depicted on *Figure 3, Monitoring Well Analytical Summary*.

SUMMARY AND RECOMMENDATIONS

In summary, the ground water sample analytical results from the Spring 2023 Semi-Annual Ground Water Monitoring Event were very similar to previous ground water sampling results. There is a concern that the total metals results are being influenced by sediment build up in the wells and in turn, by turbidity of the water as a result of the sampling activities. Therefore, it is believed that dissolved metal concentrations are more representative of ground water quality compared to total metals and dissolved results are discussed below.

The 10 monitoring wells offsite (MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-25, MW-26, MW-29, and MW-30) were compared to EGLE Part 201 Generic Residential Cleanup Criteria. Four (4) offsite wells contained concentrations of dissolved iron above Residential Health-Based Water Value criteria (MW-20, MW-22, MW-23, and MW-30). Dissolved concentrations of aluminum and manganese were not found above Residential Health-Based Water Value criteria in any of the 10 offsite wells. In addition to the dissolved metals, MW-23 was also analyzed for VOCs. This sample contained a concentration of Chlorobenzene that exceeded Ground Water Surface Water Interface Criteria (GSI) (III) but there is no nearby surface water.

The 14 monitoring wells found onsite were compared to EGLE Part 201 Generic Non-Residential Cleanup Criteria (MW-1R, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-17, MW-27, and MW-34). Of the 14 wells onsite only four (4) wells contained concentrations of dissolved iron above Non-Residential Health-Based Drinking Water Value criteria (MW-1R, MW-5, MW-9, and MW-10). Dissolved concentrations of aluminum and manganese were not found above Non-residential Health-Based Water Value criteria in any of the 14 wells onsite. In addition to the dissolved metals, MW-10 was analyzed for VOCs as well. This sample contained a concentration of Chlorobenzene that exceeded Ground Water Surface Water Interface Criteria (GSI) (III) but there is no nearby surface water.

Based on the dissolved concentrations of iron, aluminum and manganese over time, and in conjunction with the length of time that the landfill has been closed (approximately 47 years), the contaminants related to the Site appear to be stable.

Total well depths were compared to previous well depths and the amount of sediment accumulation in each well was calculated. The amount of sediment accumulation was calculated for each well by comparing the total well depths to the well depths from previous testing. As a result, it was determined five (5) monitoring wells (MW-1R, MW-3, MW-12, MW-17, and MW-34) on and around the Site had accumulated over 1.0 foot of sediment. Nineteen (19) wells have an estimated sediment accumulation of less than 1.0 feet. All subsequent monitoring events will include measurement and recording of sediment volume within each monitoring well and purging of water to attempt to lower turbidity to less than 10 NTU before a water sample is collected. Well redevelopment has been scheduled for the five (5) wells that contained greater than 1.0 foot of sediment.

TABLE 1

Analytes for Semi-Annual Ground Water Monitoring



Table 1
Proposed Analytes for Semi-Annual Ground Water Monitoring
 Van Buren Landfill Site
 Van Buren Township, Wayne County, Michigan

| Monitoring Well | Location | Purpose of MW ¹ | Sampling Event 1 (yearly - Spring) | | | Sampling Event 2 (yearly - Autumn) | | |
|-------------------------|---------------------------------|--------------------------------|---------------------------------------|---------------------------|-------------------------------|---------------------------------------|---------------------------|-------------------------------|
| | | | VOCs | Total Metals ² | Dissolved Metals ² | VOCs | Total Metals ² | Dissolved Metals ² |
| USEPA Testing Method | | | 8260 | 6020A/7470 | | 8260 | 6020A/7470 | |
| MW-1R ³ | North Perimeter of Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-3 ³ | East Perimeter of Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-4 | On-Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-5 | North West Perimeter of Site | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-6 | On-Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-7 | South West Perimeter of Site | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-8 | Ecorse Rd (westbound) ROW | Hydro Assessment, Metals | | √ | √ | | | |
| MW-9 | West Perimeter of Site | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-10 | North Perimeter of Site | Hydro Assessment, VOCs, Metals | √ | √ | √ | √ | | |
| MW-11 | North East Perimeter of Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-12 ³ | On-Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-13 | On-Site | Hydro Assessment | | | | | | |
| MW-14 | On-Site | Hydro Assessment | | | | | | |
| MW-15 | On-Site | Hydro Assessment | | | | | | |
| MW-16 | On-Site | Hydro Assessment | | | | | | |
| MW-17 ³ | South East Perimeter of Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-18 | Ecorse Rd (eastbound) ROW | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-19 | Ecorse Rd (eastbound) ROW | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-20 | Ecorse Rd (eastbound) ROW | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-21 | North of Site (Subaru Property) | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-22 | North of Site (Subaru Property) | Hydro Assessment, Metals | | √ | √ | | | |
| MW-23 | North of Site (Subaru Property) | Hydro Assessment, VOCs, Metals | √ | √ | √ | √ | | |
| MW-24 ⁴ | North of Site (Subaru Property) | Hydro Assessment, VOCs, Metals | | | | | | |
| MW-25 | North of Site (Subaru Property) | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-26 | North of Site (Subaru Property) | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-27 | East Perimeter of Site | Hydro Assessment, Metals | | √ | √ | | | |
| MW-28 | On-Site | Hydro Assessment | | | | | | |
| MW-29 | Michigan Ave (Westbound) ROW | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-30 | Michigan Ave (Westbound) ROW | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-31 | GM Property | Hydro Assessment, Metals | | √ | √ | | | |
| MW-32 ³ | GM Property | Hydro Assessment, Metals | | √ | √ | √ | | √ |
| MW-33 | GM Property | Hydro Assessment, Metals | | √ | √ | | | |
| MW-34 ³ | Rawsonville Rd/Michigan Ave | Hydro Assessment, Metals | | √ | √ | | | |
| CRA-265M ⁴ | Willow Run Powertrain Plant | Hydro Assessment | | | | | | |
| CRA-266M ⁴ | Willow Run Powertrain Plant | Hydro Assessment, Metals | | | | | | |
| CRA-833M ⁴ | Willow Run Powertrain Plant | Hydro Assessment | | | | | | |
| CRA-834M ⁴ | Willow Run Powertrain Plant | Hydro Assessment | | | | | | |
| Total Number of Samples | | | 2 | 28 | 28 | 2 | 12 | 12 |

Notes:

¹ = Constituents historically and/or currently detected in monitoring well exceeding applicable Michigan Part 201 Generic Cleanup Criteria.

² = Al, Fe, Mn (Method 6020A).

³ = MW -1R, MW-3, MW-12, MW-17, MW-32, and MW-34 sediment accumulation greater than 1.0; recommended well redevelopment

⁴ = Abandoned

Green shading indicates MWs included in monitoring events; check mark indicates analytical parameter

TABLE 2

Summary of Groundwater Sample Results (Non-Residential)



**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Volatile Organic Compounds (VOCs) | | | | | | | | | | | |
|--|----------------------------|-------------|-----------------------------------|---------------------|---------------------|-----------------------------|---------------|----------|----------------------|------------------|---------------|--------------|---------------|------------|
| | | | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromodichloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloromethane | Chloroform |
| Non-residential Drinking Water Criteria (II) | | | 38,000 | 600 (A) | 75 (A) | 5,200 | 2,100 | 5.0 (A) | 80 (A,W) | 2,300 | 100 (A) | 1,700 | 1,100 | 80 (A,W) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 2,200 | 13 | 17 | ID | 1,700 | 200 (X) | ID | ID | 25 | 1,100 (X) | ID | 350 |
| GSI Final Acute Value (FAV) | | | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | ID | 450 | 20,000 | NA | 11,000 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2.4E+8 (S) | 1.6E+05 (S) | 74,000 (S) | 2.0E+07 (S) | 1.0E+09 (D,S) | 35,000 | 37,000 | 5.5E+05 | 4.7E+05 (S) | 5.7E+06 (S) | 4.5E+04 | 1.8E+05 |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (c)) | | | 1.8E+07 | 32,000 | 380 | 1.1E+06 | 3.4E+07 | 140 | NA | 9,900 | 4,600 | 1.80E+05 | NA | 720 |
| Groundwater Concentration for Vapor Intrusion (GW _{VI} (c)) (a) | | | 18,000 | 32,000 | 380 | 4,400,000 | 34,000,000 | 1.4E+02 | NA | 9,900 | 4,600 | 180,000 | NA | 7.2E+02 |
| Water Solubility (VII) | | | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | |
| MW-1 [†] | W-R2330025-102919-KRM-014 | 10/29/2019 | | | | | | | | | | | | |
| MW-1 | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | | | | |
| MW-1 (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | | | | |
| MW-1 | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330026-110620-KRM-023 | 11/6/2020 | | | | | | | | | | | | |
| MW-1 | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330027-041521-KRM-029 | 4/15/2021 | | | | | | | | | | | | |
| MW-1 | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | | | | | | | | | | | | |
| MW-1 (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1R [†] | W-R2330031-042123-ERR-027 | 4/21/2023 | | | | | | | | | | | | |
| MW-1R | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330026-052120-KRM-027 | 5/21/2020 | | | | | | | | | | | | |
| MW-3 | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330026-110520-KRM-017 | 11/5/2020 | | | | | | | | | | | | |
| MW-3 | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | | | | | | | | | | | | |
| MW-3 (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330027-041321-KRM-014 | 4/13/2021 | | | | | | | | | | | | |
| MW-3 | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330027-042522-KADH-004 | 4/25/2022 | | | | | | | | | | | | |
| MW-3 | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330031-042023-ERR-016 | 4/20/2023 | | | | | | | | | | | | |
| MW-3 | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330026-052120-KRM-023 | 5/21/2020 | | | | | | | | | | | | |
| MW-4 | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330026-110520-KRM-015 | 11/5/2020 | | | | | | | | | | | | |
| MW-4 | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330027-041321-KRM-010 | 4/13/2021 | | | | | | | | | | | | |
| MW-4 | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330027-042622-ADP-008 | 4/26/2022 | | | | | | | | | | | | |
| MW-4 | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330031-050423-ERR-007 | 5/4/2023 | | | | | | | | | | | | |
| MW-4 | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Diphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol |
|--|----------------------------|-------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|
| Non-residential Drinking Water Criteria (II) | | | NA | 80 (A,W) | 4,800 | 74 (E) | 2,300 | NA | 790 (E) | 280 (E) | ID | 130 | 750 | 1,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 |
| GSI Final Acute Value (FAV) | | | ID | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | NA |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NA | 1.10E+05 | 3.0E+05 | 1.7E+05 (S) | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 1.1E+06 | 25,000 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (c)) | | | NA | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI} (a)) | | | 8,100 | NA | NA | 2.6E+03 | 53 | NA | 150,000 | 10,000 (d) | ID | NA | 3,900 | NA |
| Water Solubility (VII) | | | NA | 2.60E+06 | 3.0E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | |
| MW-1 [†] | W-R2330025-102919-KRM-014 | 10/29/2019 | | | | | | | | | | | | |
| MW-1 | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | | | | |
| MW-1 (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | | | | |
| MW-1 | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330026-110620-KRM-023 | 11/6/2020 | | | | | | | | | | | | |
| MW-1 | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330027-041521-KRM-029 | 4/15/2021 | | | | | | | | | | | | |
| MW-1 | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | | | | | | | | | | | | |
| MW-1 (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1R [†] | W-R2330031-042123-ERR-027 | 4/21/2023 | | | | | | | | | | | | |
| MW-1R | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330026-052120-KRM-027 | 5/21/2020 | | | | | | | | | | | | |
| MW-3 | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330026-110520-KRM-017 | 11/5/2020 | | | | | | | | | | | | |
| MW-3 | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | | | | | | | | | | | | |
| MW-3 (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330027-041321-KRM-014 | 4/13/2021 | | | | | | | | | | | | |
| MW-3 | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330027-042522-KADH-004 | 4/25/2022 | | | | | | | | | | | | |
| MW-3 | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330031-042023-ERR-016 | 4/20/2023 | | | | | | | | | | | | |
| MW-3 | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330026-052120-KRM-023 | 5/21/2020 | | | | | | | | | | | | |
| MW-4 | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330026-110520-KRM-015 | 11/5/2020 | | | | | | | | | | | | |
| MW-4 | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330027-041321-KRM-010 | 4/13/2021 | | | | | | | | | | | | |
| MW-4 | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330027-042622-ADP-008 | 4/26/2022 | | | | | | | | | | | | |
| MW-4 | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330031-050423-ERR-007 | 5/4/2023 | | | | | | | | | | | | |
| MW-4 | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | | |
|--|----------------------------|-------------|--|--------------------|-----------------|----------------------------|--------------|--------------|--------------|------------------------|-------------|--------------|-------------------------|-------------------|
| | | | 4-Methylphenol | 2,4-Dimethylphenol | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzyl phthalate | Carbazole | Dibenzofuran | Dichlorodifluoromethane | Diethyl phthalate |
| Non-residential Drinking Water Criteria (II) | | | 1,000 | 1,000 | NA | 6.0 (A) | 3,800 | 4,400 | NA | 2,700 (S) | 350 | ID | 4,800 | 16,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 30 (M); 25 | 380 | NA | 25 | 38 | ID | NA | 67 (X) | 10 (M); 4.0 | 4.0 | ID | 110 |
| GSI Final Acute Value (FAV) | | | 1,400 | 2,700 | ID | 285 | 200 | NA | NA | 72 | NA | ID | 2,000 | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | 10,000 (S) | 3.0E+05 | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (_{CR})) | | | | NLV | NA | NLV | NA | NA | NA | NA | NLV | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (a) | | | NA | NA | NA | NA | 2.30E+05 | NA | NA | NA | NLV | NA | NA | NA |
| Water Solubility (VII) | | | 2.80E+07 | 7.87E+06 | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.69E+03 | 7,480 | 10,000 | 3.0E+05 | 1.08E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | NA | NA | ID | ID | NA | ID | ID | ID | ID | NA |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | |
| MW-1 [†] | W-R2330025-102919-KRM-014 | 10/29/2019 | | | | | | | | | | | | |
| MW-1 | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | | | | |
| MW-1 (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | | | | |
| MW-1 | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330026-110620-KRM-023 | 11/6/2020 | | | | | | | | | | | | |
| MW-1 | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] | W-R2330027-041521-KRM-029 | 4/15/2021 | | | | | | | | | | | | |
| MW-1 | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | | | | | | | | | | | | |
| MW-1 (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-1R [†] | W-R2330031-042123-ERR-027 | 4/21/2023 | | | | | | | | | | | | |
| MW-1R | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330026-052120-KRM-027 | 5/21/2020 | | | | | | | | | | | | |
| MW-3 | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330026-110520-KRM-017 | 11/5/2020 | | | | | | | | | | | | |
| MW-3 | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | | | | | | | | | | | | |
| MW-3 (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330027-041321-KRM-014 | 4/13/2021 | | | | | | | | | | | | |
| MW-3 | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330027-042522-KADH-004 | 4/25/2022 | | | | | | | | | | | | |
| MW-3 | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-3 [†] | W-R2330031-042023-ERR-016 | 4/20/2023 | | | | | | | | | | | | |
| MW-3 | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330026-052120-KRM-023 | 5/21/2020 | | | | | | | | | | | | |
| MW-4 | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330026-110520-KRM-015 | 11/5/2020 | | | | | | | | | | | | |
| MW-4 | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330027-041321-KRM-010 | 4/13/2021 | | | | | | | | | | | | |
| MW-4 | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330027-042622-ADP-008 | 4/26/2022 | | | | | | | | | | | | |
| MW-4 | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-4 [†] | W-R2330031-050423-ERR-007 | 5/4/2023 | | | | | | | | | | | | |
| MW-4 | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dimethyl phthalate | Di-n-butyl phthalate | Fluoranthene | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium |
|--|----------------------------|-------------|--------------------|----------------------|--------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 2.1E+05 | 2,500 | 210 (S) | 2,000 (S) | 1,500 | 150 | 140 (S) | 13,000 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | 4,100 | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | 9.7 | 1.6 | 12 | 11 | 2.0 (M); 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) |
| GSI Final Acute Value (FAV) | | | NA | 75 | 220 | 200 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | 210 (S) | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL}) (c)(6) | | | NA | NA | 71,000 | 3,00E-05 | NA | 110 | 4.10E-05 | NA | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | NA | NA | NA | 300,000 | 1,200 | 4.8E+2 | 1.7E+06 | NA | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | 4.19E+06 | 11,200 | 206 | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | NA | NA | ID | ID | NA | ID | ID | NA | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | |
| MW-1 [†] | W-R2330025-102919-KRM-014 | 10/29/2019 | | | | | | | | | <8.0 | NS | NS | NS |
| MW-1 | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | 19 | NS | NS | NS |
| MW-1 (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-1 [†] | W-R2330026-052720-KRM-035 | 5/27/2020 | | | | | | | | | 17 | NS | NS | NS |
| MW-1 | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8 | NS | NS | NS |
| MW-1 [†] | W-R2330026-110620-KRM-023 | 11/6/2020 | | | | | | | | | 29 | NS | NS | NS |
| MW-1 | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-1 [†] | W-R2330027-041521-KRM-029 | 4/15/2021 | | | | | | | | | 29 | NS | NS | NS |
| MW-1 | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-1 [†] (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | | | | | | | | | 19 | NS | NS | NS |
| MW-1 (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-1R [†] | W-R2330031-042123-ERR-027 | 4/21/2023 | | | | | | | | | 360 | NS | NS | NS |
| MW-1R | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-3 [†] | W-R2330026-052120-KRM-027 | 5/21/2020 | | | | | | | | | <8.0 | NS | NS | NS |
| MW-3 | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | 13 | NS | NS | NS |
| MW-3 [†] | W-R2330026-110520-KRM-017 | 11/5/2020 | | | | | | | | | 2,700 | NS | NS | NS |
| MW-3 | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-3 [†] (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | | | | | | | | | 6,100 | NS | NS | NS |
| MW-3 (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | 48 | NS | NS | NS |
| MW-3 [†] | W-R2330027-041321-KRM-014 | 4/13/2021 | | | | | | | | | 73 | NS | NS | NS |
| MW-3 | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-3 [†] | W-R2330027-042522-KADH-004 | 4/25/2022 | | | | | | | | | 65 | NS | NS | NS |
| MW-3 | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 11 | NS | NS | NS |
| MW-3 [†] | W-R2330031-042023-ERR-016 | 4/20/2023 | | | | | | | | | 23 | NS | NS | NS |
| MW-3 | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10.0 | NS | NS | NS |
| MW-4 [†] | W-R2330026-052120-KRM-023 | 5/21/2020 | | | | | | | | | 47 | NS | NS | NS |
| MW-4 | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | 8.8 J | NS | NS | NS |
| MW-4 [†] | W-R2330026-110520-KRM-015 | 11/5/2020 | | | | | | | | | 10 | NS | NS | NS |
| MW-4 | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-4 [†] | W-R2330027-041321-KRM-010 | 4/13/2021 | | | | | | | | | 150 | NS | NS | NS |
| MW-4 | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-4 [†] | W-R2330027-042622-ADP-008 | 4/26/2022 | | | | | | | | | 80 | NS | NS | NS |
| MW-4 | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 19 | NS | NS | NS |
| MW-4 [†] | W-R2330031-050423-ERR-007 | 5/4/2023 | | | | | | | | | 23 | NS | NS | NS |
| MW-4 | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | |
|--|----------------------------|-------------|-----------|---------|----------|--------|------------|---------------|----------|----------|---------------|---------------|---------|-----------|
| | | | Beryllium | Cadmium | Chromium | Cobalt | Copper (B) | Cyanide (P R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel |
| Non-residential Drinking Water Criteria (II) | | | 4.0 (A) | 5.0 (A) | 100 (A) | 100 | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 1.1E+06 | 50 (E) | 2.0 (A) | 100 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | 4,000 | NA | 5,600 | NA | 2,500 | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 6.7 (G) | 3 (G) | 11 | 100 | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 13 (G) | 1,588 | 740 | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (c,d)) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (e) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 56 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | |
| MW-1 ^A | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS | NS | 12,000 | NS | NS | 180 | NS | NS |
| MW-1 | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS | NS | 12,000 | NS | NS | 200 | NS | NS |
| MW-1 ^A (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 200 | NS | NS |
| MW-1 (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 200 | NS | NS |
| MW-1 ^A | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 230 | NS | NS |
| MW-1 | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS | NS | 13,000 | NS | NS | 230 | NS | NS |
| MW-1 ^A | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 15,000 | NS | NS | 290 | NS | NS |
| MW-1 | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 15,000 | NS | NS | 240 | NS | NS |
| MW-1 ^A | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 19,000 | NS | NS | 340 | NS | NS |
| MW-1 | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 16,000 | NS | NS | 290 | NS | NS |
| MW-1 ^A (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 19,000 | NS | NS | 320 | NS | NS |
| MW-1 (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 13,000 | NS | NS | 290 | NS | NS |
| MW-1R ^A | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS | NS | 15,000 | NS | NS | 320 | NS | NS |
| MW-1R | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS | NS | 15,000 | NS | NS | 540 | NS | NS |
| MW-3 ^A | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS | NS | 5,800 | NS | NS | 290 | NS | NS |
| MW-3 | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS | NS | 6,000 | NS | NS | 290 | NS | NS |
| MW-3 ^A | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 16,000 | NS | NS | 290 | NS | NS |
| MW-3 | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 8,600 | NS | NS | 230 | NS | NS |
| MW-3 ^A (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 24,000 | NS | NS | 360 | NS | NS |
| MW-3 (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 13,000 | NS | NS | 140 | NS | NS |
| MW-3 ^A | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 7,800 | NS | NS | 100 | NS | NS |
| MW-3 | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 4,300 | NS | NS | 98 | NS | NS |
| MW-3 ^A | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS | NS | 2,900 | NS | NS | 120 | NS | NS |
| MW-3 | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS | NS | 1,300 | NS | NS | 130 | NS | NS |
| MW-3 ^A | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS | NS | 2,700 | NS | NS | 29 | NS | NS |
| MW-3 | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS | NS | 2,800 | NS | NS | 29 | NS | NS |
| MW-4 ^A | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS | NS | 7,900 | NS | NS | 540 | NS | NS |
| MW-4 | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS | NS | 7,200 | NS | NS | 540 | NS | NS |
| MW-4 ^A | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 83 | NS | NS |
| MW-4 | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 86 | NS | NS |
| MW-4 ^A | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 16,000 | NS | NS | 110 | NS | NS |
| MW-4 | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 89 | NS | NS |
| MW-4 ^A | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 6,600 | NS | NS | 810 | NS | NS |
| MW-4 | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 5,600 | NS | NS | 800 | NS | NS |
| MW-4 ^A | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS | NS | 80 | NS | NS | 4.2 J | NS | NS |
| MW-4 | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS | NS | <80 | NS | NS | 2.4 J | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Selenium (E) | Silver | Thallium | Vanadium | Zinc |
|--|----------------------------|-------------|--------------|---------------|----------|----------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 50 (A) | 98 | 2.0 (A) | 62 | 5,000 (E) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW ₁ SL _(c,d)) | | | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{v,i}) (a) | | | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | |
| MW-1 ^A | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS |
| MW-1 | W-R2330025-102919-KRM-014 | 10/29/2019 | NS | NS | NS | NS | NS |
| MW-1 ^A (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS |
| MW-1 (DUP) | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS |
| MW-1 ^A | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS |
| MW-1 | W-R2330026-052720-KRM-035 | 5/27/2020 | NS | NS | NS | NS | NS |
| MW-1 ^A | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-1 | W-R2330026-110620-KRM-023 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-1 ^A | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-1 | W-R2330027-041521-KRM-029 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-1 ^A (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-1 (DUP) | W-R2330027-041521-KRM-031 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-1R ^A | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS |
| MW-1R | W-R2330031-042123-ERR-027 | 4/21/2023 | NS | NS | NS | NS | NS |
| MW-3 ^A | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-3 | W-R2330026-052120-KRM-027 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-3 ^A | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-3 | W-R2330026-110520-KRM-017 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-3 ^A (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-3 (DUP) | W-R2330026-110520-KRM-018 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-3 ^A | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-3 | W-R2330027-041321-KRM-014 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-3 ^A | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS |
| MW-3 | W-R2330027-042522-KADH-004 | 4/25/2022 | NS | NS | NS | NS | NS |
| MW-3 ^A | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS |
| MW-3 | W-R2330031-042023-ERR-016 | 4/20/2023 | NS | NS | NS | NS | NS |
| MW-4 ^A | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-4 | W-R2330026-052120-KRM-023 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-4 ^A | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-4 | W-R2330026-110520-KRM-015 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-4 ^A | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-4 | W-R2330027-041321-KRM-010 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-4 ^A | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-4 | W-R2330027-042622-ADP-008 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-4 ^A | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS |
| MW-4 | W-R2330031-050423-ERR-007 | 5/4/2023 | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Volatile Organic Compounds (VOCs) | | | | | | | | | | | |
|--|----------------------------|------------|-----------------------------------|---------------------|---------------------|-----------------------------|---------------|----------|--------------------|------------------|---------------|--------------|--------------|------------|
| | | | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromochloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloroethane | Chloroform |
| Non-residential Drinking Water Criteria (II) | | | 38,000 | 600 (A) | 75 (A) | 5,200 | 2,100 | 5.0 (A) | 80 (A,W) | 2,300 | 100 (A) | 1,700 | 1,100 | 80 (A,W) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 2,200 | 13 | 17 | ID | 1,700 | 200 (X) | ID | ID | 25 | 1,100 (X) | ID | 350 |
| GSI Final Acute Value (FAV) | | | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | ID | 450 | 20,000 | NA | 11,000 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2.4E+8 (S) | 1.6E+05 (S) | 74,000 (S) | 2.0E+07 (S) | 1.0E+09 (D,S) | 35,000 | 37,000 | 5.5E+05 | 4.7E+05 (S) | 5.7E+06 (S) | 4.5E+04 | 1.8E+05 |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL} (G)) | | | 1.8E+07 | 32,000 | 380 | 1.1E+06 | 3.4E+07 | 140 | NA | 9,900 | 4,600 | 1.80E+05 | NA | 720 |
| Groundwater Concentration for Vapor Intrusion (GW _{VI})(a) | | | 18,000 | 32,000 | 380 | 4,400,000 | 34,000,000 | 1.4E+02 | NA | 9,900 | 4,600 | 180,000 | NA | 7.2E+02 |
| Water Solubility (VII) | | | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID |
| MW-5 ^a | W-R2330026-110620-KRM-021 | 11/6/2020 | | | | | | | | | | | | |
| MW-5 | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330027-041621-KRM-034 | 4/16/2021 | | | | | | | | | | | | |
| MW-5 | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330027-042622-ADH-011 | 4/26/2022 | | | | | | | | | | | | |
| MW-5 | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330028-102722-ADH-006 | 10/27/2022 | | | | | | | | | | | | |
| MW-5 | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330031-041823-ERR-004 | 4/18/2023 | | | | | | | | | | | | |
| MW-5 | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330026-052220-KRM-030 | 5/22/2020 | | | | | | | | | | | | |
| MW-6 | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330026-110520-KRM-013 | 11/5/2020 | | | | | | | | | | | | |
| MW-6 | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330027-041321-KRM-006 | 4/13/2021 | | | | | | | | | | | | |
| MW-6 | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330027-042622-SSR-007 | 4/26/2022 | | | | | | | | | | | | |
| MW-6 | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R233003105-0423-ERR-025 | 5/4/2023 | | | | | | | | | | | | |
| MW-6 | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330026-110920-KRM-026 | 11/9/2020 | | | | | | | | | | | | |
| MW-7 | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330027-041321-KRM-018 | 4/14/2021 | | | | | | | | | | | | |
| MW-7 | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330027-042622-ADH-013 | 4/26/2022 | | | | | | | | | | | | |
| MW-7 | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330028-102722-ADH-003 | 10/27/2022 | | | | | | | | | | | | |
| MW-7 | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | | | | | | | | | | | | |
| MW-7 (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330031-041823-ERR-005 | 4/18/2023 | | | | | | | | | | | | |
| MW-7 | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Biphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol |
|--|----------------------------|------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|
| Non-residential Drinking Water Criteria (II) | | | NA | 80 (A,W) | 4,800 | 74 (E) | 2,300 | NA | 790 (E) | 280 (E) | ID | 130 | 750 | 1,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 |
| GSI Final Acute Value (FAV) | | | ID | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | NA |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NA | 1.10E+05 | 3.0E+05 | 1.7E+05 (S) | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 1.1E+06 | 25,000 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL(GD)}) | | | NA | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC(a)}) (a) | | | 8,100 | NA | NA | 2.6E+03 | 53 | NA | 150,000 | 10,000 (d) | ID | NA | 3,900 | NA |
| Water Solubility (VII) | | | NA | 2.60E+06 | 3.0E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA |
| MW-5 ^a | W-R2330026-110620-KRM-021 | 11/6/2020 | | | | | | | | | | | | |
| MW-5 | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330027-041621-KRM-034 | 4/16/2021 | | | | | | | | | | | | |
| MW-5 | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330027-042622-ADH-011 | 4/26/2022 | | | | | | | | | | | | |
| MW-5 | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330028-102722-ADH-006 | 10/27/2022 | | | | | | | | | | | | |
| MW-5 | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330031-041823-ERR-004 | 4/18/2023 | | | | | | | | | | | | |
| MW-5 | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330026-052220-KRM-030 | 5/22/2020 | | | | | | | | | | | | |
| MW-6 | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330026-110520-KRM-013 | 11/5/2020 | | | | | | | | | | | | |
| MW-6 | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330027-041321-KRM-006 | 4/13/2021 | | | | | | | | | | | | |
| MW-6 | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330027-042622-SSR-007 | 4/26/2022 | | | | | | | | | | | | |
| MW-6 | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R233003105-0423-ERR-025 | 5/4/2023 | | | | | | | | | | | | |
| MW-6 | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330026-110920-KRM-026 | 11/9/2020 | | | | | | | | | | | | |
| MW-7 | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330027-041321-KRM-018 | 4/14/2021 | | | | | | | | | | | | |
| MW-7 | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330027-042622-ADH-013 | 4/26/2022 | | | | | | | | | | | | |
| MW-7 | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330028-102722-ADH-003 | 10/27/2022 | | | | | | | | | | | | |
| MW-7 | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | | | | | | | | | | | | |
| MW-7 (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330031-041823-ERR-005 | 4/18/2023 | | | | | | | | | | | | |
| MW-7 | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

Table 2
Summary Of Ground Water Sample Results

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | |
|--|-----------------------------|------------|--|--------------------|-----------------|----------------------------|--------------|--------------|--------------|------------------------|-----------|--------------|
| | | | 4-Methylphenol | 2,4-Dimethylphenol | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzyl phthalate | Carbazole | Dibenzofuran |
| Non-residential Drinking Water Criteria (II) | 1,000 | 1,000 | NA | 6.0 (A) | 3,800 | 4,400 | NA | 2,700 (S) | 350 | ID | 4,800 | 16,000 |
| Non-residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | 30 (M); 25 | 380 | NA | 25 | 38 | ID | NA | 67 (X) | 10 (M); 4.0 | 4.0 | ID | 110 |
| GSI Final Acute Value (FAV) | 1,400 | 2,700 | ID | 285 | 200 | NA | NA | 72 | NA | NA | ID | 2,000 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | NLV | NLV | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | 10,000 (S) | 3.0E+05 | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL(GD)}) | | NLV | NA | NLV | NA | NA | NA | NA | NLV | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI(GD)}) (a) | NA | NA | NA | NA | 2.30E+05 | NA | NA | NA | NLV | NA | NA | NA |
| Water Solubility (VII) | 2.80E+07 | 7.87E+06 | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.69E+03 | 7,480 | 10,000 | 3.0E+05 | 1.08E+06 |
| Flammability & Explosivity Screening Level (VIII) | NA | ID | NA | NA | ID | ID | NA | ID | ID | ID | ID | NA |
| MW-5 ^a | W-R2330026-110620-KRM-021 | 11/6/2020 | | | | | | | | | | |
| MW-5 | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330027-041621-KRM-034 | 4/16/2021 | | | | | | | | | | |
| MW-5 | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330027-042622-ADH-011 | 4/26/2022 | | | | | | | | | | |
| MW-5 | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330028-102722-ADH-006 | 10/27/2022 | | | | | | | | | | |
| MW-5 | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-5 ^a | W-R2330031-041823-ERR-004 | 4/18/2023 | | | | | | | | | | |
| MW-5 | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330026-052220-KRM-030 | 5/22/2020 | | | | | | | | | | |
| MW-6 | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330026-110520-KRM-013 | 11/5/2020 | | | | | | | | | | |
| MW-6 | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330027-041321-KRM-006 | 4/13/2021 | | | | | | | | | | |
| MW-6 | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R2330027-042622-SSR-007 | 4/26/2022 | | | | | | | | | | |
| MW-6 | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-6 ^a | W-R233003105-0423-ERR-025 | 5/4/2023 | | | | | | | | | | |
| MW-6 | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330026-110920-KRM-026 | 11/9/2020 | | | | | | | | | | |
| MW-7 | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330027-041321-KRM-018 | 4/14/2021 | | | | | | | | | | |
| MW-7 | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330027-042622-ADH-013 | 4/26/2022 | | | | | | | | | | |
| MW-7 | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330028-102722-ADH-003 | 10/27/2022 | | | | | | | | | | |
| MW-7 | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a (DUP) | W-R2330028-11/11/22-ADH-014 | 11/11/2022 | | | | | | | | | | |
| MW-7 (DUP) | W-R2330028-11/11/22-ADH-014 | 11/11/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-7 ^a | W-R2330031-041823-ERR-005 | 4/18/2023 | | | | | | | | | | |
| MW-7 | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dimethyl phthalate | D-n-butyl phthalate | Fluoranthene | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium |
|--|----------------------------|------------|--------------------|---------------------|--------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 2.1E+05 | 2,500 | 210 (S) | 2,000 (S) | 1,500 | 150 | 140 (S) | 13,000 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | 4,100 | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | 9.7 | 1.6 | 12 | 11 | 2.0 (M), 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) |
| GSI Final Acute Value (FAV) | | | NA | 75 | 220 | 200 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | 210 (S) | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL(GD)}) | | | NA | NA | 71,000 | 3.00E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (a) | | | NA | NA | NA | 300,000 | 1,200 | 4.8E+2 | 1.7E+06 | NA | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | 4.19E+06 | 11,200 | 206 | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | NA | NA | ID | ID | NA | ID | ID | NA | ID | ID | ID | ID |
| MW-5 ^a | W-R2330026-110620-KRM-021 | 11/6/2020 | | | | | | | | | 400 | NS | NS | NS |
| MW-5 | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-5 ^a | W-R2330027-041621-KRM-034 | 4/16/2021 | | | | | | | | | 150 | NS | NS | NS |
| MW-5 | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-5 ^a | W-R2330027-042622-ADH-011 | 4/26/2022 | | | | | | | | | 630.0 | NS | NS | NS |
| MW-5 | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 76.0 | NS | NS | NS |
| MW-5 ^a | W-R2330028-102722-ADH-006 | 10/27/2022 | | | | | | | | | 53.0 | NS | NS | NS |
| MW-5 | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 8.5 | NS | NS | NS |
| MW-5 ^a | W-R2330031-041823-ERR-004 | 4/18/2023 | | | | | | | | | 52 | NS | NS | NS |
| MW-5 | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-6 ^a | W-R2330026-052220-KRM-030 | 5/22/2020 | | | | | | | | | 54 | NS | NS | NS |
| MW-6 | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-6 ^a | W-R2330026-110520-KRM-013 | 11/5/2020 | | | | | | | | | 1,400 | NS | NS | NS |
| MW-6 | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | 130 | NS | NS | NS |
| MW-6 ^a | W-R2330027-041321-KRM-006 | 4/13/2021 | | | | | | | | | 310 | NS | NS | NS |
| MW-6 | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-6 ^a | W-R2330027-042622-SSR-007 | 4/26/2022 | | | | | | | | | 74 | NS | NS | NS |
| MW-6 | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-6 ^a | W-R233003105-0423-ERR-025 | 5/4/2023 | | | | | | | | | 41 | NS | NS | NS |
| MW-6 | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-7 ^a | W-R2330026-110920-KRM-026 | 11/9/2020 | | | | | | | | | 12 | NS | NS | NS |
| MW-7 | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-7 ^a | W-R2330027-041321-KRM-018 | 4/14/2021 | | | | | | | | | 10 | NS | NS | NS |
| MW-7 | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-7 ^a | W-R2330027-042622-ADH-013 | 4/26/2022 | | | | | | | | | 27.00 | NS | NS | NS |
| MW-7 | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 8.10 | NS | NS | NS |
| MW-7 ^a | W-R2330028-102722-ADH-003 | 10/27/2022 | | | | | | | | | 31.00 | NS | NS | NS |
| MW-7 | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 6.7 | NS | NS | NS |
| MW-7 ^a (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | | | | | | | | | 18.00 | NS | NS | NS |
| MW-7 (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 8.9 | NS | NS | NS |
| MW-7 ^a | W-R2330031-041823-ERR-005 | 4/18/2023 | | | | | | | | | 17 | NS | NS | NS |
| MW-7 | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | |
|--|----------------------------|------------|-----------|---------|----------|--------|------------|---------------|----------|----------|---------------|---------------|---------|-----------|
| | | | Beryllium | Cadmium | Chromium | Cobalt | Copper (B) | Cyanide (P,R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel |
| Non-residential Drinking Water Criteria (II) | | | 4.0 (A) | 5.0 (A) | 100 (A) | 100 | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 1.1E+06 | 50 (E) | 2.0 (A) | 100 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | 4,000 | NA | 5,600 | NA | NA | 2,500 | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 6.7 (G) | 3 (G) | 11 | 100 | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 13 (G) | 1,588 | 740 | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL(GD)}) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{CVI}) (a) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 56 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MW-5 ^a | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 5,700 | NS | NS | 110 | NS | NS |
| MW-5 | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 5,600 | NS | NS | 100 | NS | NS |
| MW-5 ^a | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS | NS | 7,000 | NS | NS | 100 | NS | NS |
| MW-5 | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS | NS | 6,700 | NS | NS | 96 | NS | NS |
| MW-5 ^a | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 8,300 | NS | NS | 100 | NS | NS |
| MW-5 | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 5,700 | NS | NS | 79 | NS | NS |
| MW-5 ^a | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS | NS | 6,500 | NS | NS | 70 | NS | NS |
| MW-5 | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS | NS | 5,800 | NS | NS | 68 | NS | NS |
| MW-5 ^a | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 7,000 | NS | NS | 70 | NS | NS |
| MW-5 | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 6,700 | NS | NS | 69 | NS | NS |
| MW-6 ^a | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS | NS | 840 | NS | NS | 1,500 | NS | NS |
| MW-6 | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS | NS | 670 | NS | NS | 1,500 | NS | NS |
| MW-6 ^a | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 22,000 | NS | NS | 700 | NS | NS |
| MW-6 | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 570 | NS | NS |
| MW-6 ^a | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 4,300 | NS | NS | 190 | NS | NS |
| MW-6 | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 240 | NS | NS | 25 | NS | NS |
| MW-6 ^a | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 2,200 | NS | NS | 190 | NS | NS |
| MW-6 | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 76 | NS | NS | 140 | NS | NS |
| MW-6 ^a | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS | NS | 210 | NS | NS | 12 | NS | NS |
| MW-6 | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS | NS | <80 | NS | NS | 2.4 J | NS | NS |
| MW-7 ^a | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS | NS | 7,700 | NS | NS | 730 | NS | NS |
| MW-7 | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS | NS | 7,600 | NS | NS | 760 | NS | NS |
| MW-7 ^a | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS | NS | 8,900 | NS | NS | 660 | NS | NS |
| MW-7 | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS | NS | 8,800 | NS | NS | 690 | NS | NS |
| MW-7 ^a | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 2,000 | NS | NS | 880 | NS | NS |
| MW-7 | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 1,900 | NS | NS | 880 | NS | NS |
| MW-7 ^a | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS | NS | 7,000 | NS | NS | 520 | NS | NS |
| MW-7 | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS | NS | 4,000 | NS | NS | 490 | NS | NS |
| MW-7 ^a (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | NS | NS | NS | NS | NS | NS | 7,000 | NS | NS | 540 | NS | NS |
| MW-7 (DUP) | W-R2330028-11/1/22-ADH-014 | 11/1/2022 | NS | NS | NS | NS | NS | NS | 6,600 | NS | NS | 540 | NS | NS |
| MW-7 ^a | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 5,300 | NS | NS | 380 | NS | NS |
| MW-7 | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 5,400 | NS | NS | 390 | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Selenium (B) | Silver | Thallium | Vanadium | Zinc |
|--|-----------------------------|------------|--------------|---------------|----------|----------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 50 (A) | 98 | 2.0 (A) | 62 | 5,000 (E) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) | | | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (a) | | | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID |
| MW-5 ^A | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-5 | W-R2330026-110620-KRM-021 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-5 ^A | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS |
| MW-5 | W-R2330027-041621-KRM-034 | 4/16/2021 | NS | NS | NS | NS | NS |
| MW-5 ^A | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-5 | W-R2330027-042622-ADH-011 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-5 ^A | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS |
| MW-5 | W-R2330028-102722-ADH-006 | 10/27/2022 | NS | NS | NS | NS | NS |
| MW-5 ^A | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-5 | W-R2330031-041823-ERR-004 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-6 ^A | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS |
| MW-6 | W-R2330026-052220-KRM-030 | 5/22/2020 | NS | NS | NS | NS | NS |
| MW-6 ^A | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-6 | W-R2330026-110520-KRM-013 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-6 ^A | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-6 | W-R2330027-041321-KRM-006 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-6 ^A | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-6 | W-R2330027-042622-SSR-007 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-6 ^A | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS |
| MW-6 | W-R233003105-0423-ERR-025 | 5/4/2023 | NS | NS | NS | NS | NS |
| MW-7 ^A | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS |
| MW-7 | W-R2330026-110920-KRM-026 | 11/9/2020 | NS | NS | NS | NS | NS |
| MW-7 ^A | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS |
| MW-7 | W-R2330027-041321-KRM-018 | 4/14/2021 | NS | NS | NS | NS | NS |
| MW-7 ^A | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-7 | W-R2330027-042622-ADH-013 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-7 ^A | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS |
| MW-7 | W-R2330028-102722-ADH-003 | 10/27/2022 | NS | NS | NS | NS | NS |
| MW-7 ^A (DUP) | W-R2330028-11/11/22-ADH-014 | 11/11/2022 | NS | NS | NS | NS | NS |
| MW-7 (DUP) | W-R2330028-11/11/22-ADH-014 | 11/11/2022 | NS | NS | NS | NS | NS |
| MW-7 ^A | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-7 | W-R2330031-041823-ERR-005 | 4/18/2023 | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Volatile Organic Compounds (VOCs) | | | | | | | | | | | |
|--|---------------------------|------------|-----------------------------------|---------------------|---------------------|-----------------------------|---------------|----------|----------------------|------------------|---------------|--------------|--------------|------------|
| | | | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromodichloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloroethane | Chloroform |
| Non-residential Drinking Water Criteria (II) | | | 38,000 | 600 (A) | 75 (A) | 5,200 | 2,100 | 5.0 (A) | 80 (A,W) | 2,300 | 100 (A) | 1,700 | 1,100 | 80 (A,W) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 2,200 | 13 | 17 | ID | 1,700 | 200 (X) | ID | ID | 25 | 1,100 (X) | ID | 350 |
| GSI Final Acute Value (FAV) | | | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | ID | 450 | 20,000 | NA | 11,000 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2.4E+8 (S) | 1.6E+05 (S) | 74,000 (S) | 2.0E+07 (S) | 1.0E+09 (D,S) | 35,000 | 37,000 | 5.5E+05 | 4.7E+05 (S) | 5.7E+06 (S) | 4.5E+04 | 1.8E+05 |
| Draft Non-Residential Groundwater Screening Levels (GW _{NS} SL _{CR}) | | | 1.8E+07 | 32,000 | 380 | 1.1E+06 | 3.4E+07 | 140 | NA | 9,900 | 4,600 | 1.80E+05 | NA | 720 |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | 18,000 | 32,000 | 380 | 4,400,000 | 34,000,000 | 1.4E+02 | NA | 9,900 | 4,600 | 180,000 | NA | 7.2E+02 |
| Water Solubility (VII) | | | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID |
| MW-8 ^a | W-R2330024-102318-SSR-008 | 10/23/2018 | | | | | | | | | | | | |
| MW-8 | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^b | W-R2330025-103019-SCD-021 | 10/30/2019 | | | | | | | | | | | | |
| MW-8 | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^a | W-R2330026-110920-KRM-027 | 11/9/2020 | | | | | | | | | | | | |
| MW-8 | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^a | W-R2330027-041421-SSR-025 | 4/14/2021 | | | | | | | | | | | | |
| MW-8 | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^a | W-R2330031-041823-ERR-010 | 4/18/2023 | | | | | | | | | | | | |
| MW-8 | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330026-110620-KRM-024 | 11/6/2020 | | | | | | | | | | | | |
| MW-9 | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330027-041621-SSR-035 | 4/16/2021 | | | | | | | | | | | | |
| MW-9 | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330027-042622-SSR-012 | 4/26/2022 | | | | | | | | | | | | |
| MW-9 | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330028-11122-ADH-013 | 11/1/2022 | | | | | | | | | | | | |
| MW-9 | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330031-041823-ERR-006 | 4/18/2023 | | | | | | | | | | | | |
| MW-9 | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330026-110620-KRM-022 | 11/6/2020 | | | | | | | | | | | | |
| MW-10 | W-R2330026-110620-KRM-022 | 11/6/2020 | <0.52 | <0.32 | <0.35 | <0.52 | <6.2 | 2.9 | <0.49 | <0.49 | 25 | <0.68 | <0.68 | <0.46 |
| MW-10 ^a | W-R2330027-041521-SSR-027 | 4/15/2021 | | | | | | | | | | | | |
| MW-10 | W-R2330027-041521-SSR-027 | 4/15/2021 | <0.52 | <0.32 | <0.35 | <0.52 | 7 | 2.0 | <0.49 | <0.49 | 19 | <0.68 | <0.68 | <0.46 |
| MW-10 ^a | W-R2330027-042622-ADP-010 | 4/26/2022 | | | | | | | | | | | | |
| MW-10 | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330028-102722-ADH-007 | 10/27/2022 | | | | | | | | | | | | |
| MW-10 | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 31 | NS | NS | NS |
| MW-10 ^a | W-R2330031-041923-ERR-013 | 4/19/2023 | | | | | | | | | | | | |
| MW-10 | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | | | | | | | | | | | | |
| MW-10 (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | <5.0 | <1.0 | <1.0 | <1.0 | <10 | 2.40 | <1.0 | <1.0 | 21.00 | <1.0 | <1.0 | <1.0 |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Diphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol |
|--|---------------------------|------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|
| Non-residential Drinking Water Criteria (II) | | | NA | 80 (A,W) | 4,800 | 74 (E) | 2,300 | NA | 790 (E) | 280 (E) | ID | 130 | 750 | 1,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 |
| GSI Final Acute Value (FAV) | | | ID | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | NA |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NA | 1.10E+05 | 3.0E+05 | 1.7E+05 (S) | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 1.1E+06 | 25,000 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL} (G)) | | | NA | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI} (a)) | | | 8,100 | NA | NA | 2.6E+03 | 53 | NA | 150,000 | 10,000 (d) | ID | NA | 3,900 | NA |
| Water Solubility (VII) | | | NA | 2.60E+06 | 3.0E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA |
| MW-8 ^a | W-R2330024-102318-SSR-008 | 10/23/2018 | | | | | | | | | | | | |
| MW-8 | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^b | W-R2330025-103019-SCD-021 | 10/30/2019 | | | | | | | | | | | | |
| MW-8 | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^a | W-R2330026-110920-KRM-027 | 11/9/2020 | | | | | | | | | | | | |
| MW-8 | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^a | W-R2330027-041421-SSR-025 | 4/14/2021 | | | | | | | | | | | | |
| MW-8 | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-8 ^a | W-R2330031-041823-ERR-010 | 4/18/2023 | | | | | | | | | | | | |
| MW-8 | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330026-110620-KRM-024 | 11/6/2020 | | | | | | | | | | | | |
| MW-9 | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330027-041621-SSR-035 | 4/16/2021 | | | | | | | | | | | | |
| MW-9 | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330027-042622-SSR-012 | 4/26/2022 | | | | | | | | | | | | |
| MW-9 | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330028-11122-ADH-013 | 11/1/2022 | | | | | | | | | | | | |
| MW-9 | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-9 ^a | W-R2330031-041823-ERR-006 | 4/18/2023 | | | | | | | | | | | | |
| MW-9 | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330026-110620-KRM-022 | 11/6/2020 | | | | | | | | | | | | |
| MW-10 | W-R2330026-110620-KRM-022 | 11/6/2020 | <0.63 | <0.40 | <0.68 | <0.34 | <0.35 | <0.35 | <0.45 | <0.81 | NS | NS | NS | NS |
| MW-10 ^a | W-R2330027-041521-SSR-027 | 4/15/2021 | | | | | | | | | | | | |
| MW-10 | W-R2330027-041521-SSR-027 | 4/15/2021 | <0.63 | <0.40 | <0.68 | <0.34 | <0.35 | <0.35 | <0.45 | <0.81 | NS | NS | NS | NS |
| MW-10 ^a | W-R2330027-042622-ADP-010 | 4/26/2022 | | | | | | | | | | | | |
| MW-10 | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330028-102722-ADH-007 | 10/27/2022 | | | | | | | | | | | | |
| MW-10 | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330031-041923-ERR-013 | 4/19/2023 | | | | | | | | | | | | |
| MW-10 | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | | | | | | | | | | | | |
| MW-10 (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | <2.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <3.0 | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | |
|--|---------------------------|------------|--|--------------------|-----------------|----------------------------|--------------|--------------|--------------|-----------------------|-----------|--------------|-----------------------|
| | | | 4-Methylphenol | 2,4-Dimethylphenol | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzy phthalate | Carbazole | Dibenzofuran | Dichlorofluoromethane |
| Non-residential Drinking Water Criteria (II) | 1,000 | 1,000 | NA | 6.0 (A) | 3,800 | 4,400 | NA | 2,700 (S) | 350 | ID | 4,800 | 16,000 | |
| Non-residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| Ground Water Surface Water Interface Criteria (GSI) (III) | 30 (M); 25 | 380 | NA | 25 | 38 | ID | NA | 67 (X) | 10 (M); 4.0 | 4.0 | ID | 110 | |
| GSI Final Acute Value (FAV) | 1,400 | 2,700 | ID | 285 | 200 | NA | NA | 72 | 200 | NA | ID | 2,000 | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | NLV | NLV | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | 10,000 (S) | 3.0E+05 | NLV | |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSRL}) | | NLV | NA | NLV | NA | NA | NA | NLV | NA | NLV | NA | NA | |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | NA | NA | NA | NA | 2.30E+06 | NA | NA | NA | NLV | NA | NA | NA | |
| Water Solubility (VII) | 2.80E+07 | 7.87E+06 | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.69E+03 | 7,480 | 10,000 | 3.0E+05 | 1.08E+06 | |
| Flammability & Explosivity Screening Level (VIII) | NA | ID | NA | NA | ID | ID | NA | ID | ID | ID | ID | NA | |
| MW-8 ^a | W-R2330024-102318-SSR-008 | 10/23/2018 | | | | | | | | | | | |
| MW-8 | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-8 ^b | W-R2330025-103019-SCD-021 | 10/30/2019 | | | | | | | | | | | |
| MW-8 | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-8 ^a | W-R2330026-110920-KRM-027 | 11/9/2020 | | | | | | | | | | | |
| MW-8 | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-8 ^a | W-R2330027-041421-SSR-025 | 4/14/2021 | | | | | | | | | | | |
| MW-8 | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-8 ^a | W-R2330031-041823-ERR-010 | 4/18/2023 | | | | | | | | | | | |
| MW-8 | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-9 ^a | W-R2330026-110620-KRM-024 | 11/6/2020 | | | | | | | | | | | |
| MW-9 | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-9 ^a | W-R2330027-041621-SSR-035 | 4/16/2021 | | | | | | | | | | | |
| MW-9 | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-9 ^a | W-R2330027-042622-SSR-012 | 4/26/2022 | | | | | | | | | | | |
| MW-9 | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-9 ^a | W-R2330028-11122-ADH-013 | 11/1/2022 | | | | | | | | | | | |
| MW-9 | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-9 ^a | W-R2330031-041823-ERR-006 | 4/18/2023 | | | | | | | | | | | |
| MW-9 | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-10 ^a | W-R2330026-110620-KRM-022 | 11/6/2020 | | | | | | | | | | | |
| MW-10 | W-R2330026-110620-KRM-022 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-10 ^a | W-R2330027-041521-SSR-027 | 4/15/2021 | | | | | | | | | | | |
| MW-10 | W-R2330027-041521-SSR-027 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-10 ^a | W-R2330027-042622-ADP-010 | 4/26/2022 | | | | | | | | | | | |
| MW-10 | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-10 ^a | W-R2330028-102722-ADH-007 | 10/27/2022 | | | | | | | | | | | |
| MW-10 | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-10 ^a | W-R2330031-041923-ERR-013 | 4/19/2023 | | | | | | | | | | | |
| MW-10 | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-10 ^a (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | | | | | | | | | | | |
| MW-10 (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dimethyl phthalate | D-n-butyl phthalate | Fluoranthene | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium |
|--|---------------------------|------------|--------------------|---------------------|--------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 2.1E+05 | 2,500 | 210 (S) | 2,000 (S) | 1,500 | 150 | 140 (S) | 13,000 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | 4,100 | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | 9.7 | 1.6 | 12 | 11 | 2.0 (M), 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) |
| GSI Final Acute Value (FAV) | | | NA | 75 | 220 | 200 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | 210 (S) | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSRL}) | | | NA | NA | 71,000 | 3,00E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | NA | NA | NA | 300,000 | 1,200 | 4.8E+2 | 1.7E+06 | NA | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | 4.19E+06 | 11,200 | 206 | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | NA | NA | ID | ID | NA | ID | ID | NA | ID | ID | ID | ID |
| MW-8 ^a | W-R2330024-102318-SSR-008 | 10/23/2018 | | | | | | | | | 60 | NS | NS | NS |
| MW-8 | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS | NS | NS | NS | 8.80 | NS | NS | NS |
| MW-8 ^b | W-R2330025-103019-SCD-021 | 10/30/2019 | | | | | | | | | 11 | NS | NS | NS |
| MW-8 | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-8 ^a | W-R2330026-110920-KRM-027 | 11/9/2020 | | | | | | | | | 95 | NS | NS | NS |
| MW-8 | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-8 ^a | W-R2330027-041421-SSR-025 | 4/14/2021 | | | | | | | | | 130 | NS | NS | NS |
| MW-8 | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-8 ^a | W-R2330031-041823-ERR-010 | 4/18/2023 | | | | | | | | | 10 | NS | NS | NS |
| MW-8 | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-9 ^a | W-R2330026-110620-KRM-024 | 11/6/2020 | | | | | | | | | 140 | NS | NS | NS |
| MW-9 | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-9 ^a | W-R2330027-041621-SSR-035 | 4/16/2021 | | | | | | | | | 180 | NS | NS | NS |
| MW-9 | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-9 ^a | W-R2330027-042622-SSR-012 | 4/26/2022 | | | | | | | | | 910.00 | NS | NS | NS |
| MW-9 | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-9 ^a | W-R2330028-11122-ADH-013 | 11/1/2022 | | | | | | | | | 11.00 | NS | NS | NS |
| MW-9 | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 7.30 | NS | NS | NS |
| MW-9 ^a | W-R2330031-041823-ERR-006 | 4/18/2023 | | | | | | | | | 6.8 J | NS | NS | NS |
| MW-9 | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | 8.7 J | NS | NS | NS |
| MW-10 ^a | W-R2330026-110620-KRM-022 | 11/6/2020 | | | | | | | | | 94 | NS | NS | NS |
| MW-10 | W-R2330026-110620-KRM-022 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | 11 | NS | NS | NS |
| MW-10 ^a | W-R2330027-041521-SSR-027 | 4/15/2021 | | | | | | | | | 170 | NS | NS | NS |
| MW-10 | W-R2330027-041521-SSR-027 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | 10 | NS | NS | NS |
| MW-10 ^a | W-R2330027-042622-ADP-010 | 4/26/2022 | | | | | | | | | 1200 | NS | NS | NS |
| MW-10 | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 13 | NS | NS | NS |
| MW-10 ^a | W-R2330028-102722-ADH-007 | 10/27/2022 | | | | | | | | | NS | NS | NS | NS |
| MW-10 | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330031-041923-ERR-013 | 4/19/2023 | | | | | | | | | 88 | NS | NS | NS |
| MW-10 | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | 33 | NS | NS | NS |
| MW-10 ^a (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | | | | | | | | | 450 | NS | NS | NS |
| MW-10 (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | 8.2 | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | |
|--|---------------------------|------------|-----------|---------|----------|--------|------------|---------------|----------|----------|---------------|---------------|-----------|---------|
| | | | Beryllium | Cadmium | Chromium | Cobalt | Copper (B) | Cyanide (P/R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel |
| Non-residential Drinking Water Criteria (II) | | | 4.0 (A) | 5.0 (A) | 100 (A) | 100 | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 1.1E+06 | 50 (E) | 2.0 (A) | 100 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | 4,000 | NA | 5,600 | NA | NA | 2,500 | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 6.7 (G) | 3 (G) | 11 | 100 | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 13 (G) | 1,588 | 740 | 39 (G) | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL(CM)}) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VC(M)}) (a) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 56 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MW-8 ^a | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS | NS | 190 | NS | NS | 1.8 | NS | NS |
| MW-8 | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS | NS | 8,400 | NS | NS | 440 | NS | NS |
| MW-8 ^b | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS | NS | 8,700 | NS | NS | 330 | NS | NS |
| MW-8 | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS | NS | 8,500 | NS | NS | 330 | NS | NS |
| MW-8 ^a | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS | NS | 8,700 | NS | NS | 300 | NS | NS |
| MW-8 | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS | NS | 8,000 | NS | NS | 290 | NS | NS |
| MW-8 ^a | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS | NS | 7,300 | NS | NS | 250 | NS | NS |
| MW-8 | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS | NS | 6,600 | NS | NS | 240 | NS | NS |
| MW-8 ^a | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 3,400 | NS | NS | 180 | NS | NS |
| MW-8 | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 3,300 | NS | NS | 180 | NS | NS |
| MW-9 ^a | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 24,000 | NS | NS | 250 | NS | NS |
| MW-9 | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 23,000 | NS | NS | 240 | NS | NS |
| MW-9 ^a | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS | NS | 32,000 | NS | NS | 360 | NS | NS |
| MW-9 | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS | NS | 28,000 | NS | NS | 330 | NS | NS |
| MW-9 ^a | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 65,000 | NS | NS | 590 | NS | NS |
| MW-9 | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 26,000 | NS | NS | 240 | NS | NS |
| MW-9 ^a | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS | NS | 24,000 | NS | NS | 230 | NS | NS |
| MW-9 | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS | NS | 24,000 | NS | NS | 230 | NS | NS |
| MW-9 ^a | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 17,000 | NS | NS | 260 | NS | NS |
| MW-9 | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS | NS | 18,000 | NS | NS | 290 | NS | NS |
| MW-10 ^a | W-R2330026-110620-KRM-022 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 20,000 | NS | NS | 520 | NS | NS |
| MW-10 | W-R2330026-110620-KRM-022 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 19,000 | NS | NS | 530 | NS | NS |
| MW-10 ^a | W-R2330027-041521-SSR-027 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 22,000 | NS | NS | 600 | NS | NS |
| MW-10 | W-R2330027-041521-SSR-027 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 21,000 | NS | NS | 560 | NS | NS |
| MW-10 ^a | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 31,000 | NS | NS | 620 | NS | NS |
| MW-10 | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 18,000 | NS | NS | 530 | NS | NS |
| MW-10 ^a | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-10 ^a | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS | NS | 19,000 | NS | NS | 500 | NS | NS |
| MW-10 | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS | NS | 20,000 | NS | NS | 510 | NS | NS |
| MW-10 ^a (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | NS | NS | NS | NS | NS | NS | 19,000 | NS | NS | 550 | NS | NS |
| MW-10 (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | NS | NS | NS | NS | NS | NS | 21,000 | NS | NS | 670 | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Selenium (B) | Silver | Thallium | Vanadium | Zinc |
|--|---------------------------|------------|--------------|---------------|----------|----------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 50 (A) | 98 | 2.0 (A) | 62 | 5,000 (E) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL(c,d)}) | | | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIA(a)}) (a) | | | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID |
| MW-8 ^A | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS |
| MW-8 | W-R2330024-102318-SSR-008 | 10/23/2018 | NS | NS | NS | NS | NS |
| MW-8 ^A | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS |
| MW-8 | W-R2330025-103019-SCD-021 | 10/30/2019 | NS | NS | NS | NS | NS |
| MW-8 ^A | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS |
| MW-8 | W-R2330026-110920-KRM-027 | 11/9/2020 | NS | NS | NS | NS | NS |
| MW-8 ^A | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS |
| MW-8 | W-R2330027-041421-SSR-025 | 4/14/2021 | NS | NS | NS | NS | NS |
| MW-8 ^A | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-8 | W-R2330031-041823-ERR-010 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-9 ^A | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-9 | W-R2330026-110620-KRM-024 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-9 ^A | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS |
| MW-9 | W-R2330027-041621-SSR-035 | 4/16/2021 | NS | NS | NS | NS | NS |
| MW-9 ^A | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-9 | W-R2330027-042622-SSR-012 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-9 ^A | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS |
| MW-9 | W-R2330028-11122-ADH-013 | 11/1/2022 | NS | NS | NS | NS | NS |
| MW-9 ^A | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-9 | W-R2330031-041823-ERR-006 | 4/18/2023 | NS | NS | NS | NS | NS |
| MW-10 ^A | W-R2330026-110620-KRM-022 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-10 | W-R2330026-110620-KRM-022 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-10 ^A | W-R2330027-041521-SSR-027 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-10 | W-R2330027-041521-SSR-027 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-10 ^A | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-10 | W-R2330027-042622-ADP-010 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-10 ^A | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS |
| MW-10 | W-R2330028-102722-ADH-007 | 10/27/2022 | NS | NS | NS | NS | NS |
| MW-10 ^A | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS |
| MW-10 | W-R2330031-041923-ERR-013 | 4/19/2023 | NS | NS | NS | NS | NS |
| MW-10 ^A (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | NS | NS | NS | NS | NS |
| MW-10 (DUP) | W-R2330031-042123-ERR-028 | 4/21/2023 | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | Volatile Organic Compounds (VOCs) | | | | | | | | | | | |
|--|-----------------------------------|---------------------|---------------------|-----------------------------|---------------|----------|----------------------|------------------|---------------|--------------|---------------|------------|
| | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromodichloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloromethane | Chloroform |
| Non-residential Drinking Water Criteria (II) | 38,000 | 600 (A) | 75 (A) | 5,200 | 2,100 | 5.0 (A) | 80 (A,W) | 2,300 | 100 (A) | 1,700 | 1,100 | 80 (A,W) |
| Non-residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | 2,200 | 13 | 17 | ID | 1,700 | 200 (X) | ID | ID | 25 | 1,100 (X) | ID | 350 |
| GSI Final Acute Value (FAV) | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | ID | 450 | 20,000 | NA | 11,000 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | 2.4E+8 (S) | 1.6E+05 (S) | 74,000 (S) | 2.0E+07 (S) | 1.0E+09 (D,S) | 35,000 | 37,000 | 5.5E+05 | 4.7E+05 (S) | 5.7E+06 (S) | 4.5E+04 | 1.8E+05 |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (_{CR})) | 1.8E+07 | 32,000 | 380 | 1.1E+06 | 3.4E+07 | 140 | NA | 9,900 | 4,600 | 1.80E+05 | | 720 |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (a) | 18,000 | 32,000 | 380 | 4,400,000 | 34,000,000 | 1.4E+02 | NA | 9,900 | 4,600 | 180,000 | NA | 7.2E+02 |
| Water Solubility (VII) | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 |
| Flammability & Explosivity Screening Level (VIII) | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID |
| MW-11 ^A | W-R2330026-052120-KRM-028 | 5/21/2020 | | | | | | | | | | |
| MW-11 | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330026-110620-KRM-020 | 11/6/2020 | | | | | | | | | | |
| MW-11 | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-041521-KRM-032 | 4/15/2021 | | | | | | | | | | |
| MW-11 | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-042622-ADP-017 | 4/26/2022 | | | | | | | | | | |
| MW-11 | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330031-042023-ERR-020 | 4/20/2023 | | | | | | | | | | |
| MW-11 | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-052020-KRM-024 | 5/20/2020 | | | | | | | | | | |
| MW-12 | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-110520-KRM-014 | 11/5/2020 | | | | | | | | | | |
| MW-12 | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-041321-KRM-008 | 4/13/2021 | | | | | | | | | | |
| MW-12 | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-042622-SSR-009 | 4/26/2022 | | | | | | | | | | |
| MW-12 | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330031-042123-ERR-026 | 4/21/2023 | | | | | | | | | | |
| MW-12 | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-051920-KRM-010 | 5/19/2020 | | | | | | | | | | |
| MW-17 | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-110920-KRM-028 | 11/9/2020 | | | | | | | | | | |
| MW-17 | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-041421-SSR-023 | 4/14/2021 | | | | | | | | | | |
| MW-17 | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-0426221-SSR-015 | 4/26/2022 | | | | | | | | | | |
| MW-17 | W-R2330027-0426221-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330031-042023-ERR-015 | 4/20/2023 | | | | | | | | | | |
| MW-17 | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

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Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Biphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol |
|--|---------------------------|-----------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|
| Non-residential Drinking Water Criteria (II) | | | NA | 80 (A,W) | 4,800 | 74 (E) | 2,300 | NA | 790 (E) | 280 (E) | ID | 130 | 750 | 1,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 |
| GSI Final Acute Value (FAV) | | | ID | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | NA |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NA | 1.10E+05 | 3.0E+05 | 1.7E+05 (S) | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 1.1E+06 | 25,000 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (c ₂₀)) | | | NA | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | 8,100 | NA | NA | 2.6E+03 | 53 | NA | 150,000 | 10,000 (d) | ID | NA | 3,900 | NA |
| Water Solubility (VII) | | | NA | 2.60E+06 | 3.0E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA |
| MW-11 ^A | W-R2330026-052120-KRM-028 | 5/21/2020 | | | | | | | | | | | | |
| MW-11 | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330026-110620-KRM-020 | 11/6/2020 | | | | | | | | | | | | |
| MW-11 | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-041521-KRM-032 | 4/15/2021 | | | | | | | | | | | | |
| MW-11 | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-042622-ADP-017 | 4/26/2022 | | | | | | | | | | | | |
| MW-11 | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330031-042023-ERR-020 | 4/20/2023 | | | | | | | | | | | | |
| MW-11 | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-052020-KRM-024 | 5/20/2020 | | | | | | | | | | | | |
| MW-12 | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-110520-KRM-014 | 11/5/2020 | | | | | | | | | | | | |
| MW-12 | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-041321-KRM-008 | 4/13/2021 | | | | | | | | | | | | |
| MW-12 | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-042622-SSR-009 | 4/26/2022 | | | | | | | | | | | | |
| MW-12 | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330031-042123-ERR-026 | 4/21/2023 | | | | | | | | | | | | |
| MW-12 | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-051920-KRM-010 | 5/19/2020 | | | | | | | | | | | | |
| MW-17 | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-110920-KRM-028 | 11/9/2020 | | | | | | | | | | | | |
| MW-17 | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-041421-SSR-023 | 4/14/2021 | | | | | | | | | | | | |
| MW-17 | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-042622-SSR-015 | 4/26/2022 | | | | | | | | | | | | |
| MW-17 | W-R2330027-042622-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330031-042023-ERR-015 | 4/20/2023 | | | | | | | | | | | | |
| MW-17 | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | | |
|--|----------------------------|-----------|--|--------------------|-----------------|----------------------------|--------------|--------------|--------------|-----------------------|-------------|--------------|-------------------------|-------------------|
| | | | 4-Methylphenol | 2,4-Dimethylphenol | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzy phthalate | Carbazole | Dibenzofuran | Dichlorodifluoromethane | Diethyl phthalate |
| Non-residential Drinking Water Criteria (II) | | | 1,000 | 1,000 | NA | 6.0 (A) | 3,800 | 4,400 | NA | 2,700 (S) | 350 | ID | 4,800 | 16,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 30 (M); 25 | 380 | NA | 25 | 38 | ID | NA | 67 (X) | 10 (M); 4.0 | 4.0 | ID | 110 |
| GSI Final Acute Value (FAV) | | | 1,400 | 2,700 | ID | 285 | 200 | NA | NA | 72 | NA | ID | 2,000 | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | 10,000 (S) | 3.0E+05 | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL}) _(c,d) | | | NA | NLV | NA | NLV | NA | NA | NA | NA | NLV | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (e) | | | NA | NA | NA | NA | 2.30E+05 | NA | NA | NA | NLV | NA | NA | NA |
| Water Solubility (VII) | | | 2.80E+07 | 7.87E+06 | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.69E+03 | 7,480 | 10,000 | 3.0E+05 | 1.08E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | NA | NA | ID | ID | NA | ID | ID | ID | ID | NA |
| MW-11 ^A | W-R2330026-052120-KRM-028 | 5/21/2020 | | | | | | | | | | | | |
| MW-11 | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330026-110620-KRM-020 | 11/6/2020 | | | | | | | | | | | | |
| MW-11 | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-041521-KRM-032 | 4/15/2021 | | | | | | | | | | | | |
| MW-11 | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-042622-ADP-017 | 4/26/2022 | | | | | | | | | | | | |
| MW-11 | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330031-042023-ERR-020 | 4/20/2023 | | | | | | | | | | | | |
| MW-11 | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-052020-KRM-024 | 5/20/2020 | | | | | | | | | | | | |
| MW-12 | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-110520-KRM-014 | 11/5/2020 | | | | | | | | | | | | |
| MW-12 | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-041321-KRM-008 | 4/13/2021 | | | | | | | | | | | | |
| MW-12 | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-042622-SSR-009 | 4/26/2022 | | | | | | | | | | | | |
| MW-12 | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330031-042123-ERR-026 | 4/21/2023 | | | | | | | | | | | | |
| MW-12 | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-051920-KRM-010 | 5/19/2020 | | | | | | | | | | | | |
| MW-17 | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-110920-KRM-028 | 11/9/2020 | | | | | | | | | | | | |
| MW-17 | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-041421-SSR-023 | 4/14/2021 | | | | | | | | | | | | |
| MW-17 | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-0426221-SSR-015 | 4/26/2022 | | | | | | | | | | | | |
| MW-17 | W-R2330027-0426221-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330031-042023-ERR-015 | 4/20/2023 | | | | | | | | | | | | |
| MW-17 | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dimethyl phthalate | Di-n-butyl phthalate | Fluoranthene | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium |
|--|---------------------------|-----------|--------------------|----------------------|--------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 2.1E+05 | 2,500 | 210 (S) | 2,000 (S) | 1,500 | 150 | 140 (S) | 13,000 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | 4,100 | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | 9.7 | 1.6 | 12 | 11 | 2.0 (M); 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) |
| GSI Final Acute Value (FAV) | | | NA | 75 | 220 | 200 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | 210 (S) | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (c ₂₀)) | | | NA | NA | 71,000 | 3,00E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | NA | NA | NA | 300,000 | 1,200 | 4.8E+2 | 1.7E+06 | NA | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | 4.19E+06 | 11,200 | 206 | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | NA | NA | ID | ID | NA | ID | ID | NA | ID | ID | ID | ID |
| MW-11 ^A | W-R2330026-052120-KRM-028 | 5/21/2020 | | | | | | | | | 60 | NS | NS | NS |
| MW-11 | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-11 ^A | W-R2330026-110620-KRM-020 | 11/6/2020 | | | | | | | | | 12 | NS | NS | NS |
| MW-11 | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-11 ^A | W-R2330027-041521-KRM-032 | 4/15/2021 | | | | | | | | | 14 | NS | NS | NS |
| MW-11 | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-11 ^A | W-R2330027-042622-ADP-017 | 4/26/2022 | | | | | | | | | 42 | NS | NS | NS |
| MW-11 | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-11 ^A | W-R2330031-042023-ERR-020 | 4/20/2023 | | | | | | | | | 100 | NS | NS | NS |
| MW-11 | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-12 ^A | W-R2330026-052020-KRM-024 | 5/20/2020 | | | | | | | | | 38 | NS | NS | NS |
| MW-12 | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-12 ^A | W-R2330026-110520-KRM-014 | 11/5/2020 | | | | | | | | | 400 | NS | NS | NS |
| MW-12 | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-12 ^A | W-R2330027-041321-KRM-008 | 4/13/2021 | | | | | | | | | 83 | NS | NS | NS |
| MW-12 | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-12 ^A | W-R2330027-042622-SSR-009 | 4/26/2022 | | | | | | | | | 220 | NS | NS | NS |
| MW-12 | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 11 | NS | NS | NS |
| MW-12 ^A | W-R2330031-042123-ERR-026 | 4/21/2023 | | | | | | | | | 39 | NS | NS | NS |
| MW-12 | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS | NS | NS | NS | 6.2 J | NS | NS | NS |
| MW-17 ^A | W-R2330026-051920-KRM-010 | 5/19/2020 | | | | | | | | | 33.0 | NS | NS | NS |
| MW-17 | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-17 ^A | W-R2330026-110920-KRM-028 | 11/9/2020 | | | | | | | | | 42 | NS | NS | NS |
| MW-17 | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-17 ^A | W-R2330027-041421-SSR-023 | 4/14/2021 | | | | | | | | | 85 | NS | NS | NS |
| MW-17 | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-17 ^A | W-R2330027-042622-SSR-015 | 4/26/2022 | | | | | | | | | 1,900.0 | NS | NS | NS |
| MW-17 | W-R2330027-042622-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | <10.0 | NS | NS | NS |
| MW-17 ^A | W-R2330031-042023-ERR-015 | 4/20/2023 | | | | | | | | | 130 | NS | NS | NS |
| MW-17 | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | |
|--|---------------------------|-----------|-----------|---------|----------|--------|------------|---------------|----------|----------|---------------|---------------|---------|-----------|
| | | | Beryllium | Cadmium | Chromium | Cobalt | Copper (B) | Cyanide (P/R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel |
| Non-residential Drinking Water Criteria (II) | | | 4.0 (A) | 5.0 (A) | 100 (A) | 100 | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 1.1E+06 | 50 (E) | 2.0 (A) | 100 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | 4,000 | NA | 5,600 | NA | NA | 2,500 | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 6.7 (G) | 3 (G) | 11 | 100 | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 13 (G) | 1,588 | 740 | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (c,d)) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (e) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 56 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MW-11 ^A | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS | NS | 500 | NS | NS | 140 | NS | NS |
| MW-11 | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS | NS | 160 | NS | NS | 57 | NS | NS |
| MW-11 ^A | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 2000 | NS | NS | 200 | NS | NS |
| MW-11 | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS | NS | 1500 | NS | NS | 180 | NS | NS |
| MW-11 ^A | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 1400 | NS | NS | 99 | NS | NS |
| MW-11 | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS | NS | 1300 | NS | NS | 91 | NS | NS |
| MW-11 ^A | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 4000 | NS | NS | 340 | NS | NS |
| MW-11 | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 75 | NS | NS | 48 | NS | NS |
| MW-11 ^A | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS | NS | 9100 | NS | NS | 860 | NS | NS |
| MW-11 | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS | NS | <90 | NS | NS | 24 | NS | NS |
| MW-12 ^A | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS | NS | 14,000 | NS | NS | 450 | NS | NS |
| MW-12 | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS | NS | 13,000 | NS | NS | 490 | NS | NS |
| MW-12 ^A | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 13,000 | NS | NS | 230 | NS | NS |
| MW-12 | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS | NS | 13,000 | NS | NS | 290 | NS | NS |
| MW-12 ^A | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 10,000 | NS | NS | 160 | NS | NS |
| MW-12 | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS | NS | 9,600 | NS | NS | 170 | NS | NS |
| MW-12 ^A | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 1,100 | NS | NS | 790 | NS | NS |
| MW-12 | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 4,000 | NS | NS | 530 | NS | NS |
| MW-12 ^A | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS | NS | 5,800 | NS | NS | 230 | NS | NS |
| MW-12 | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS | NS | 4,000 | NS | NS | 230 | NS | NS |
| MW-17 ^A | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS | NS | 3,200 | NS | NS | 350 | NS | NS |
| MW-17 | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS | NS | 2,600 | NS | NS | 350 | NS | NS |
| MW-17 ^A | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS | NS | 3,100 | NS | NS | 320 | NS | NS |
| MW-17 | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS | NS | 2,600 | NS | NS | 310 | NS | NS |
| MW-17 ^A | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS | NS | 2,500 | NS | NS | 370 | NS | NS |
| MW-17 | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS | NS | 2,100 | NS | NS | 340 | NS | NS |
| MW-17 ^A | W-R2330027-042622-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 8,600 | NS | NS | 470 | NS | NS |
| MW-17 | W-R2330027-042622-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS | NS | 2,800 | NS | NS | 370 | NS | NS |
| MW-17 ^A | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS | NS | 11,000 | NS | NS | 110 | NS | NS |
| MW-17 | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS | NS | 2,100 | NS | NS | 77 | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Selenium (B) | Silver | Thallium | Vanadium | Zinc |
|--|---------------------------|-----------|--------------|---------------|----------|----------|-----------|
| Non-residential Drinking Water Criteria (I) | | | 50 (A) | 98 | 2.0 (A) | 62 | 5,000 (E) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL} (_{rad})) | | | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (e) | | | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID |
| MW-11 ^A | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-11 | W-R2330026-052120-KRM-028 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-11 | W-R2330026-110620-KRM-020 | 11/6/2020 | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-11 | W-R2330027-041521-KRM-032 | 4/15/2021 | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-11 | W-R2330027-042622-ADP-017 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-11 ^A | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS |
| MW-11 | W-R2330031-042023-ERR-020 | 4/20/2023 | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS |
| MW-12 | W-R2330026-052020-KRM-024 | 5/20/2020 | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-12 | W-R2330026-110520-KRM-014 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-12 | W-R2330027-041321-KRM-008 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-12 | W-R2330027-042622-SSR-009 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-12 ^A | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS |
| MW-12 | W-R2330031-042123-ERR-026 | 4/21/2023 | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS |
| MW-17 | W-R2330026-051920-KRM-010 | 5/19/2020 | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS |
| MW-17 | W-R2330026-110920-KRM-028 | 11/9/2020 | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS |
| MW-17 | W-R2330027-041421-SSR-023 | 4/14/2021 | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330027-042622-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-17 | W-R2330027-042622-SSR-015 | 4/26/2022 | NS | NS | NS | NS | NS |
| MW-17 ^A | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS |
| MW-17 | W-R2330031-042023-ERR-015 | 4/20/2023 | NS | NS | NS | NS | NS |

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | Volatile Organic Compounds (VOCs) | | | | | | | | | | | | |
|--|-----------------------------------|---------------------|---------------------|-----------------------------|---------------|----------|--------------------|------------------|---------------|--------------|---------------|------------|--|
| | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromochloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloromethane | Chloroform | |
| Non-residential Drinking Water Criteria (II) | 38,000 | 600 (A) | 75 (A) | 5,200 | 2,100 | 5.0 (A) | 80 (A,W) | 2,300 | 100 (A) | 1,700 | 1,100 | 80 (A,W) | |
| Non-residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| Ground Water Surface Water Interface Criteria (GSI) (III) | 2,200 | 13 | 17 | ID | 1,700 | 200 (X) | ID | ID | 25 | 1,100 (X) | ID | 350 | |
| GSI Final Acute Value (FAV) | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | ID | 450 | 20,000 | NA | 11,000 | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | 2.4E+8 (S) | 1.6E+05 (S) | 74,000 (S) | 2.0E+07 (S) | 1.0E+09 (D,S) | 35,000 | 37,000 | 5.5E+05 | 4.7E+05 (S) | 5.7E+06 (S) | 4.5E+04 | 1.8E+05 | |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) _(CG) | 1.8E+07 | 32,000 | 380 | 1.1E+06 | 3.4E+07 | 140 | NA | 9,900 | 4,600 | 1.80E+05 | | 720 | |
| Groundwater Concentration for Vapor Intrusion (GW _{VI,av}) (a) | 18,000 | 32,000 | 380 | 4,400,000 | 34,000,000 | 1.4E+02 | NA | 9,900 | 4,600 | 180,000 | NA | 7.2E+02 | |
| Water Solubility (VII) | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 | |
| Flammability & Explosivity Screening Level (VIII) | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID | |
| MW-27 ^A | W-R2330026-052120-KRM-025 | 5/21/2020 | | | | | | | | | | | |
| MW-27 | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-27 ^A | W-R2330026-110520-KRM-016 | 11/5/2020 | | | | | | | | | | | |
| MW-27 | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-27 ^A | W-R2330027-041321-KRM-0012 | 4/13/2021 | | | | | | | | | | | |
| MW-27 | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-27 ^A | W-R2330027-042522-ADP-005 | 4/25/2022 | | | | | | | | | | | |
| MW-27 | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-27 ^A | W-R2330031-042023-ERR-023 | 5/5/2023 | | | | | | | | | | | |
| MW-27 | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-34 ^A | W-R2330026-051920-JPM-011 | 5/19/2020 | | | | | | | | | | | |
| MW-34 | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-34 ^A | W-R2330026-111020-SSR-036 | 11/10/2020 | | | | | | | | | | | |
| MW-34 | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-34 ^A | W-R2330027-041221-SSR-015 | 4/13/2021 | | | | | | | | | | | |
| MW-34 | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-34 ^A (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | | | | | | | | | | | |
| MW-34 (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-34 ^A | W-R2330027-042822-SSR-031 | 4/28/2022 | | | | | | | | | | | |
| MW-34 | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| MW-34 ^A | W-R2330031-041923-ERR-014 | 4/19/2023 | | | | | | | | | | | |
| MW-34 | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of NREPA.
 G = Calculated value based on a hardness of 150 mg/L.
 H = Analyzed outside of holding time.
 J = Analyte detected below quantitation limit.
 NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)
 Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value (E)
 Exceeds Generic Ground Water Surface Water Interface Criteria (III)
 Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
 Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 2012/13 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Cyclohexane | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Biphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol |
|--|----------------------------|------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|
| Non-residential Drinking Water Criteria (II) | | | NA | 80 (A,W) | 4,800 | 74 (E) | 2,300 | NA | 790 (E) | 280 (E) | ID | 130 | 750 | 1,000 |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M), 25 |
| GSI Final Acute Value (FAV) | | | ID | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | NA |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NA | 1.10E+05 | 3.0E+05 | 1.7E+05 (S) | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 1.1E+06 | 25,000 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) _(CG) | | | NA | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) _(a) | | | 8,100 | NA | NA | 2.6E+03 | 53 | NA | 150,000 | 10,000 (d) | ID | NA | 3,900 | NA |
| Water Solubility (VII) | | | NA | 2.60E+06 | 3.0E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA |
| MW-27 ^A | W-R2330026-052120-KRM-025 | 5/21/2020 | | | | | | | | | | | | |
| MW-27 | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330026-110520-KRM-016 | 11/5/2020 | | | | | | | | | | | | |
| MW-27 | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330027-041321-KRM-0012 | 4/13/2021 | | | | | | | | | | | | |
| MW-27 | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330027-042522-ADP-005 | 4/25/2022 | | | | | | | | | | | | |
| MW-27 | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330031-042023-ERR-023 | 5/5/2023 | | | | | | | | | | | | |
| MW-27 | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330026-051920-JPM-011 | 5/19/2020 | | | | | | | | | | | | |
| MW-34 | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330026-111020-SSR-036 | 11/10/2020 | | | | | | | | | | | | |
| MW-34 | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330027-041221-SSR-015 | 4/13/2021 | | | | | | | | | | | | |
| MW-34 | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | | | | | | | | | | | | |
| MW-34 (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330027-042822-SSR-031 | 4/28/2022 | | | | | | | | | | | | |
| MW-34 | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330031-041923-ERR-014 | 4/19/2023 | | | | | | | | | | | | |
| MW-34 | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of NREPA.
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Exceeds Generic Drinking Water Cleanup Criteria (II)
 Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value
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 Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
 Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | | |
|--|--|--------------------|-----------------|----------------------------|--------------|--------------|--------------|-----------------------|-------------|--------------|-------------------------|-------------------|
| | 4-Methylphenol | 2,4-Dimethylphenol | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzy phthalate | Carbazole | Dibenzofuran | Dichlorodifluoromethane | Diethyl phthalate |
| Non-residential Drinking Water Criteria (II) | 1,000 | 1,000 | NA | 6.0 (A) | 3,800 | 4,400 | NA | 2,700 (S) | 350 | ID | 4,800 | 16,000 |
| Non-residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | 30 (M); 25 | 380 | NA | 25 | 38 | ID | NA | 67 (X) | 10 (M); 4.0 | 4.0 | ID | 110 |
| GSI Final Acute Value (FAV) | 1,400 | 2,700 | ID | 285 | 200 | NA | NA | NA | 72 | NA | ID | 2,000 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | NLV | NLV | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | 10,000 (S) | 3.0E+05 | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) _(CG) | | NLV | NA | NLV | NA | NA | NA | NA | NLV | NA | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | NA | NA | NA | NA | 2.30E-05 | NA | NA | NA | NLV | NA | NA | NA |
| Water Solubility (VII) | 2.80E+07 | 7.87E+06 | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.69E+03 | 7,480 | 10,000 | 3.0E+05 | 1.08E+06 |
| Flammability & Explosivity Screening Level (VIII) | NA | ID | NA | NA | ID | ID | NA | ID | ID | ID | ID | NA |
| MW-27 ^A | W-R2330026-052120-KRM-025 | 5/21/2020 | | | | | | | | | | |
| MW-27 | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330026-110520-KRM-016 | 11/5/2020 | | | | | | | | | | |
| MW-27 | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330027-041321-KRM-0012 | 4/13/2021 | | | | | | | | | | |
| MW-27 | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330027-042522-ADP-005 | 4/25/2022 | | | | | | | | | | |
| MW-27 | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330031-042023-ERR-023 | 5/5/2023 | | | | | | | | | | |
| MW-27 | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330026-051920-JPM-011 | 5/19/2020 | | | | | | | | | | |
| MW-34 | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330026-111020-SSR-036 | 11/10/2020 | | | | | | | | | | |
| MW-34 | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330027-041221-SSR-015 | 4/13/2021 | | | | | | | | | | |
| MW-34 | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | | | | | | | | | | |
| MW-34 (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330027-042822-SSR-031 | 4/28/2022 | | | | | | | | | | |
| MW-34 | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330031-041923-ERR-014 | 4/19/2023 | | | | | | | | | | |
| MW-34 | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of NREPA.
 G = Calculated value based on a hardness of 150 mg/L.
 H = Analyzed outside of holding time.
 J = Analyte detected below quantitation limit.
 NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)
 Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value
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**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dimethyl phthalate | Di-n-butyl phthalate | Fluoranthene | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium |
|--|----------------------------|------------|--------------------|----------------------|--------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 2.1E+05 | 2,500 | 210 (S) | 2,000 (S) | 1,500 | 150 | 140 (S) | 13,000 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | 4,100 | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | 9.7 | 1.6 | 12 | 11 | 2.0 (M); 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) |
| GSI Final Acute Value (FAV) | | | NA | 75 | 220 | 200 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | 210 (S) | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) _(CG) | | | NA | NA | 71,000 | 3.00E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) _(a) | | | NA | NA | NA | 300,000 | 1,200 | 4.8E+2 | 1.7E+06 | NA | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | 4.19E+06 | 11,200 | 206 | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | NA | NA | ID | ID | NA | ID | ID | NA | ID | ID | ID | ID |
| MW-27 ^A | W-R2330026-052120-KRM-025 | 5/21/2020 | | | | | | | | | 33 | NS | NS | NS |
| MW-27 | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-27 ^A | W-R2330026-110520-KRM-016 | 11/5/2020 | | | | | | | | | 630 | NS | NS | NS |
| MW-27 | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-27 ^A | W-R2330027-041321-KRM-0012 | 4/13/2021 | | | | | | | | | 28 | NS | NS | NS |
| MW-27 | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8 | NS | NS | NS |
| MW-27 ^A | W-R2330027-042522-ADP-005 | 4/25/2022 | | | | | | | | | 730 | NS | NS | NS |
| MW-27 | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-27 ^A | W-R2330031-042023-ERR-023 | 5/5/2023 | | | | | | | | | 160 | NS | NS | NS |
| MW-27 | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |
| MW-34 ^A | W-R2330026-051920-JPM-011 | 5/19/2020 | | | | | | | | | 41 | NS | NS | NS |
| MW-34 | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS | NS | NS | NS | 23 | NS | NS | NS |
| MW-34 ^A | W-R2330026-111020-SSR-036 | 11/10/2020 | | | | | | | | | 100 | NS | NS | NS |
| MW-34 | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-34 ^A | W-R2330027-041221-SSR-015 | 4/13/2021 | | | | | | | | | 110 | NS | NS | NS |
| MW-34 | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS |
| MW-34 ^A (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | | | | | | | | | 140 | NS | NS | NS |
| MW-34 (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | 10 | NS | NS | NS |
| MW-34 ^A | W-R2330027-042822-SSR-031 | 4/28/2022 | | | | | | | | | 2,400 | NS | NS | NS |
| MW-34 | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | 14 | NS | NS | NS |
| MW-34 ^A | W-R2330031-041923-ERR-014 | 4/19/2023 | | | | | | | | | 18 | NS | NS | NS |
| MW-34 | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | <10 | NS | NS | NS |

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of NREPA.
 G = Calculated value based on a hardness of 150 mg/L.
 H = Analyzed outside of holding time.
 J = Analyte detected below quantitation limit.
 NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)
 Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value
 Exceeds Generic Ground Water Surface Water Interface Criteria (III)
 Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
 Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | |
|--|----------------------------|------------|-----------|---------|----------|--------|------------|----------------|----------|----------|---------------|---------------|---------|-----------|
| | | | Beryllium | Cadmium | Chromium | Cobalt | Copper (B) | Cyanide (P, R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel |
| Non-residential Drinking Water Criteria (II) | | | 4.0 (A) | 5.0 (A) | 100 (A) | 100 | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 1.1E+06 | 50 (E) | 2.0 (A) | 100 (A) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | 4,000 | NA | 5,600 | NA | NA | 2,500 | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 6.7 (G) | 3 (G) | 11 | 100 | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 13 (G) | 1,588 | 740 | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) _(c2) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI,v}) (a) | | | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 56 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MW-27 ^A | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS | 4,100 | NS | NS | 89 | NS | NS | NS |
| MW-27 | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS | 6,300 | NS | NS | 84 | NS | NS | NS |
| MW-27 ^A | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS | 6,300 | NS | NS | 100 | NS | NS | NS |
| MW-27 | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS | 4,100 | NS | NS | 96 | NS | NS | NS |
| MW-27 ^A | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS | 2,600 | NS | NS | 110 | NS | NS | NS |
| MW-27 | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS | 2,400 | NS | NS | 110 | NS | NS | NS |
| MW-27 ^A | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS | 11,000 | NS | NS | 180 | NS | NS | NS |
| MW-27 | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS | 6,800 | NS | NS | 150 | NS | NS | NS |
| MW-27 ^A | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS | 7,100 | NS | NS | 93 | NS | NS | NS |
| MW-27 | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS | 1,900 | NS | NS | 83 | NS | NS | NS |
| MW-34 ^A | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS | 1,600 | NS | NS | 250 | NS | NS | NS |
| MW-34 | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS | 1,400 | NS | NS | 240 | NS | NS | NS |
| MW-34 ^A | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS | 2,700 | NS | NS | 420 | NS | NS | NS |
| MW-34 | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS | 2,500 | NS | NS | 420 | NS | NS | NS |
| MW-34 ^A | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS | 2,000 | NS | NS | 190 | NS | NS | NS |
| MW-34 | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS | 1,400 | NS | NS | 200 | NS | NS | NS |
| MW-34 ^A (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS | 2,000 | NS | NS | 200 | NS | NS | NS |
| MW-34 (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS | 1,400 | NS | NS | 180 | NS | NS | NS |
| MW-34 ^A | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS | 7,300 | NS | NS | 260 | NS | NS | NS |
| MW-34 | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS | 2,700 | NS | NS | 170 | NS | NS | NS |
| MW-34 ^A | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS | 2,600 | NS | NS | 290 | NS | NS | NS |
| MW-34 | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS | 2,200 | NS | NS | 300 | NS | NS | NS |

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of NREPA.
 G = Calculated value based on a hardness of 150 mg/L.
 H = Analyzed outside of holding time.
 J = Analyte detected below quantitation limit.
 NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)
 Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value
 Exceeds Generic Ground Water Surface Water Interface Criteria (III)
 Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
 Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 2
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 2011213 Generic Non-Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Selenium (B) | Silver | Thallium | Vanadium | Zinc |
|--|----------------------------|------------|--------------|---------------|----------|----------|-----------|
| Non-residential Drinking Water Criteria (II) | | | 50 (A) | 98 | 2.0 (A) | 62 | 5,000 (E) |
| Non-residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL} (c,d)) | | | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI} (a)) | | | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID |
| MW-27 ^A | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-27 | W-R2330026-052120-KRM-025 | 5/21/2020 | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-27 | W-R2330026-110520-KRM-016 | 11/5/2020 | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-27 | W-R2330027-041321-KRM-0012 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS |
| MW-27 | W-R2330027-042522-ADP-005 | 4/25/2022 | NS | NS | NS | NS | NS |
| MW-27 ^A | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS |
| MW-27 | W-R2330031-042023-ERR-023 | 5/5/2023 | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS |
| MW-34 | W-R2330026-051920-JPM-011 | 5/19/2020 | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS |
| MW-34 | W-R2330026-111020-SSR-036 | 11/10/2020 | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-34 | W-R2330027-041221-SSR-015 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-34 ^A (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-34 (DUP) | W-R2330027-041221-SSR-017 | 4/13/2021 | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS |
| MW-34 | W-R2330027-042822-SSR-031 | 4/28/2022 | NS | NS | NS | NS | NS |
| MW-34 ^A | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS |
| MW-34 | W-R2330031-041923-ERR-014 | 4/19/2023 | NS | NS | NS | NS | NS |

E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of NREPA.
G = Calculated value based on a hardness of 150 mg/L.
H = Analyzed outside of holding time.
J = Analyte detected below quantitation limit.
NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)
Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value (E)
Exceeds Generic Ground Water Surface Water Interface Criteria (III)
Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
Exceeds GSI Final Acute Value (FAV), also exceeds others

TABLE 3

Summary of Groundwater Sample Results (Residential)



**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Volatile Organic Compounds (VOCs) | | | | | | | | | | | | |
|--|-----------------------------|-------------|-----------------------------------|---------------------|---------------------|---------------------------|---------------|----------|----------------------|------------------|---------------|--------------|--------------|------------|-------------|
| | | | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentane (MIBK) | Acetone | Benzene | Bromodichloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloroethane | Chloroform | Cyclohexane |
| Residential Drinking Water Criteria (II) | | | 13,000 | 600 (A) | 75 (A) | 1,800 | 730 | 5.0 (A) | 80 (A,W) | 800 | 100 (A) | 430 | 260 | 80 (A,W) | NA |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 2,200 | 13 | 17 | ID | 1,700 | 200 | ID | 25 | 1,100 | ID | 350 | NA | |
| GSI Final Acute Value (FAV) | | | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | 450 | 20,000 | NA | 11,000 | ID | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2.4E+8 (S) | 1.6E+5 (S) | 16,000 | 2.0E+07 (S) | 1.0E+09 (D,S) | 5,600 | 4,800 | 2.5E+05 | 2.1E+05 | 5.7E+06 (S) | 8.6E+03 | 28,000 | NA |
| Draft Non-Residential Groundwater Screening Levels (GW _{NS} SL _(c,d)) | | | 9.6E+06 | NA | NA | 1.1E+06 | 1.1E+07 | 100 | NA | NA | 1.3E+03 | 7.9E+04 | | 520 | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{VIS}) (a) | | | 4.3E+06 | 7,600 | 76 | 1,100 | 8.2E+06 | 27 | NA | 2,400 | 1,100 | 44,000 | NA | 140 | 1,900 |
| Water Solubility (VII) | | | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID | NA |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-18 ^a | W-R2330026-110920-KRM-029 | 11/9/2020 | | | | | | | | | | | | | |
| MW-18 | W-R2330026-110920-KRM-029 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-041321-SSR-009 | 4/13/2021 | | | | | | | | | | | | | |
| MW-18 | W-R2330027-041321-SSR-009 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-042622-ADP-014 | 4/26/2022 | | | | | | | | | | | | | |
| MW-18 | W-R2330027-042622-ADP-014 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330028-102722-ADH-004 | 10/27/2022 | | | | | | | | | | | | | |
| MW-18 | W-R2330028-102722-ADH-004 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R23300310-41723-ERR-001 | 4/17/2023 | | | | | | | | | | | | | |
| MW-18 | W-R23300310-41723-ERR-001 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330026-110920-KRM-030 | 11/9/2020 | | | | | | | | | | | | | |
| MW-19 | W-R2330026-110920-KRM-030 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-041321-SSR-011 | 4/13/2021 | | | | | | | | | | | | | |
| MW-19 | W-R2330027-041321-SSR-011 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-042622-SSR-030 | 4/26/2022 | | | | | | | | | | | | | |
| MW-19 | W-R2330027-042622-SSR-030 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330028-102722-ADH-005 | 10/27/2022 | | | | | | | | | | | | | |
| MW-19 | W-R2330028-102722-ADH-005 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R233031-041723-ERR-002 | 4/17/2023 | | | | | | | | | | | | | |
| MW-19 | W-R233031-041723-ERR-002 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330026-111020-SSR-032 | 11/10/2020 | | | | | | | | | | | | | |
| MW-20 | W-R2330026-111020-SSR-032 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^(DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | | | | | | | | | | | | | |
| MW-20 (DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-041321-SSR-013 | 4/13/2021 | | | | | | | | | | | | | |
| MW-20 | W-R2330027-041321-SSR-013 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-042622-SSR-029 | 4/26/2022 | | | | | | | | | | | | | |
| MW-20 | W-R2330027-042622-SSR-029 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330028-10/26/22-ADH-001 | 10/26/2022 | | | | | | | | | | | | | |
| MW-20 | W-R2330028-10/26/22-ADH-001 | 10/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330031-041723-ERR-003 | 4/17/2023 | | | | | | | | | | | | | |
| MW-20 | W-R2330031-041723-ERR-003 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330026-110420-SSR-007 | 11/4/2020 | | | | | | | | | | | | | |
| MW-21 | W-R2330026-110420-SSR-007 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-041421-KRM-024 | 4/14/2021 | | | | | | | | | | | | | |
| MW-21 | W-R2330027-041421-KRM-024 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a (DUP) | DUP 1 | 4/27/2022 | | | | | | | | | | | | | |
| MW-21 (DUP) | DUP 1 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-042722-SSR-024 | 4/27/2022 | | | | | | | | | | | | | |
| MW-21 | W-R2330027-042722-SSR-024 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330028-102622-ADH-002 | 10/26/2022 | | | | | | | | | | | | | |
| MW-21 | W-R2330028-102622-ADH-002 | 10/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330031-041923-ERR-011 | 4/19/2023 | | | | | | | | | | | | | |
| MW-21 | W-R2330031-041923-ERR-011 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Biphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol | 4-Methylphenol | 2,4-Dimethylphenol |
|--|-----------------------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|----------------|--------------------|
| Residential Drinking Water Criteria (II) | | | 80 (A,W) | 1,700 | 74 (E) | 800 | NA | 790 (E) | 280 (E) | ID | 45 | 260 | 370 | 370 | 370 |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 | 30 (M); 25 | 380 |
| GSI Final Acute Value (FAV) | | | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | 1,400 | 1,400 | 2,700 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 14,000 | 2.2E+05 | 1.1E+05 | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 490,000 | 25,000 (S) | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NS} SL _(c,d)) | | | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA | NA | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIS}) (a) | | | NA | NA | 700 (d) | 10 | NA | 36,000 | 10,000 (d) | ID | 78,000 | 940 | NA | NA | NA |
| Water Solubility (VII) | | | 2.60E+06 | 3.00E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 | 2.80E+07 | 7.87E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA | NA | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-18 ^a | W-R2330026-110920-KRM-029 | 11/9/2020 | | | | | | | | | | | | | |
| MW-18 | W-R2330026-110920-KRM-029 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-041321-SSR-009 | 4/13/2021 | | | | | | | | | | | | | |
| MW-18 | W-R2330027-041321-SSR-009 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-042622-ADP-014 | 4/26/2022 | | | | | | | | | | | | | |
| MW-18 | W-R2330027-042622-ADP-014 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330028-102722-ADH-004 | 10/27/2022 | | | | | | | | | | | | | |
| MW-18 | W-R2330028-102722-ADH-004 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R23300310-41723-ERR-001 | 4/17/2023 | | | | | | | | | | | | | |
| MW-18 | W-R23300310-41723-ERR-001 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330026-110920-KRM-030 | 11/9/2020 | | | | | | | | | | | | | |
| MW-19 | W-R2330026-110920-KRM-030 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-041321-SSR-011 | 4/13/2021 | | | | | | | | | | | | | |
| MW-19 | W-R2330027-041321-SSR-011 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-042622-SSR-030 | 4/26/2022 | | | | | | | | | | | | | |
| MW-19 | W-R2330027-042622-SSR-030 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330028-102722-ADH-005 | 10/27/2022 | | | | | | | | | | | | | |
| MW-19 | W-R2330028-102722-ADH-005 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R233031-041723-ERR-002 | 4/17/2023 | | | | | | | | | | | | | |
| MW-19 | W-R233031-041723-ERR-002 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330026-111020-SSR-032 | 11/10/2020 | | | | | | | | | | | | | |
| MW-20 | W-R2330026-111020-SSR-032 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^(DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | | | | | | | | | | | | | |
| MW-20 (DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-041321-SSR-013 | 4/13/2021 | | | | | | | | | | | | | |
| MW-20 | W-R2330027-041321-SSR-013 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-042622-SSR-029 | 4/26/2022 | | | | | | | | | | | | | |
| MW-20 | W-R2330027-042622-SSR-029 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330028-10/26/22-ADH-001 | 10/26/2022 | | | | | | | | | | | | | |
| MW-20 | W-R2330028-10/26/22-ADH-001 | 10/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330031-041723-ERR-003 | 4/17/2023 | | | | | | | | | | | | | |
| MW-20 | W-R2330031-041723-ERR-003 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330026-110420-SSR-007 | 11/4/2020 | | | | | | | | | | | | | |
| MW-21 | W-R2330026-110420-SSR-007 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-041421-KRM-024 | 4/14/2021 | | | | | | | | | | | | | |
| MW-21 | W-R2330027-041421-KRM-024 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a (DUP) | DUP 1 | 4/27/2022 | | | | | | | | | | | | | |
| MW-21 (DUP) | DUP 1 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-042722-SSR-024 | 4/27/2022 | | | | | | | | | | | | | |
| MW-21 | W-R2330027-042722-SSR-024 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330028-102622-ADH-002 | 10/26/2022 | | | | | | | | | | | | | |
| MW-21 | W-R2330028-102622-ADH-002 | 10/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330031-041923-ERR-011 | 4/19/2023 | | | | | | | | | | | | | |
| MW-21 | W-R2330031-041923-ERR-011 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | | | |
|--|---------------------------|-------------|--|----------------------------|--------------|--------------|--------------|------------------------|--------------|-------------|--------------|-------------------|--------------------|----------------------|--------------|
| | | | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Bis(1-benzyl)phthalate | Caproic acid | Carbazole | Dibenzofuran | Diethyl phthalate | Dimethyl phthalate | Di-n-butyl phthalate | Fluoranthene |
| Residential Drinking Water Criteria (II) | | | NA | 6.0 (A) | 1,300 | 1,500 | NA | 1,200 | 5,800 | 85 | ID | 5,500 | 73,000 | 880 | 210 (S) |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | NA | 25 | 38 | ID | NA | 67 | NA | 10 (M); 4.0 | 4 | 110 | 110 | 9.7 | 1.5 |
| GSI Final Acute Value (FAV) | | | ID | 285 | 200 | NA | NA | 630 | ID | 72 | 72 | 2.0E+03 | NA | 75 | 220 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | NLV | 10,000 (S) | NLV | NLV | NLV | 210 (S) |
| Draft Non-Residential Groundwater Screening Levels (GW _{NS} SL _(c)) | | | NA | NLV | NA | NA | NA | NA | NA | NLV | NA | NA | NA | NA | 71,000 |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | NA | NA | NA | NA | NA | NA | NA | NLV | 2.30E+01 | NA | NA | NA | NA |
| Water Solubility (VII) | | | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.7E+03 | 5.25E+09 | 7,480 | 10,000 | 1.08E+06 | 1.08E+06 | 1.12E+04 | 206 |
| Flammability & Explosivity Screening Level (VIII) | | | NA | NA | ID | ID | NA | ID | NA | ID | ID | NA | NA | NA | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-18 ^a | W-R2330026-110920-KRM-029 | 11/9/2020 | | | | | | | | | | | | | |
| MW-18 | W-R2330026-110920-KRM-029 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-041321-SSR-009 | 4/13/2021 | | | | | | | | | | | | | |
| MW-18 | W-R2330027-041321-SSR-009 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-042622-ADP-014 | 4/26/2022 | | | | | | | | | | | | | |
| MW-18 | W-R2330027-042622-ADP-014 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330028-102722-ADH-004 | 10/27/2022 | | | | | | | | | | | | | |
| MW-18 | W-R2330028-102722-ADH-004 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R23300310-41723-ERR-001 | 4/17/2023 | | | | | | | | | | | | | |
| MW-18 | W-R23300310-41723-ERR-001 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330026-110920-KRM-030 | 11/9/2020 | | | | | | | | | | | | | |
| MW-19 | W-R2330026-110920-KRM-030 | 11/9/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-041321-SSR-011 | 4/13/2021 | | | | | | | | | | | | | |
| MW-19 | W-R2330027-041321-SSR-011 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-042622-SSR-030 | 4/26/2022 | | | | | | | | | | | | | |
| MW-19 | W-R2330027-042622-SSR-030 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330028-102722-ADH-005 | 10/27/2022 | | | | | | | | | | | | | |
| MW-19 | W-R2330028-102722-ADH-005 | 10/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R233031-041723-ERR-002 | 4/17/2023 | | | | | | | | | | | | | |
| MW-19 | W-R233031-041723-ERR-002 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330026-111020-SSR-032 | 11/10/2020 | | | | | | | | | | | | | |
| MW-20 | W-R2330026-111020-SSR-032 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^(DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | | | | | | | | | | | | | |
| MW-20 (DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-041321-SSR-013 | 4/13/2021 | | | | | | | | | | | | | |
| MW-20 | W-R2330027-041321-SSR-013 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-042622-SSR-029 | 4/26/2022 | | | | | | | | | | | | | |
| MW-20 | W-R2330027-042622-SSR-029 | 4/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330028-102622-ADH-001 | 10/26/2022 | | | | | | | | | | | | | |
| MW-20 | W-R2330028-102622-ADH-001 | 10/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330031-041723-ERR-003 | 4/17/2023 | | | | | | | | | | | | | |
| MW-20 | W-R2330031-041723-ERR-003 | 4/17/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330026-110420-SSR-007 | 11/4/2020 | | | | | | | | | | | | | |
| MW-21 | W-R2330026-110420-SSR-007 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-041421-KRM-024 | 4/14/2021 | | | | | | | | | | | | | |
| MW-21 | W-R2330027-041421-KRM-024 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a (DUP) | DUP 1 | 4/27/2022 | | | | | | | | | | | | | |
| MW-21 (DUP) | DUP 1 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-042722-SSR-024 | 4/27/2022 | | | | | | | | | | | | | |
| MW-21 | W-R2330027-042722-SSR-024 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330028-102622-ADH-002 | 10/26/2022 | | | | | | | | | | | | | |
| MW-21 | W-R2330028-102622-ADH-002 | 10/26/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330031-041923-ERR-011 | 4/19/2023 | | | | | | | | | | | | | |
| MW-21 | W-R2330031-041923-ERR-011 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium | Beryllium | Calcium | Chromium | Cobalt |
|--|---------------------------|-------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|-----------|---------|----------|--------|
| Residential Drinking Water Criteria (II) | | | 880 | 520 | 52 | 140 (S) | 4,400 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) | 4.0 (A) | 5.0 (A) | 100 (A) | 40 |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | 300 | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 12 | 11 | 2.0 (M); 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) | 6.7 (G) | 3 (G) | 11 | 100 |
| GSI Final Acute Value (FAV) | | | 220 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) | 120 | 13 (G) | 1,588 | 740 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSRL}) | | | 1.5E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIR}) (a) | | | 7.1E+04 | 240 | 110 | 410 | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV |
| Water Solubility (VII) | | | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | ID | ID | NA | ID | ID | ID | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-18 ^A | W-R2330026-110920-KRM-029 | 11/9/2020 | | | | | | 7,000 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330026-110920-KRM-029 | 11/9/2020 | NS | NS | NS | NS | NS | 11 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^A | W-R2330027-041321-SSR-009 | 4/13/2021 | | | | | | 260 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330027-041321-SSR-009 | 4/13/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^A | W-R2330027-042622-ADP-014 | 4/26/2022 | | | | | | 1,500 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330027-042622-ADP-014 | 4/26/2022 | NS | NS | NS | NS | NS | 22 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^A | W-R2330028-102722-ADH-004 | 10/27/2022 | | | | | | 410 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330028-102722-ADH-004 | 10/27/2022 | NS | NS | NS | NS | NS | 13 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^A | W-R2330030-041723-ERR-001 | 4/17/2023 | | | | | | 220 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330030-041723-ERR-001 | 4/17/2023 | NS | NS | NS | NS | NS | 11 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^A | W-R2330026-110920-KRM-030 | 11/9/2020 | | | | | | 280 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330026-110920-KRM-030 | 11/9/2020 | NS | NS | NS | NS | NS | 16 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^A | W-R2330027-041321-SSR-011 | 4/13/2021 | | | | | | 1,200 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330027-041321-SSR-011 | 4/13/2021 | NS | NS | NS | NS | NS | 14 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^A | W-R2330027-042622-SSR-030 | 4/26/2022 | | | | | | 1,900 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330027-042622-SSR-030 | 4/26/2022 | NS | NS | NS | NS | NS | 14 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^A | W-R2330028-102722-ADH-005 | 10/27/2022 | | | | | | 270 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330028-102722-ADH-005 | 10/27/2022 | NS | NS | NS | NS | NS | 45 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^A | W-R2330031-041723-ERR-002 | 4/17/2023 | | | | | | 490 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330031-041723-ERR-002 | 4/17/2023 | NS | NS | NS | NS | NS | 46 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^A | W-R2330026-111020-SSR-032 | 11/10/2020 | | | | | | 1,200 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330026-111020-SSR-032 | 11/10/2020 | NS | NS | NS | NS | NS | 18 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^{A (DUP)} | W-R2330026-111020-SSR-033 | 11/10/2020 | | | | | | 1,200 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 (DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | NS | NS | NS | NS | NS | 19 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^A | W-R2330027-041321-SSR-013 | 4/13/2021 | | | | | | 3,000 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330027-041321-SSR-013 | 4/13/2021 | NS | NS | NS | NS | NS | 36 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^A | W-R2330027-042622-SSR-029 | 4/26/2022 | | | | | | 2,600 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330027-042622-SSR-029 | 4/26/2022 | NS | NS | NS | NS | NS | 150 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^A | W-R2330028-102622-ADH-001 | 10/26/2022 | | | | | | 8,700 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330028-102622-ADH-001 | 10/26/2022 | NS | NS | NS | NS | NS | 43 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^A | W-R2330031-041723-ERR-003 | 4/17/2023 | | | | | | 270 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330031-041723-ERR-003 | 4/17/2023 | NS | NS | NS | NS | NS | 11 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^A | W-R2330026-110420-SSR-007 | 11/4/2020 | | | | | | 550 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330026-110420-SSR-007 | 11/4/2020 | NS | NS | NS | NS | NS | 31 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^A | W-R2330027-041421-KRM-024 | 4/14/2021 | | | | | | 84 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330027-041421-KRM-024 | 4/14/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^A (DUP) | DUP 1 | 4/27/2022 | | | | | | 16000 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 (DUP) | DUP 1 | 4/27/2022 | NS | NS | NS | NS | NS | 130 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^A | W-R2330027-042722-SSR-024 | 4/27/2022 | | | | | | 18,000 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330027-042722-SSR-024 | 4/27/2022 | NS | NS | NS | NS | NS | 46 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^A | W-R2330028-102622-ADH-002 | 10/26/2022 | | | | | | 850 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330028-102622-ADH-002 | 10/26/2022 | NS | NS | NS | NS | NS | 32 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^A | W-R2330031-041923-ERR-011 | 4/19/2023 | | | | | | 470 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330031-041923-ERR-011 | 4/19/2023 | NS | NS | NS | NS | NS | 30 | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | | |
|--|-----------------------------|-------------|------------|---------------|----------|----------|---------------|---------------|---------|-----------|--------------|---------------|----------|----------|---------|
| | | | Copper (E) | Cyanide (P/R) | Iron (E) | Lead (E) | Magnesium (E) | Manganese (E) | Mercury | Nickel | Selenium (E) | Silver | Thallium | Vanadium | Zinc |
| Residential Drinking Water Criteria (II) | | | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 400,000 | 50 (E) | 2.0 (A) | 100 (A) | 50 (A) | 34 | 2.0 (A) | 4.5 | 2,400 |
| Residential Health-Based Drinking Water Value (E) | | | 1,400 | NA | 2,000 | NA | NA | 860 | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NS} SL _(c)) | | | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIS}) (a) | | | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | NA | 56 | NA | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-18 ^a | W-R2330026-110920-KRM-029 | 11/9/2020 | NS | NS | 25,000 | NS | NS | 1,500 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330026-110920-KRM-029 | 11/9/2020 | NS | NS | 3,900 | NS | NS | 270 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-041321-SSR-009 | 4/13/2021 | NS | NS | 1,900 | NS | NS | 300 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330027-041321-SSR-009 | 4/13/2021 | NS | NS | 1,100 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330027-042622-ADP-014 | 4/26/2022 | NS | NS | 9,200 | NS | NS | 550 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330027-042622-ADP-014 | 4/26/2022 | NS | NS | 370 | NS | NS | 220 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R2330028-102722-ADH-004 | 10/27/2022 | NS | NS | 6,300 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R2330028-102722-ADH-004 | 10/27/2022 | NS | NS | 4,100 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 ^a | W-R23300310-41723-ERR-001 | 4/17/2023 | NS | NS | 1,200 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-18 | W-R23300310-41723-ERR-001 | 4/17/2023 | NS | NS | 580 | NS | NS | 310 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330026-110920-KRM-030 | 11/9/2020 | NS | NS | 3,600 | NS | NS | 440 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330026-110920-KRM-030 | 11/9/2020 | NS | NS | 2,800 | NS | NS | 430 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-041321-SSR-011 | 4/13/2021 | NS | NS | 8,300 | NS | NS | 490 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330027-041321-SSR-011 | 4/13/2021 | NS | NS | 3,500 | NS | NS | 520 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R2330027-042622-SSR-030 | 4/26/2022 | NS | NS | 8,900 | NS | NS | 620 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R2330027-042622-SSR-030 | 4/26/2022 | NS | NS | 4,700 | NS | NS | 580 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R233028-102722-ADH-005 | 10/27/2022 | NS | NS | 3,800 | NS | NS | 450 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R233028-102722-ADH-005 | 10/27/2022 | NS | NS | 3,200 | NS | NS | 460 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 ^a | W-R233031-041723-ERR-002 | 4/17/2023 | NS | NS | 2,200 | NS | NS | 460 | NS | NS | NS | NS | NS | NS | NS |
| MW-19 | W-R233031-041723-ERR-002 | 4/17/2023 | NS | NS | 1,500 | NS | NS | 470 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330026-111020-SSR-032 | 11/10/2020 | NS | NS | 8,300 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330026-111020-SSR-032 | 11/10/2020 | NS | NS | 4,800 | NS | NS | 200 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^(DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | NS | NS | 8,300 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 (DUP) | W-R2330026-111020-SSR-033 | 11/10/2020 | NS | NS | 4,900 | NS | NS | 200 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-041321-SSR-013 | 4/13/2021 | NS | NS | 14,000 | NS | NS | 400 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330027-041321-SSR-013 | 4/13/2021 | NS | NS | 6,700 | NS | NS | 240 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330027-042622-SSR-029 | 4/26/2022 | NS | NS | 12,000 | NS | NS | 410 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330027-042622-SSR-029 | 4/26/2022 | NS | NS | 4,200 | NS | NS | 180 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330028-10/26/22-ADH-001 | 10/26/2022 | NS | NS | 35,000 | NS | NS | 1100 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330028-10/26/22-ADH-001 | 10/26/2022 | NS | NS | 91 | NS | NS | 150 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 ^a | W-R2330031-041723-ERR-003 | 4/17/2023 | NS | NS | 5,600 | NS | NS | 200 | NS | NS | NS | NS | NS | NS | NS |
| MW-20 | W-R2330031-041723-ERR-003 | 4/17/2023 | NS | NS | 5,000 | NS | NS | 180 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330026-110420-SSR-007 | 11/4/2020 | NS | NS | 870 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330026-110420-SSR-007 | 11/4/2020 | NS | NS | 330 | NS | NS | 290 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-041421-KRM-024 | 4/14/2021 | NS | NS | 370 | NS | NS | 210 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330027-041421-KRM-024 | 4/14/2021 | NS | NS | 320 | NS | NS | 200 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a (DUP) | DUP 1 | 4/27/2022 | NS | NS | 19,000 | NS | NS | 1200 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 (DUP) | DUP 1 | 4/27/2022 | NS | NS | 83 | NS | NS | 60 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330027-042722-SSR-024 | 4/27/2022 | NS | NS | 21,000 | NS | NS | 1000 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330027-042722-SSR-024 | 4/27/2022 | NS | NS | 82 | NS | NS | 53 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330028-102622-ADH-002 | 10/26/2022 | NS | NS | 4,900 | NS | NS | 610 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330028-102622-ADH-002 | 10/26/2022 | NS | NS | 250 | NS | NS | 60 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 ^a | W-R2330031-041923-ERR-011 | 4/19/2023 | NS | NS | 3,200 | NS | NS | 520 | NS | NS | NS | NS | NS | NS | NS |
| MW-21 | W-R2330031-041923-ERR-011 | 4/19/2023 | NS | NS | 240 | NS | NS | 110 | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Volatile Organic Compounds (VOCs) | | | | | | | | | | | | |
|--|---------------------------|-------------|-----------------------------------|---------------------|---------------------|---------------------------|---------------|----------|----------------------|------------------|---------------|--------------|---------------|------------|-------------|
| | | | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromodichloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloromethane | Chloroform | Cyclohexane |
| Residential Drinking Water Criteria (II) | | | 13,000 | 600 (A) | 75 (A) | 1,800 | 730 | 5.0 (A) | 80 (A,W) | 800 | 100 (A) | 430 | 260 | 80 (A,W) | NA |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 2,200 | 13 | 17 | ID | 1,700 | 200 | ID | ID | 25 | 1,100 | ID | 350 | NA |
| GSI Final Acute Value (FAV) | | | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | ID | 450 | 30,000 | NA | 11,000 | ID |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2.4E+8 (S) | 1.6E+5 (S) | 16,000 | 2.0E+07 (S) | 1.0E+09 (D,S) | 5,600 | 4,800 | 2.5E+05 | 2.1E+05 | 5.7E+06 (S) | 8.6E+03 | 28,000 | NA |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL(Draft)}) | | | 9.9E+06 | NA | NA | 1.1E+06 | 1.1E+07 | 100 | NA | NA | 1.3E+03 | 7.9E+04 | 520 | NA | NA |
| Groundwater Concentration for Vapor Intrusion (GW _{V(Res)}) (a) | | | 4.3E+06 | 7,600 | 76 | 1,100 | 8.2E+06 | 27 | NA | 2,400 | 1,100 | 44,000 | NA | 140 | 1,900 |
| Water Solubility (VII) | | | 2.40E+08 | 1.66E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID | NA |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-22 ^A | W-R2330026-052020-SSR-019 | 5/20/2020 | | | | | | | | | | | | | |
| MW-22 | W-R2330026-052020-SSR-019 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330026-110420-SSR-008 | 11/4/2020 | | | | | | | | | | | | | |
| MW-22 | W-R2330026-110420-SSR-008 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-041421-KRM-026 | 4/14/2021 | | | | | | | | | | | | | |
| MW-22 | W-R2330027-041421-KRM-026 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-042722-SSR-023 | 4/27/2022 | | | | | | | | | | | | | |
| MW-22 | W-R2330027-042722-SSR-023 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330031-041923-ERR-012 | 4/19/2023 | | | | | | | | | | | | | |
| MW-22 | W-R2330031-041923-ERR-012 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330026-110420-SSR-009 | 11/4/2020 | | | | | | | | | | | | | |
| MW-23 | W-R2330026-110420-SSR-009 | 11/4/2020 | <0.52 | <0.32 | <0.35 | <0.52 | <6.2 | 2.5 | <0.49 | <0.49 | 69 | <0.68 | <0.83 | <0.46 | <0.63 |
| MW-23 ^A | W-R2330027-041421-SSR-021 | 4/14/2021 | | | | | | | | | | | | | |
| MW-23 | W-R2330027-041421-SSR-021 | 4/14/2021 | <0.52 | <0.32 | <0.35 | <0.52 | <6.2 | 1.5 | <0.49 | <0.49 | 43 | <0.68 | <0.83 | <0.46 | <0.63 |
| MW-23 ^A | W-R2330027-042722-SSR-021 | 4/27/2022 | | | | | | | | | | | | | |
| MW-23 | W-R2330027-042722-SSR-021 | 4/27/2022 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.2 | <1.0 | <1.0 | 31 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-23 ^A | W-R2330028-102822-ADH-010 | 10/28/2022 | | | | | | | | | | | | | |
| MW-23 | W-R2330028-102822-ADH-010 | 10/28/2022 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 61 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-23 ^A | W-R2330031-042023-ERR-018 | 4/20/2023 | | | | | | | | | | | | | |
| MW-23 | W-R2330031-042023-ERR-018 | 4/20/2023 | <5.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.20 | <1.0 | <1.0 | 39 | <1.0 | <1.0 | <1.0 | <2.0 |
| MW-25 ^A | W-R2330026-052220-SSR-035 | 5/22/2020 | | | | | | | | | | | | | |
| MW-25 | W-R2330026-052220-SSR-035 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-110420-SSR-011 | 11/4/2020 | | | | | | | | | | | | | |
| MW-25 | W-R2330026-110420-SSR-011 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-041421-KRM-020 | 4/14/2021 | | | | | | | | | | | | | |
| MW-25 | W-R2330027-041421-KRM-020 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-042722-SSR-020 | 4/27/2022 | | | | | | | | | | | | | |
| MW-25 | W-R2330027-042722-SSR-020 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330031-042023-ERR-017 | 4/20/2023 | | | | | | | | | | | | | |
| MW-25 | W-R2330031-042023-ERR-017 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330026-110420-SSR-006 | 11/4/2020 | | | | | | | | | | | | | |
| MW-26 | W-R2330026-110420-SSR-006 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-041421-KRM-022 | 4/14/2021 | | | | | | | | | | | | | |
| MW-26 | W-R2330027-041421-KRM-022 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-042722-SSR-022 | 4/27/2022 | | | | | | | | | | | | | |
| MW-26 | W-R2330027-042722-SSR-022 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330028-102822-ADH-009 | 10/28/2022 | | | | | | | | | | | | | |
| MW-26 | W-R2330028-102822-ADH-009 | 10/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330031-042023-ERR-019 | 4/20/2023 | | | | | | | | | | | | | |
| MW-26 | W-R2330031-042023-ERR-019 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Biphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol | 4-Methylphenol | 2,4-Dimethylphenol |
|--|---------------------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|----------------|--------------------|
| Residential Drinking Water Criteria (II) | | | 80 (A,W) | 1,700 | 74 (E) | 800 | NA | 790 (E) | 280 (E) | ID | 45 | 260 | 370 | 370 | 370 |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 | 30 (M); 25 | 380 |
| GSI Final Acute Value (FAV) | | | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | 1,400 | 1,400 | 2,700 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 14,000 | 2.2E+05 | 1.1E+05 | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 490,000 | 25,000 (S) | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL}) (a) | | | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | NA | NA | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIR}) (a) | | | NA | NA | 700 (d) | 10 | NA | 36,000 | 10,000 (d) | ID | 78,000 | 940 | NA | NA | NA |
| Water Solubility (VII) | | | 2.60E+06 | 3.00E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 | 2.80E+07 | 7.87E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA | NA | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-22 ^A | W-R2330026-052020-SSR-019 | 5/20/2020 | | | | | | | | | | | | | |
| MW-22 | W-R2330026-052020-SSR-019 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330026-110420-SSR-008 | 11/4/2020 | | | | | | | | | | | | | |
| MW-22 | W-R2330026-110420-SSR-008 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-041421-KRM-026 | 4/14/2021 | | | | | | | | | | | | | |
| MW-22 | W-R2330027-041421-KRM-026 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-042722-SSR-023 | 4/27/2022 | | | | | | | | | | | | | |
| MW-22 | W-R2330027-042722-SSR-023 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330031-041923-ERR-012 | 4/19/2023 | | | | | | | | | | | | | |
| MW-22 | W-R2330031-041923-ERR-012 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330026-110420-SSR-009 | 11/4/2020 | | | | | | | | | | | | | |
| MW-23 | W-R2330026-110420-SSR-009 | 11/4/2020 | <0.40 | <0.68 | <0.34 | <0.35 | <0.35 | <0.45 | <0.81 | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-041421-SSR-021 | 4/14/2021 | | | | | | | | | | | | | |
| MW-23 | W-R2330027-041421-SSR-021 | 4/14/2021 | <0.40 | <0.68 | <0.34 | <0.35 | <0.35 | <0.45 | <0.81 | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-042722-SSR-021 | 4/27/2022 | | | | | | | | | | | | | |
| MW-23 | W-R2330027-042722-SSR-021 | 4/27/2022 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330028-102822-ADH-010 | 10/28/2022 | | | | | | | | | | | | | |
| MW-23 | W-R2330028-102822-ADH-010 | 10/28/2022 | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-23 ^A | W-R2330031-042023-ERR-018 | 4/20/2023 | | | | | | | | | | | | | |
| MW-23 | W-R2330031-042023-ERR-018 | 4/20/2023 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <3.0 | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-052220-SSR-035 | 5/22/2020 | | | | | | | | | | | | | |
| MW-25 | W-R2330026-052220-SSR-035 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-110420-SSR-011 | 11/4/2020 | | | | | | | | | | | | | |
| MW-25 | W-R2330026-110420-SSR-011 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-041421-KRM-020 | 4/14/2021 | | | | | | | | | | | | | |
| MW-25 | W-R2330027-041421-KRM-020 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-042722-SRS-020 | 4/27/2022 | | | | | | | | | | | | | |
| MW-25 | W-R2330027-042722-SRS-020 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330031-042023-ERR-017 | 4/20/2023 | | | | | | | | | | | | | |
| MW-25 | W-R2330031-042023-ERR-017 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330026-110420-SSR-006 | 11/4/2020 | | | | | | | | | | | | | |
| MW-26 | W-R2330026-110420-SSR-006 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-041421-KRM-022 | 4/14/2021 | | | | | | | | | | | | | |
| MW-26 | W-R2330027-041421-KRM-022 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-042722-SSR-022 | 4/27/2022 | | | | | | | | | | | | | |
| MW-26 | W-R2330027-042722-SSR-022 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330028-102822-ADH-009 | 10/28/2022 | | | | | | | | | | | | | |
| MW-26 | W-R2330028-102822-ADH-009 | 10/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330031-042023-ERR-019 | 4/20/2023 | | | | | | | | | | | | | |
| MW-26 | W-R2330031-042023-ERR-019 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | | |
|--|---------------------------|-------------|--|----------------------------|--------------|--------------|--------------|-----------------------|-------------|-----------|--------------|-------------------|--------------------|----------------------|
| | | | 4-Chloroaniline | Big(2-ethyl)hexylphthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzy phthalate | Caprolactam | Carbazole | Dibenzofuran | Diethyl phthalate | Dimethyl phthalate | Di-n-butyl phthalate |
| Residential Drinking Water Criteria (II) | NA | 6.0 (A) | 1,300 | 1,500 | NA | 1,200 | 5,800 | 85 | ID | 5,500 | 73,000 | 880 | 210 (S) | |
| Residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| Ground Water Surface Water Interface Criteria (GSI) (III) | NA | 25 | 38 | ID | NA | 67 | NA | 10 (M); 4.0 | 4 | 110 | 110 | 9.7 | 1.6 | |
| GSI Final Acute Value (FAV) | ID | 285 | 200 | NA | NA | 630 | ID | 72 | 72 | 2.0E+03 | NA | 75 | 220 | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | NLV | 10,000 (S) | NLV | NLV | NLV | 210 (S) | |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL}) (a) | NA | NLV | NA | NA | NA | NA | NA | NLV | NA | NA | NA | NA | 71,000 | |
| Groundwater Concentration for Vapor Intrusion (GW _{VIR}) (a) | NA | NA | NA | NA | NA | NA | NA | NLV | 2.30E+01 | NA | NA | NA | NA | |
| Water Solubility (VII) | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.7E+03 | 5.25E+09 | 7,480 | 10,000 | 1.08E+06 | 1.08E+06 | 1.12E+04 | 206 | |
| Flammability & Explosivity Screening Level (VIII) | NA | NA | ID | ID | NA | ID | NA | ID | ID | NA | NA | NA | ID | |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | |
| MW-22 ^A | W-R2330026-052020-SSR-019 | 5/20/2020 | | | | | | | | | | | | |
| MW-22 | W-R2330026-052020-SSR-019 | 5/20/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330026-110420-SSR-008 | 11/4/2020 | | | | | | | | | | | | |
| MW-22 | W-R2330026-110420-SSR-008 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-041421-KRM-026 | 4/14/2021 | | | | | | | | | | | | |
| MW-22 | W-R2330027-041421-KRM-026 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-042722-SSR-023 | 4/27/2022 | | | | | | | | | | | | |
| MW-22 | W-R2330027-042722-SSR-023 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330031-041923-ERR-012 | 4/19/2023 | | | | | | | | | | | | |
| MW-22 | W-R2330031-041923-ERR-012 | 4/19/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330026-110420-SSR-009 | 11/4/2020 | | | | | | | | | | | | |
| MW-23 | W-R2330026-110420-SSR-009 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-041421-SSR-021 | 4/14/2021 | | | | | | | | | | | | |
| MW-23 | W-R2330027-041421-SSR-021 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-042722-SSR-021 | 4/27/2022 | | | | | | | | | | | | |
| MW-23 | W-R2330027-042722-SSR-021 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330028-102822-ADH-010 | 10/28/2022 | | | | | | | | | | | | |
| MW-23 | W-R2330028-102822-ADH-010 | 10/28/2022 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-23 ^A | W-R2330031-042023-ERR-018 | 4/20/2023 | | | | | | | | | | | | |
| MW-23 | W-R2330031-042023-ERR-018 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-052220-SSR-035 | 5/22/2020 | | | | | | | | | | | | |
| MW-25 | W-R2330026-052220-SSR-035 | 5/22/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-110420-SSR-011 | 11/4/2020 | | | | | | | | | | | | |
| MW-25 | W-R2330026-110420-SSR-011 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-041421-KRM-020 | 4/14/2021 | | | | | | | | | | | | |
| MW-25 | W-R2330027-041421-KRM-020 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-042722-SRS-020 | 4/27/2022 | | | | | | | | | | | | |
| MW-25 | W-R2330027-042722-SRS-020 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330031-042023-ERR-017 | 4/20/2023 | | | | | | | | | | | | |
| MW-25 | W-R2330031-042023-ERR-017 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330026-110420-SSR-006 | 11/4/2020 | | | | | | | | | | | | |
| MW-26 | W-R2330026-110420-SSR-006 | 11/4/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-041421-KRM-022 | 4/14/2021 | | | | | | | | | | | | |
| MW-26 | W-R2330027-041421-KRM-022 | 4/14/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-042722-SSR-022 | 4/27/2022 | | | | | | | | | | | | |
| MW-26 | W-R2330027-042722-SSR-022 | 4/27/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330028-102822-ADH-009 | 10/28/2022 | | | | | | | | | | | | |
| MW-26 | W-R2330028-102822-ADH-009 | 10/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330031-042023-ERR-019 | 4/20/2023 | | | | | | | | | | | | |
| MW-26 | W-R2330031-042023-ERR-019 | 4/20/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

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Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Fluorene | Naphthalene | Phenanthrene | Pyrene | Phenol | Aluminum | Antimony | Arsenic | Barium | Beryllium | Cadmium | Chromium | Cobalt |
|--|---------------------------|-------------|-----------|-------------|--------------|----------|---------|-----------|----------|---------|-----------|-----------|---------|----------|--------|
| Residential Drinking Water Criteria (II) | | | 880 | 520 | 52 | 140 (S) | 4,400 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) | 4.0 (A) | 5.0 (A) | 100 (A) | 40 |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | 300 | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 12 | 11 | 2.0 (M); 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) | 6.7 (G) | 3 (G) | 11 | 100 |
| GSI Final Acute Value (FAV) | | | 220 | 200 | 11 | ID | 6,800 | NA | 2,300 | 880 | 3,844 (G) | 120 | 13 (G) | 1,588 | 740 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSR} SL _{CR,d}) | | | 1.5E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI,CR}) (a) | | | 7.1E+04 | 240 | 110 | 410 | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV |
| Water Solubility (VII) | | | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | ID | ID | NA | ID | ID | ID | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-22 ^A | W-R2330026-052020-SSR-019 | 5/20/2020 | | | | | | 340 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330026-052020-SSR-019 | 5/20/2020 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330026-110420-SSR-008 | 11/4/2020 | | | | | | 330 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330026-110420-SSR-008 | 11/4/2020 | NS | NS | NS | NS | NS | 170 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-041421-KRM-026 | 4/14/2021 | | | | | | 54 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330027-041421-KRM-026 | 4/14/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-042722-SSR-023 | 4/27/2022 | | | | | | 730 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330027-042722-SSR-023 | 4/27/2022 | NS | NS | NS | NS | NS | <10 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330031-041923-ERR-012 | 4/19/2023 | | | | | | 29 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330031-041923-ERR-012 | 4/19/2023 | NS | NS | NS | NS | NS | <10 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330026-110420-SSR-009 | 11/4/2020 | | | | | | 150 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330026-110420-SSR-009 | 11/4/2020 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-041421-SSR-021 | 4/14/2021 | | | | | | 410 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330027-041421-SSR-021 | 4/14/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-042722-SSR-021 | 4/27/2022 | | | | | | 78 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330027-042722-SSR-021 | 4/27/2022 | NS | NS | NS | NS | NS | <10 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330028-102822-ADH-010 | 10/28/2022 | | | | | | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330028-102822-ADH-010 | 10/28/2022 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330031-042023-ERR-018 | 4/20/2023 | | | | | | 130 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330031-042023-ERR-018 | 4/20/2023 | NS | NS | NS | NS | NS | 13 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-052220-SSR-035 | 5/22/2020 | | | | | | 1,500 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330026-052220-SSR-035 | 5/22/2020 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-110420-SSR-011 | 11/4/2020 | | | | | | 220 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330026-110420-SSR-011 | 11/4/2020 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-041421-KRM-020 | 4/14/2021 | | | | | | 120 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330027-041421-KRM-020 | 4/14/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-042722-SRS-020 | 4/27/2022 | | | | | | 61 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330027-042722-SRS-020 | 4/27/2022 | NS | NS | NS | NS | NS | <10 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330031-042023-ERR-017 | 4/20/2023 | | | | | | 3,200 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330031-042023-ERR-017 | 4/20/2023 | NS | NS | NS | NS | NS | 11 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330026-110420-SSR-006 | 11/4/2020 | | | | | | 560 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330026-110420-SSR-006 | 11/4/2020 | NS | NS | NS | NS | NS | 16 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-041421-KRM-022 | 4/14/2021 | | | | | | 85 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330027-041421-KRM-022 | 4/14/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-042722-SSR-022 | 4/27/2022 | | | | | | 300 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330027-042722-SSR-022 | 4/27/2022 | NS | NS | NS | NS | NS | 9 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330028-102822-ADH-009 | 10/28/2022 | | | | | | 120 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330028-102822-ADH-009 | 10/28/2022 | NS | NS | NS | NS | NS | 16 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330031-042023-ERR-019 | 4/20/2023 | | | | | | 15 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330031-042023-ERR-019 | 4/20/2023 | NS | NS | NS | NS | NS | <10 | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | | |
|--|---------------------------|-------------|------------|---------------|----------|----------|---------------|---------------|---------|-----------|--------------|---------------|----------|----------|---------|
| | | | Copper (B) | Cyanide (P,R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel | Selenium (B) | Silver | Thallium | Vanadium | Zinc |
| Residential Drinking Water Criteria (II) | | | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 400,000 | 50 (E) | 2.0 (A) | 100 (A) | 50 (A) | 34 | 2.0 (A) | 4.5 | 2,400 |
| Residential Health-Based Drinking Water Value (E) | | | 1,400 | NA | 2,000 | NA | NA | 860 | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{SL}) (a) | | | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIR}) (a) | | | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | 56 | NA | NA | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-22 ^A | W-R2330026-052020-SSR-019 | 5/20/2020 | NS | NS | 14,000 | NS | NS | 130 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330026-052020-SSR-019 | 5/20/2020 | NS | NS | 7,900 | NS | NS | 87 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330026-110420-SSR-008 | 11/4/2020 | NS | NS | 11,000 | NS | NS | 98 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330026-110420-SSR-008 | 11/4/2020 | NS | NS | 10,000 | NS | NS | 87 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-041421-KRM-026 | 4/14/2021 | NS | NS | 8,500 | NS | NS | 110 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330027-041421-KRM-026 | 4/14/2021 | NS | NS | 7,200 | NS | NS | 120 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330027-042722-SSR-023 | 4/27/2022 | NS | NS | 11,000 | NS | NS | 180 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330027-042722-SSR-023 | 4/27/2022 | NS | NS | 6,800 | NS | NS | 150 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 ^A | W-R2330031-041923-ERR-012 | 4/19/2023 | NS | NS | 3,500 | NS | NS | 55 | NS | NS | NS | NS | NS | NS | NS |
| MW-22 | W-R2330031-041923-ERR-012 | 4/19/2023 | NS | NS | 2,900 | NS | NS | 52 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330026-110420-SSR-009 | 11/4/2020 | NS | NS | 12,000 | NS | NS | 100 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330026-110420-SSR-009 | 11/4/2020 | NS | NS | 10,000 | NS | NS | 90 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-041421-SSR-021 | 4/14/2021 | NS | NS | 14,000 | NS | NS | 110 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330027-041421-SSR-021 | 4/14/2021 | NS | NS | 10,000 | NS | NS | 100 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330027-042722-SSR-021 | 4/27/2022 | NS | NS | 9,700 | NS | NS | 74 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330027-042722-SSR-021 | 4/27/2022 | NS | NS | 8,000 | NS | NS | 74 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330028-102822-ADH-010 | 10/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330028-102822-ADH-010 | 10/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-23 ^A | W-R2330031-042023-ERR-018 | 4/20/2023 | NS | NS | 13,000 | NS | NS | 95 | NS | NS | NS | NS | NS | NS | NS |
| MW-23 | W-R2330031-042023-ERR-018 | 4/20/2023 | NS | NS | 13,000 | NS | NS | 88 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-052220-SSR-035 | 5/22/2020 | NS | NS | 3,500 | NS | NS | 2,600 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330026-052220-SSR-035 | 5/22/2020 | NS | NS | <50 | NS | NS | 170 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330026-110420-SSR-011 | 11/4/2020 | NS | NS | 700 | NS | NS | 990 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330026-110420-SSR-011 | 11/4/2020 | NS | NS | <50 | NS | NS | 580 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-041421-KRM-020 | 4/14/2021 | NS | NS | 410 | NS | NS | 580 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330027-041421-KRM-020 | 4/14/2021 | NS | NS | <50 | NS | NS | 380 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330027-042722-SRS-020 | 4/27/2022 | NS | NS | 1,200 | NS | NS | 570 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330027-042722-SRS-020 | 4/27/2022 | NS | NS | 130 | NS | NS | 280 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 ^A | W-R2330031-042023-ERR-017 | 4/20/2023 | NS | NS | 6,900 | NS | NS | 4,200 | NS | NS | NS | NS | NS | NS | NS |
| MW-25 | W-R2330031-042023-ERR-017 | 4/20/2023 | NS | NS | <80 | NS | NS | 200 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330026-110420-SSR-006 | 11/4/2020 | NS | NS | 840 | NS | NS | 34 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330026-110420-SSR-006 | 11/4/2020 | NS | NS | <50 | NS | NS | 22 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-041421-KRM-022 | 4/14/2021 | NS | NS | 170 | NS | NS | 6.6 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330027-041421-KRM-022 | 4/14/2021 | NS | NS | <50 | NS | NS | <2.5 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330027-042722-SSR-022 | 4/27/2022 | NS | NS | 370 | NS | NS | 9 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330027-042722-SSR-022 | 4/27/2022 | NS | NS | <80 | NS | NS | <5 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330028-102822-ADH-009 | 10/28/2022 | NS | NS | 340 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330028-102822-ADH-009 | 10/28/2022 | NS | NS | <1.0 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-26 ^A | W-R2330031-042023-ERR-019 | 4/20/2023 | NS | NS | 61 J | NS | NS | <5.0 | NS | NS | NS | NS | NS | NS | NS |
| MW-26 | W-R2330031-042023-ERR-019 | 4/20/2023 | NS | NS | <80 | NS | NS | <5.0 | NS | NS | NS | NS | NS | NS | NS |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Volatile Organic Compounds (VOCs) | | | | | | | | | | | | |
|--|----------------------------|-------------|-----------------------------------|---------------------|---------------------|-----------------------------|---------------|----------|----------------------|------------------|---------------|--------------|---------------|------------|-------------|
| | | | 2-Butanone (MEK) | 1,2-Dichlorobenzene | 1,4-Dichlorobenzene | 4-Methyl-2-Pentanone (MIBK) | Acetone | Benzene | Bromodichloromethane | Carbon disulfide | Chlorobenzene | Chloroethane | Chloromethane | Chloroform | Cyclohexane |
| Residential Drinking Water Criteria (II) | | | 13,000 | 600 (A) | 75 (A) | 1,800 | 730 | 5.0 (A) | 80 (A,W) | 800 | 100 (A) | 430 | 260 | 80 (A,W) | NA |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 2,200 | 13 | 17 | ID | 1,700 | 200 | ID | 25 | 1,100 | ID | 350 | NA | |
| GSI Final Acute Value (FAV) | | | 40,000 | 240 | 210 | ID | 30,000 | 1,900 | ID | 450 | 20,000 | NA | 11,000 | ID | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2.4E+8 (S) | 1.6E+5 (S) | 16,000 | 2.0E+07 (S) | 1.0E+09 (D,S) | 5,600 | 4,800 | 2.5E+05 | 2.1E+05 | 5.7E+06 (S) | 8.6E+03 | 28,000 | NA |
| Draft Non-Residential Groundwater Screening Levels (GW _n SL _{GLD}) | | | 9.6E+06 | NA | NA | 1.1E+06 | 1.1E+07 | 100 | NA | NA | 1.3E+03 | 7.9E+04 | | 520 | NA |
| Groundwater Concentration for Vapor Intrusion (GW _v CSL) (a) | | | 4.3E+06 | 7,600 | 76 | 1,100 | 8.2E+06 | 27 | NA | 2,400 | 1,100 | 44,000 | NA | 140 | 1,900 |
| Water Solubility (VII) | | | 2.40E+08 | 1.56E+05 | 73,800 | 2.00E+07 | 1.0E+09 | 1.75E+06 | 6.74E+06 | 1.19E+06 | 4.72E+05 | 5.74E+06 | 6.34E+06 | 7.92E+06 | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | NA | ID | 1.5E+07 | 68,000 | ID | 13,000 | 1.6E+05 | 1.1E+05 | 3.6E+04 | ID | NA |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-29 ^a | W-R2330026-111020-SSR-034 | 11/10/2020 | | | | | | | | | | | | | |
| MW-29 | W-R2330026-111020-SSR-034 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330027-041321-SSR-005 | 4/13/2021 | | | | | | | | | | | | | |
| MW-29 | W-R2330027-041321-SSR-005 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330027-042822-SSR-027 | 4/28/2022 | | | | | | | | | | | | | |
| MW-29 | W-R2330027-042822-SSR-027 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | | | | | | | | | | | | | |
| MW-29 | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^b | W-R2330031-041823-ERR-008 | 4/18/2023 | | | | | | | | | | | | | |
| MW-29 | W-R2330031-041823-ERR-008 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330026-111020-SSR-035 | 11/10/2020 | | | | | | | | | | | | | |
| MW-30 | W-R2330026-111020-SSR-035 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330027-041321-SSR-007 | 4/13/2021 | | | | | | | | | | | | | |
| MW-30 | W-R2330027-041321-SSR-007 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330027-042822-SSR-028 | 4/28/2022 | | | | | | | | | | | | | |
| MW-30 | W-R2330027-042822-SSR-028 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330028-11/1/22-ADH-012 | 11/1/2022 | | | | | | | | | | | | | |
| MW-30 | W-R2330028-11/1/22-ADH-012 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330031-041823-ERR-009 | 4/18/2023 | | | | | | | | | | | | | |

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Dibromochloromethane | Dichlorodifluoromethane | Ethylbenzene | Isopropylbenzene | Methylcyclohexane | Toluene | Xylenes | 1,1-Biphenyl | 2-Chlorophenol | 2-Methylnaphthalene | 2-Methylphenol | 4-Methylphenol | 2,4-Dimethylphenol |
|--|----------------------------|-------------|----------------------|-------------------------|--------------|------------------|-------------------|------------|-------------|--------------|----------------|---------------------|----------------|----------------|--------------------|
| | | | | | | | | | | | | | | | |
| Residential Drinking Water Criteria (II) | | | 80 (A,W) | 1,700 | 74 (E) | 800 | NA | 790 (E) | 280 (E) | ID | 45 | 260 | 370 | 370 | 370 |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | 700 | NA | NA | 1,000 | 10,000 | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | ID | ID | 18 | 28 | NA | 270 | 41 | ID | 18 | 19 | 30 (M); 25 | 30 (M); 25 | 380 |
| GSI Final Acute Value (FAV) | | | ID | ID | 320 | 500 | NA | 2,600 | 730 | ID | NA | 340 | 1,400 | 1,400 | 2,700 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 14,000 | 2.2E+05 | 1.1E+05 | 56,000 (S) | NA | 5.3E+5 (S) | 1.9E+05 (S) | ID | 490,000 | 25,000 (S) | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSRL}) | | | NA | NA | NA | NA | NA | NA | NA | ID | NA | NA | | | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (a) | | | NA | NA | 700 (d) | 10 | NA | 36,000 | 10,000 (d) | ID | 78,000 | 940 | NA | NA | NA |
| Water Solubility (VII) | | | 2.60E+06 | 3.00E+05 | 1.69E+05 | 56,000 | NA | 5.26E+05 | 1.86E+5 (S) | ID | 2.20E+07 | 24,600 | 2.80E+07 | 2.80E+07 | 7.87E+06 |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | 43,000 | 29,000 | NA | 61,000 | 70,000 | ID | ID | ID | NA | NA | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-29 ^a | W-R2330026-111020-SSR-034 | 11/10/2020 | | | | | | | | | | | | | |
| MW-29 | W-R2330026-111020-SSR-034 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330027-041321-SSR-005 | 4/13/2021 | | | | | | | | | | | | | |
| MW-29 | W-R2330027-041321-SSR-005 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330027-042822-SSR-027 | 4/28/2022 | | | | | | | | | | | | | |
| MW-29 | W-R2330027-042822-SSR-027 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330028-11/1122-ADH-011 | 11/1/2022 | | | | | | | | | | | | | |
| MW-29 | W-R2330028-11/1122-ADH-011 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^b | W-R2330031-041823-ERR-008 | 4/18/2023 | | | | | | | | | | | | | |
| MW-29 | W-R2330031-041823-ERR-008 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330026-111020-SSR-035 | 11/10/2020 | | | | | | | | | | | | | |
| MW-30 | W-R2330026-111020-SSR-035 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330027-041321-SSR-007 | 4/13/2021 | | | | | | | | | | | | | |
| MW-30 | W-R2330027-041321-SSR-007 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330027-042822-SSR-028 | 4/28/2022 | | | | | | | | | | | | | |
| MW-30 | W-R2330027-042822-SSR-028 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330028-111122-ADH-012 | 11/1/2022 | | | | | | | | | | | | | |
| MW-30 | W-R2330028-111122-ADH-012 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330031-041823-ERR-009 | 4/18/2023 | | | | | | | | | | | | | |

G = Calculated value based on a hardness of 150 mg/L.

H = Analyzed outside of holding time.

J = Analyte detected below quantitation limit.

NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)

Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value (E)

Exceeds Generic Ground Water Surface Water Interface Criteria (III)

Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)

Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | |
|--|----------------------------|-------------|--|----------------------------|--------------|--------------|--------------|------------------------|-------------|-----------|--------------|-------------------|--------------------|
| | | | 4-Chloroaniline | Bis(2-ethylhexyl)phthalate | Acenaphthene | Acetophenone | Benzaldehyde | Butyl benzyl phthalate | Caprolactam | Carbazole | Dibenzofuran | Diethyl phthalate | Dimethyl phthalate |
| Residential Drinking Water Criteria (II) | NA | 6.0 (A) | 1,300 | 1,500 | NA | 1,200 | 5,800 | 85 | ID | 5,500 | 73,000 | 880 | 210 (S) |
| Residential Health-Based Drinking Water Value (E) | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (III) | NA | 25 | 38 | ID | NA | 67 | NA | 10 (M); 4.0 | 4 | 110 | 110 | 9.7 | 1.6 |
| GSI Final Acute Value (FAV) | ID | 285 | 200 | NA | NA | 630 | ID | 72 | 72 | 2.0E+03 | NA | 75 | 220 |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | NA | NLV | 4,200 (S) | 6.1E+06 (S) | NA | NLV | NLV | NLV | 10,000 (S) | NLV | NLV | NLV | 210 (S) |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSRL}) | NA | NLV | NA | NA | NA | NA | NA | NLV | NA | NA | NA | NA | 71,000 |
| Groundwater Concentration for Vapor Intrusion (GW _{VIC}) (a) | NA | NA | NA | NA | NA | NA | NA | NLV | 2.30E+01 | NA | NA | NA | NA |
| Water Solubility (VII) | NA | 340 | 4,240 | 6.1E+06 (S) | NA | 2.7E+03 | 5.25E+09 | 7,480 | 10,000 | 1.08E+06 | 1.08E+06 | 1.12E+04 | 206 |
| Flammability & Explosivity Screening Level (VIII) | NA | NA | ID | ID | NA | ID | NA | ID | ID | NA | NA | NA | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | |
| MW-29 ^A | W-R2330026-111020-SSR-034 | 11/10/2020 | | | | | | | | | | | |
| MW-29 | W-R2330026-111020-SSR-034 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330027-041321-SSR-005 | 4/13/2021 | | | | | | | | | | | |
| MW-29 | W-R2330027-041321-SSR-005 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330027-042822-SSR-027 | 4/28/2022 | | | | | | | | | | | |
| MW-29 | W-R2330027-042822-SSR-027 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | | | | | | | | | | | |
| MW-29 | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330031-041823-ERR-008 | 4/18/2023 | | | | | | | | | | | |
| MW-29 | W-R2330031-041823-ERR-008 | 4/18/2023 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330026-111020-SSR-035 | 11/10/2020 | | | | | | | | | | | |
| MW-30 | W-R2330026-111020-SSR-035 | 11/10/2020 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330027-041321-SSR-007 | 4/13/2021 | | | | | | | | | | | |
| MW-30 | W-R2330027-041321-SSR-007 | 4/13/2021 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330027-042822-SSR-028 | 4/28/2022 | | | | | | | | | | | |
| MW-30 | W-R2330027-042822-SSR-028 | 4/28/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330028-11/1/22-ADH-012 | 11/1/2022 | | | | | | | | | | | |
| MW-30 | W-R2330028-11/1/22-ADH-012 | 11/1/2022 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330031-041823-ERR-009 | 4/18/2023 | | | | | | | | | | | |

G = Calculated value based on a hardness of 150 mg/L.
H = Analyzed outside of holding time.
J = Analyte detected below quantitation limit.
NS = Not Sampled or Not Analyzed.
Exceeds Generic Drinking Water Cleanup Criteria (II)
Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value (E)
Exceeds Generic Ground Water Surface Water Interface Criteria (III)
Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Fluorene | Naphthalene | Phenanthrene | Pyrene | Fluoranthene | Aluminum | Antimony | Arsenic | Barium | Beryllium | Cadmium | Chromium | Cobalt | |
|--|----------------------------|-------------|-----------|-------------|--------------|----------|--------------|-----------|----------|---------|-----------|-----------|---------|----------|--------|----|
| | | | | | | | | | | | | | | | | |
| Residential Drinking Water Criteria (II) | | | 880 | 520 | 52 | 140 (S) | 4,400 | 50 (E)(V) | 6.0 (A) | 10 (A) | 2,000 (A) | 4.0 (A) | 5.0 (A) | 100 (A) | 40 | |
| Residential Health-Based Drinking Water Value (E) | | | NA | NA | NA | NA | NA | 300 | NA | NA | NA | NA | NA | NA | NA | |
| Ground Water Surface Water Interface Criteria (III) | | | 12 | 11 | 2.0 (M); 1.4 | ID | 450 | NA | 130 | 10 | 670 (G) | 6.7 (G) | 3 (G) | 11 | 100 | |
| GSI Final Acute Value (FAV) | | | 220 | 200 | 11 | ID | 6,800 | NA | 2,300 | 680 | 3,844 (G) | 120 | 13 (G) | 1,588 | 740 | |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | 2,000 (S) | 31,000 (S) | 1,000 (S) | 140 (S) | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) | | | 1.5E+05 | NA | 110 | 4.10E+05 | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | 7.1E+04 | 240 | 110 | 410 | NA | NLV | NLV | NLV | NLV | NA | NLV | NLV | NLV | |
| Water Solubility (VII) | | | 1,980 | 31,000 | 1,000 | 135 | 8.28E+7 | NA | NA | NA | NA | NA | NA | NA | NA | |
| Flammability & Explosivity Screening Level (VIII) | | | ID | NA | ID | ID | NA | ID | ID | ID | ID | ID | ID | ID | ID | |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | | |
| MW-29 ^A | W-R2330026-111020-SSR-034 | 11/10/2020 | | | | | | 640 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330026-111020-SSR-034 | 11/10/2020 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330027-041321-SSR-005 | 4/13/2021 | | | | | | 19 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330027-041321-SSR-005 | 4/13/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330027-042822-SSR-027 | 4/28/2022 | | | | | | 1700 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330027-042822-SSR-027 | 4/28/2022 | NS | NS | NS | NS | NS | 10 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | | | | | | 18 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | NS | NS | NS | NS | NS | 5.8 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^A | W-R2330031-041823-ERR-008 | 4/18/2023 | | | | | | 11.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330031-041823-ERR-008 | 4/18/2023 | NS | NS | NS | NS | NS | <10.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330026-111020-SSR-035 | 11/10/2020 | | | | | | 130 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330026-111020-SSR-035 | 11/10/2020 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330027-041321-SSR-007 | 4/13/2021 | | | | | | 130 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330027-041321-SSR-007 | 4/13/2021 | NS | NS | NS | NS | NS | <8.0 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330027-042822-SSR-028 | 4/28/2022 | | | | | | 1400 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330027-042822-SSR-028 | 4/28/2022 | NS | NS | NS | NS | NS | 8.8 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330028-111/22-ADH-012 | 11/1/2022 | | | | | | 13 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330028-111/22-ADH-012 | 11/1/2022 | NS | NS | NS | NS | NS | 20 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^A | W-R2330031-041823-ERR-009 | 4/18/2023 | | | | | | 360 | NS | NS | NS | NS | NS | NS | NS | NS |

G = Calculated value based on a hardness of 150 mg/L.
H = Analyzed outside of holding time.
J = Analyte detected below quantitation limit.
NS = Not Sampled or Not Analyzed.
Exceeds Generic Drinking Water Cleanup Criteria (II)
Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value (E)
Exceeds Generic Ground Water Surface Water Interface Criteria (III)
Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)
Exceeds GSI Final Acute Value (FAV), also exceeds others

**Table 3
Summary Of Ground Water Sample Results**

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

| GROUNDWATER: Part 201/213 Generic Residential Cleanup Criteria Revised December 30, 2013 and Guidance Document for the Vapor Intrusion Pathway May 2013 Units: µg/L | | | Metals | | | | | | | | | | | | |
|--|----------------------------|-------------|------------|----------------|----------|----------|---------------|---------------|---------|-----------|--------------|---------------|----------|----------|---------|
| | | | Copper (B) | Cyanide (P, R) | Iron (B) | Lead (B) | Magnesium (B) | Manganese (B) | Mercury | Nickel | Selenium (B) | Silver | Thallium | Vanadium | Zinc |
| Residential Drinking Water Criteria (II) | | | 1,000 (E) | 200 (A) | 300 (E) | 4.0 (L) | 400,000 | 50 (E) | 2.0 (A) | 100 (A) | 50 (A) | 34 | 2.0 (A) | 4.5 | 2,400 |
| Residential Health-Based Drinking Water Value (E) | | | 1,400 | NA | 2,000 | NA | NA | 860 | NA | NA | NA | NA | NA | NA | NA |
| Ground Water Surface Water Interface Criteria (GSI) (III) | | | 13 (G) | 5.2 | NA | 29 | NA | 2,800 (G) | 0.0013 | 73 (G) | 5.0 | 0.2 (M); 0.06 | 3.7 | 27 | 170 (G) |
| GSI Final Acute Value (FAV) | | | 39 (G) | NA | NA | 551 | NA | 12,112 (G) | 2.8 | 1,320 (G) | 120 | 1.1 | 94 | 220 | 330 (G) |
| Groundwater Volatilization to Indoor Air Inhalation Criteria (V) | | | NLV | NLV | NLV | NLV | NLV | 56 (S) | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Draft Non-Residential Groundwater Screening Levels (GW _{NSL}) (d) | | | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Groundwater Concentration for Vapor Intrusion (GW _{VI}) (a) | | | NLV | NA | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV | NLV |
| Water Solubility (VII) | | | NA | NA | NA | NA | NA | 56 | NA | NA | NA | NA | NA | NA | NA |
| Flammability & Explosivity Screening Level (VIII) | | | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID | ID |
| MONITORING WELL ID | SAMPLE ID | SAMPLE DATE | | | | | | | | | | | | | |
| MW-29 ^a | W-R2330026-111020-SSR-034 | 11/10/2020 | NS | NS | 24,000 | NS | NS | 140 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330026-111020-SSR-034 | 11/10/2020 | NS | NS | 2,600 | NS | NS | 70 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330027-041321-SSR-005 | 4/13/2021 | NS | NS | 2,400 | NS | NS | 160 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330027-041321-SSR-005 | 4/13/2021 | NS | NS | 1,800 | NS | NS | 160 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330027-042822-SSR-027 | 4/28/2022 | NS | NS | 34,000 | NS | NS | 180 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330027-042822-SSR-027 | 4/28/2022 | NS | NS | 1,200 | NS | NS | 57 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^a | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | NS | NS | 3,000 | NS | NS | 170 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330028-11/1/22-ADH-011 | 11/1/2022 | NS | NS | 2,600 | NS | NS | 190 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 ^b | W-R2330031-041823-ERR-008 | 4/18/2023 | NS | NS | 4,500 | NS | NS | 140 | NS | NS | NS | NS | NS | NS | NS |
| MW-29 | W-R2330031-041823-ERR-008 | 4/18/2023 | NS | NS | 4,300 | NS | NS | 140 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330026-111020-SSR-035 | 11/10/2020 | NS | NS | 690 | NS | NS | 54 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330026-111020-SSR-035 | 11/10/2020 | NS | NS | 160 | NS | NS | 47 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330027-041321-SSR-007 | 4/13/2021 | NS | NS | 180 | NS | NS | 79 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330027-041321-SSR-007 | 4/13/2021 | NS | NS | <50 | NS | NS | 65 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330027-042822-SSR-028 | 4/28/2022 | NS | NS | 3,600 | NS | NS | 250 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330027-042822-SSR-028 | 4/28/2022 | NS | NS | 67 | NS | NS | 29 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330028-11/1/22-ADH-012 | 11/1/2022 | NS | NS | 210 | NS | NS | 41 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 | W-R2330028-11/1/22-ADH-012 | 11/1/2022 | NS | NS | 230 | NS | NS | 50 | NS | NS | NS | NS | NS | NS | NS |
| MW-30 ^a | W-R2330031-041823-ERR-009 | 4/18/2023 | NS | NS | 670 | NS | NS | 100 | NS | NS | NS | NS | NS | NS | NS |

G = Calculated value based on a hardness of 150 mg/L.

H = Analyzed outside of holding time.

J = Analyte detected below quantitation limit.

NS = Not Sampled or Not Analyzed.

Exceeds Generic Drinking Water Cleanup Criteria (II)

Exceeds Generic Drinking Water Cleanup Criteria (II) and the Generic Health-Based Drinking Water Value (E)

Exceeds Generic Ground Water Surface Water Interface Criteria (III)

Exceeds Two or More DW (II), GSI (III) and/or Generic Health-Based Drinking Water Value (E)

Exceeds GSI Final Acute Value (FAV), also exceeds others

TABLE 4

Total Depth to Bottom of Wells and Estimated Sediment Accumulation



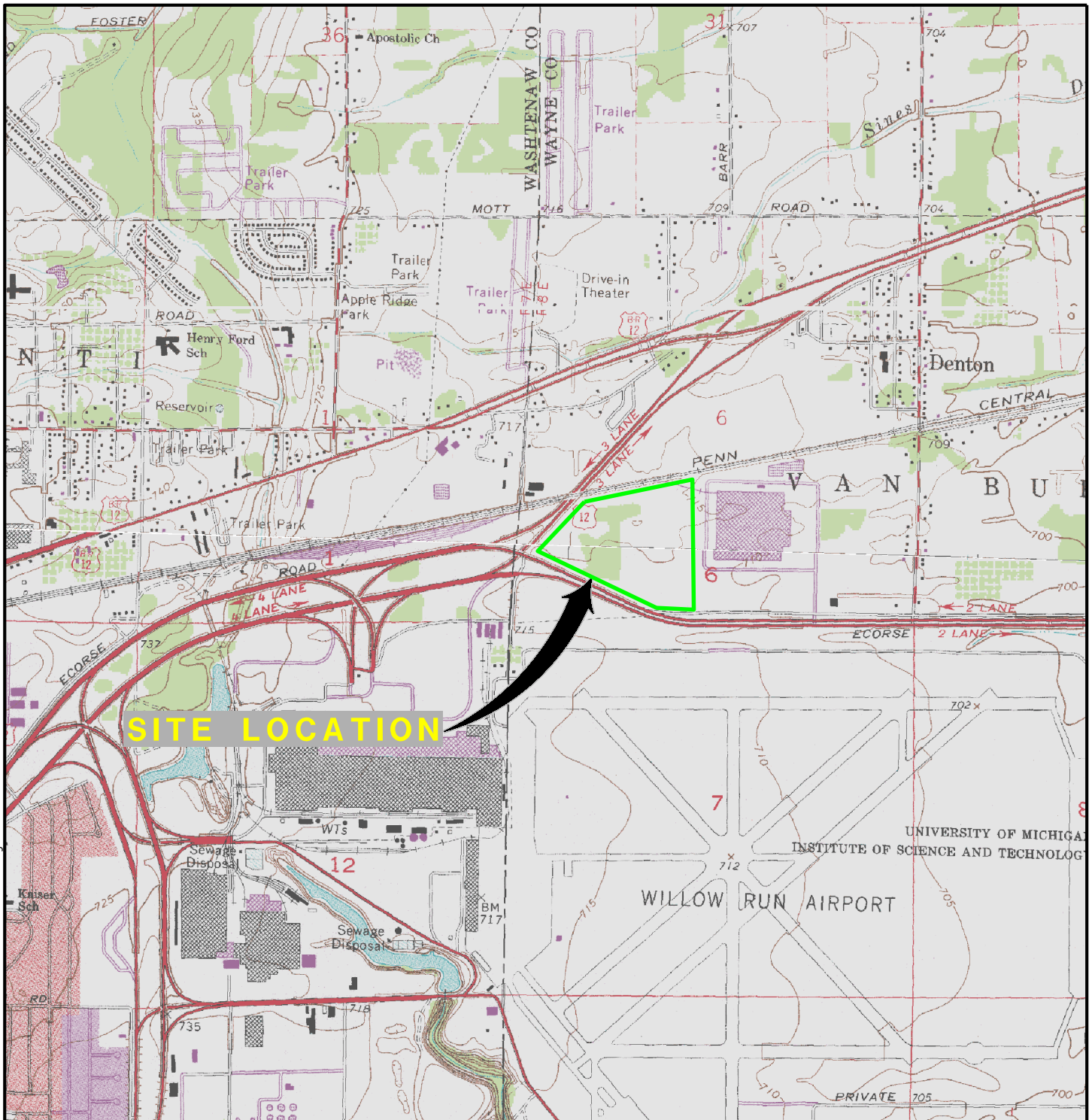
Table 4

| Total Depth to Bottom of Wells and Estimated Sediment Accumulation | | | |
|--|--|--|---------------------------------|
| Well ID | Total Depth of Well from TOC ³ (feet) | Total Depth of Well from TOC ³ (feet) 04/17/2023-04/21/2023 | Estimated Sediment Accumulation |
| MW-1R | 21.67 | 19.2 | 2.47 |
| MW-3 | 14.80 | 13.54 | 1.26 |
| MW-4 | 21.60 | 21.55 | 0.05 |
| MW-5 | 30.02 | 29.8 | 0.22 |
| MW-6 | 16.38 | 16.25 | 0.13 |
| MW-7 | 8.81 | 8.87 | -0.06 |
| MW-8 | 7.78 | 7.5 | 0.28 |
| MW-9 | 14.81 | 14.75 | 0.06 |
| MW-10 | 23.45 | 23.60 | -0.15 |
| MW-11 | 18.12 | 18.10 | 0.02 |
| MW-12 | 18.66 | 17.65 | 1.01 |
| MW-13 | 25.94 | 24.95 | 0.99 |
| MW-14 | 17.70 | 17.65 | 0.05 |
| MW-15 | 15.72 | 16.40 | -0.68 |
| MW-16 | 16.28 | 16.80 | -0.52 |
| MW-17 | 17.84 | 13.80 | 4.04 |
| MW-18 | 16.66 | 15.80 | 0.86 |
| MW-19 | 14.63 | 14.25 | 0.38 |
| MW-20 | 15.47 | 14.90 | 0.57 |
| MW-21 | 15.36 | 14.55 | 0.81 |
| MW-22 | 15.42 | 14.90 | 0.52 |
| MW-23 | 15.74 | 14.95 | 0.79 |
| MW-25 | 16.52 | 11.70 | 4.82 |
| MW-26 | 17.19 | 16.10 | 1.09 |
| MW-27 | 13.97 | 13.85 | 0.12 |
| MW- 28 | 21.70 | 22.00 | -0.30 |
| MW-29 | 12.22 | 11.60 | 0.62 |
| MW-30 | 12.36 | 12.40 | -0.04 |
| MW-34 | 18.89 | 13.40 | 5.49 |

FIGURE 1

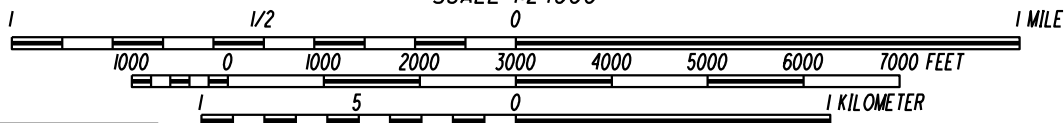
Site Location Map



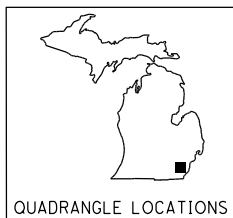


SITE LOCATION

SCALE 1:24000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATIONS

NOTE: MAP ADAPTED FROM USGS TOPOGRAPHIC QUADRANGLES, (MICHIGAN 7.5 MINUTE SERIES) DENTON, MICHIGAN (PHOTOGRAPHS TAKEN 1952 AND REVISE FROM PHOTOGRAPHS TAKEN 1966 AND FIELD CHECKED 1969, REVISED AGAIN IN 1982) AND YPSILANTI EAST, MICHIGAN, (PHOTOGRAPHS TAKEN 1952, AND REVISIONS TAKEN FROM PHOTOGRAPHS TAKEN 1966, AND FIELD CHECKED 1967, REVISED AGAIN IN 1982)

Mannik ^{The} & Smith
Group, Inc.

2365 Haggerty Road South Canton, Michigan 48188
Telephone: (734) 397-3100

FIGURE I
SITE LOCATION MAP

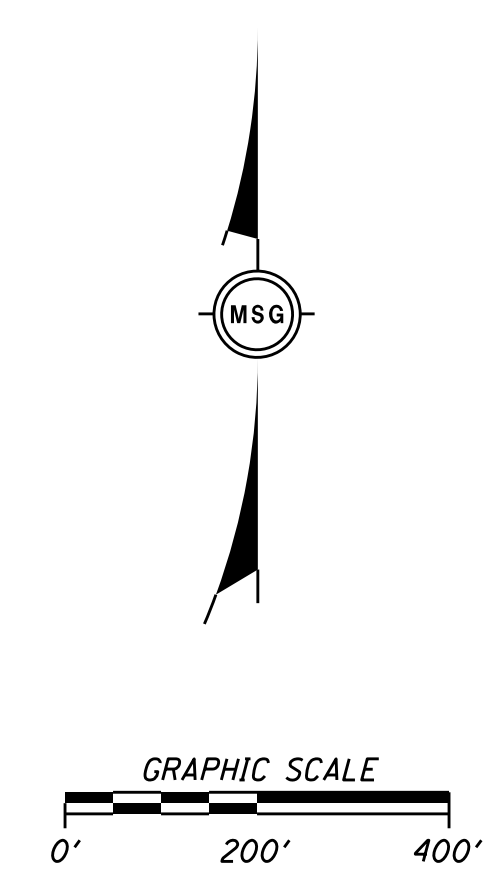
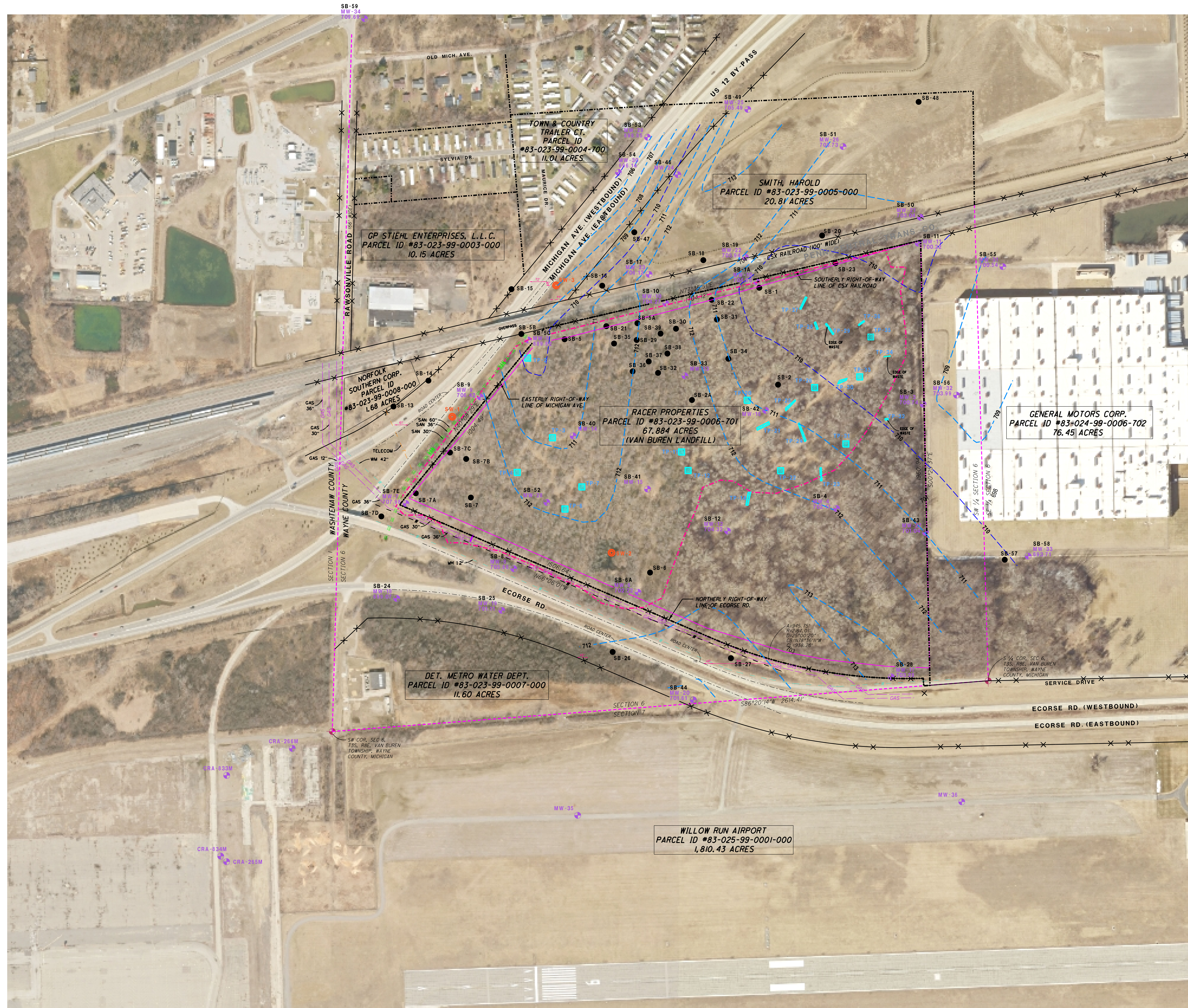
VAN BUREN LANDFILL SITE
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

| | | | |
|---------------|-----------------|--------------------|-------------------------|
| DATE 11/12 | DRAWN BY HMW | DESIGNED BY MJF | PROJECT NO. R2330004 |
|---------------|-----------------|--------------------|-------------------------|

FIGURE 2

Groundwater Elevation Contour Map





LEGEND

| | |
|--|---|
| | PROPERTY LINE |
| | R/W LINE |
| | FENCE |
| | EXTENT OF EARTH DISTURBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO |
| | GAS- EXISTING GAS MAIN |
| | FO- EXISTING FIBER OPTIC CABLE |
| | EXISTING FIRE WATER |
| | EXISTING WATER MAIN |
| | GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MSL) |
| | THREE EX. PARALLEL STORM SEWERS |
| | SURFACE WATER SAMPLE LOCATION |
| | SOIL BORING LOCATION |
| | MONITORING WELL LOCATION WITH GROUND WATER ELEVATION (FEET ABOVE MSL) |
| | TEST PIT LOCATION |

- GENERAL NOTES:
1. AERIAL PHOTO FROM SEMCOG DATED 2010.
 2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/OAPP AND MISS DIG UTILITY MARKINGS.
 3. MW-35 & MW-36 WERE ABANDONED IN JANUARY 2021.
 4. MW-13, MW-14, MW-15, MW-16, MW-24, MW-28, MW-34, CRA-265M, CRA-266M, CRA-833M & CRA-834M WERE NOT USED IN CONTOURING.

| | | | |
|-----|---------|-----|--|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 7/17/24 | CJB | PHASE III SITE INVESTIGATION SAMPLING LOCATIONS |

TERMINAL HILL
GRANITE SPILL

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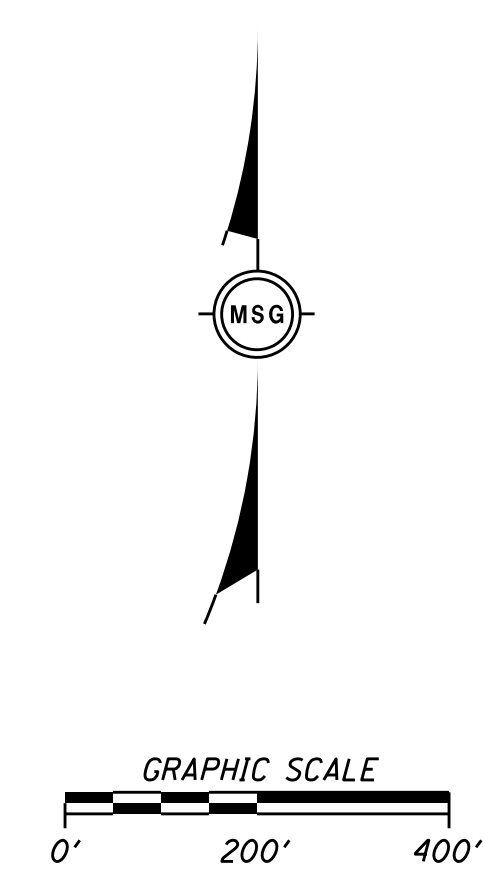
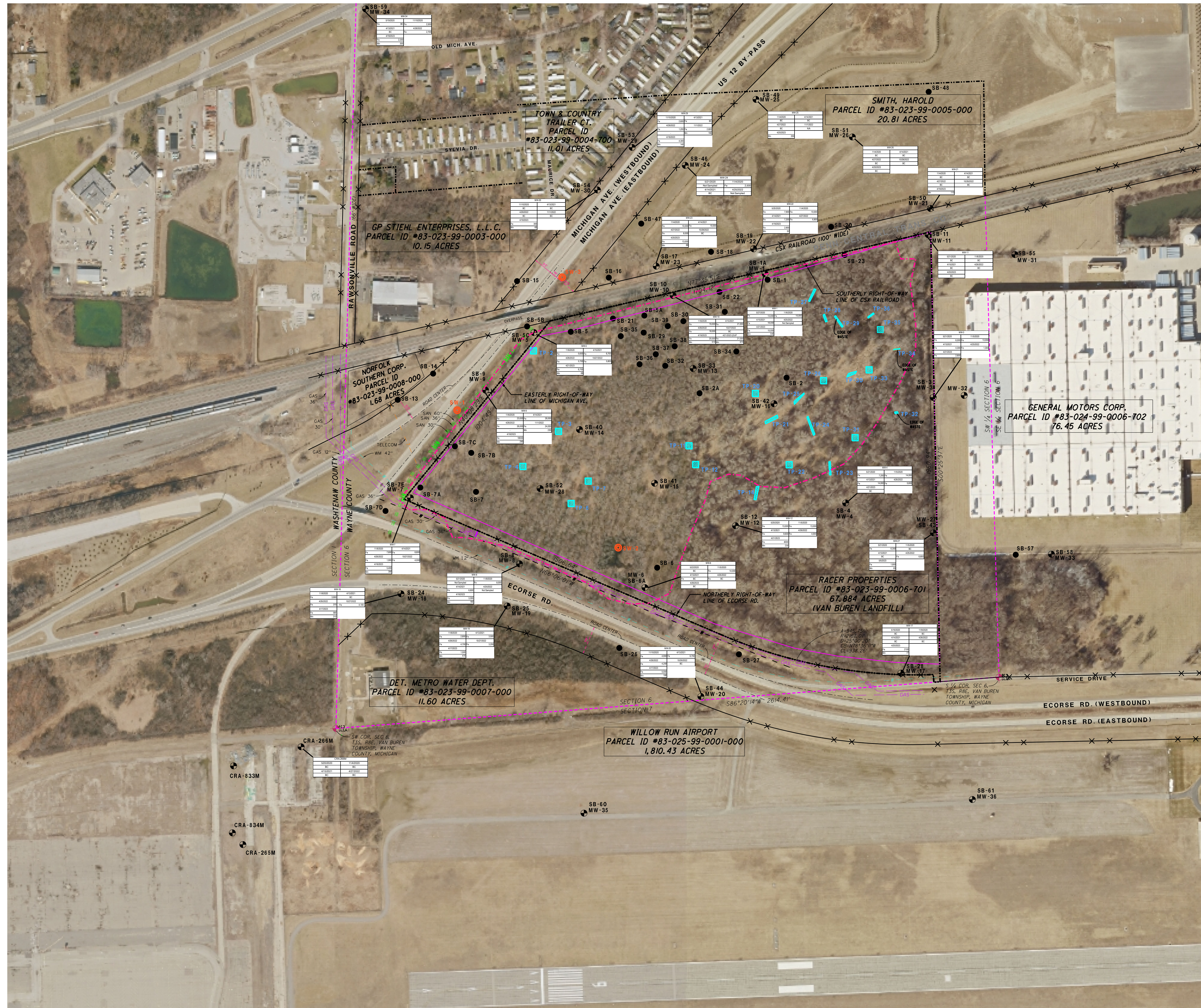
VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

FIGURE 2
GROUNDWATER ELEVATION
CONTOUR MAP (APR. 2023)

FIGURE 3

Monitoring Well Analytical Summary





MDEQ Part 201 Non-Residential Health Based Clean Up Criteria
 Al = 4,100 ug/l
 Fe = 5,600 ug/l
 Mn = 2,500 ug/l

MDEQ Part 201 Residential Health Based Clean Up Criteria
 Al = 300 ug/l
 Fe = 2,000 ug/l
 Mn = 860 ug/l

CHEMICAL ABBREVIATIONS
 Fe = Dissolved Iron
 Mn = Manganese
 BC = Below Applicable Criteria

LEGEND

- PROPERTY LINE
- R/W LINE
- FENCE
- EXTENT OF EARTH DISTURBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
- GAS --- EXISTING GAS MAIN
- FO --- EXISTING FIBER OPTIC CABLE
- W --- EXISTING FIRE WATER
- W --- EXISTING WATER MAIN
- EXISTING STORM
- ST (3) THREE EX. PARALLEL STORM SEWERS
- SURFACE WATER SAMPLE LOCATION
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- TEST PIT LOCATION
- TP-32

- GENERAL NOTES:
1. AERIAL PHOTO FROM SEMCOG DATED 2010.
 2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/OAPP AND MISS DIG UTILITY MARKINGS.
 3. OFF-SITE LOCATIONS COMPARED TO RESIDENTIAL CRITERIA. ON-SITE LOCATIONS COMPARED TO NON-RESIDENTIAL CRITERIA.
 4. ALL RESULTS EXPRESSED IN MICROGRAMS PER LITER.
 5. ONLY EXCEEDENCES OF NON-RESIDENTIAL HEALTH-BASED DRINKING WATER CRITERIA AND RESIDENTIAL HEALTH-BASED DRINKING WATER CRITERIA ARE SHOWN.
 6. ONLY EXCEEDENCES OF DISSOLVED METALS ARE SHOWN. THERE ARE EXCEEDENCES OF TOTAL METALS NOT DISPLAYED IN THE FIGURE (REFER TO TABLE).

| | | | |
|-----|---------|-----|---|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 7/17/24 | CJB | PHASE III SITE INVESTIGATION SAMPLING LOCATIONS |

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 Environmental Response Trust

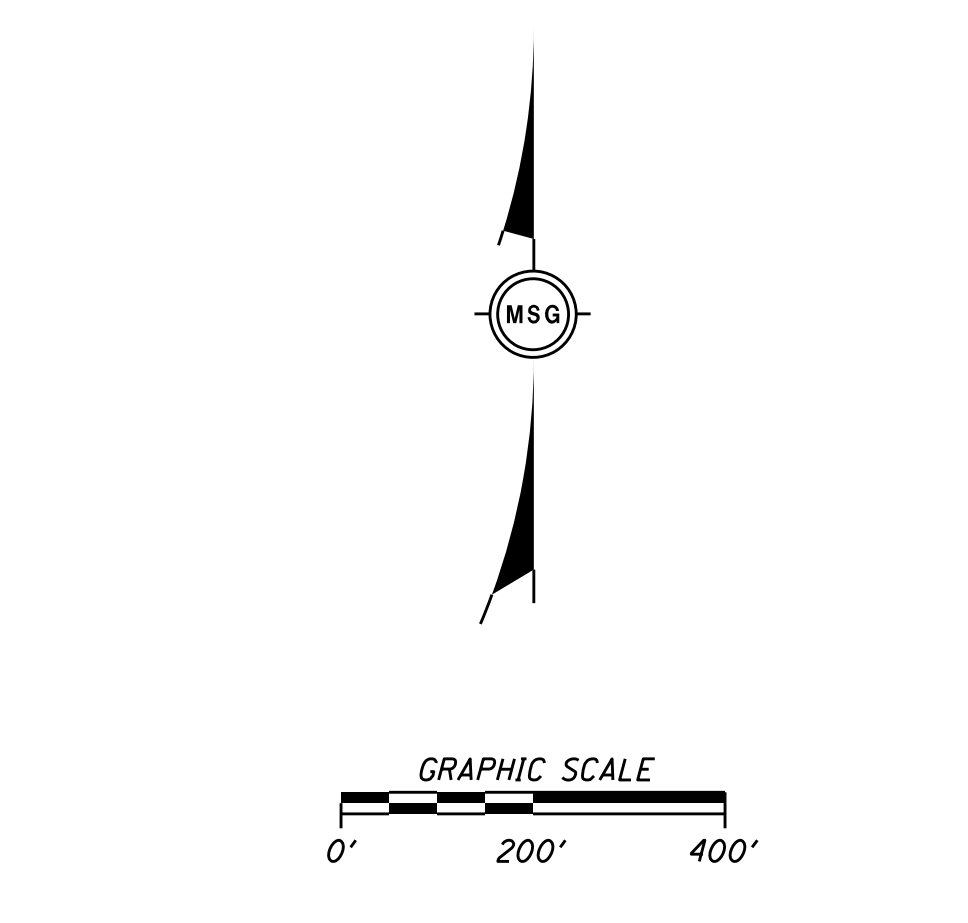
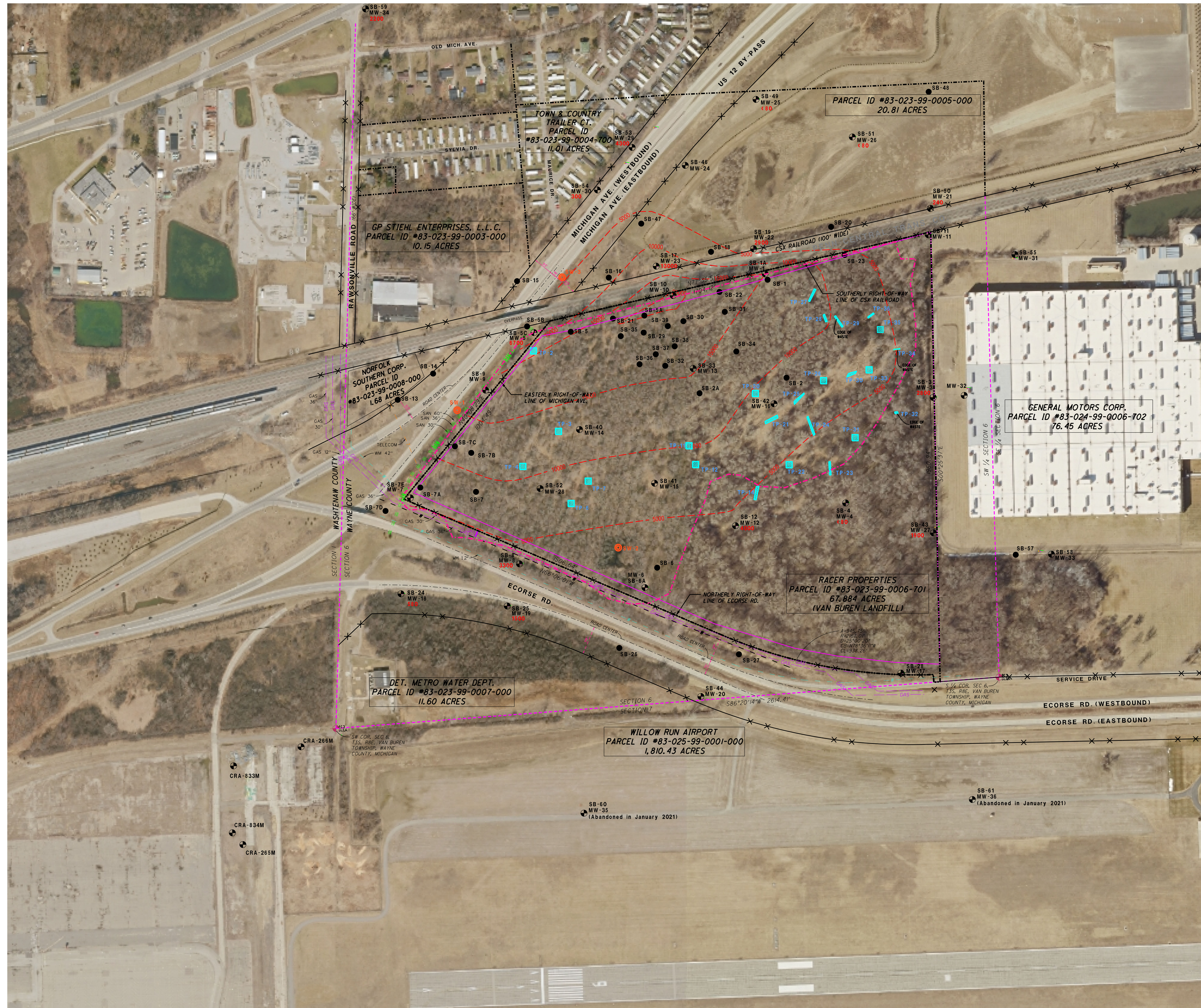
VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

FIGURE 3
MONITORING WELL ANALYTICAL SUMMARY THROUGH APRIL 2023 SEMI-ANNUAL GROUNDWATER MONITORING (EXCEEDENCES ONLY)

FIGURE 4

Dissolved Iron Concentration Map





MDEQ Part 201 Non-Residential Health Based Clean Up Criteria
 Al = 4,100 ug/l
 Fe = 5,600 ug/l
 Mn = 2,500 ug/l

MDEQ Part 201 Residential Health Based Clean Up Criteria
 Al = 300 ug/l
 Fe = 2,000 ug/l
 Mn = 860 ug/l

LEGEND

- PROPERTY LINE
- X-X- R/W LINE
- FENCE
- - - - - EXTENT OF EARTH DISTURBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
- GAS --- EXISTING GAS MAIN
- FO --- EXISTING FIBER OPTIC CABLE
- W --- EXISTING FIRE WATER
- W --- EXISTING WATER MAIN
- EXISTING STORM
- ST (3) THREE EX. PARALLEL STORM SEWERS
- SURFACE WATER SAMPLE LOCATION
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- TEST PIT LOCATION
- TP-32

5.000 NON-RESIDENTIAL HEALTH BASED DRINKING WATER VALVE (DISSOLVED IRON ISOCONTOUR (ug/L))

2.000 RESIDENTIAL HEALTH BASED DRINKING WATER VALVE (ug/L)

- GENERAL NOTES:
1. AERIAL PHOTO FROM SEMCOG DATED 2020.
 2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/OAPP AND MISS DIG UTILITY MARKINGS.
 3. OFF-SITE LOCATIONS COMPARED TO RESIDENTIAL CRITERIA, ON-SITE LOCATIONS COMPARED TO NON-RESIDENTIAL CRITERIA.
 4. ALL RESULTS EXPRESSED IN MICROGRAMS PER LITER.
 5. ONLY EXCEEDENCES OF RESIDENTIAL HEALTH-BASED DRINKING WATER CRITERIA ARE SHOWN.
 6. ONLY EXCEEDENCES OF DISSOLVED METALS ARE SHOWN. THERE ARE EXCEEDENCES OF TOTAL METALS NOT DISPLAYED IN THE FIGURE (REFER TO TABLE).

| NO. | DATE | BY | DESCRIPTION |
|-----|---------|-----|---|
| 1 | 7/17/24 | CJB | PHASE III SITE INVESTIGATION SAMPLING LOCATIONS |

Publishing As a Consultant
 Environmental Response Trust

VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

FIGURE 4
DISSOLVED IRON
ISOCONCENTRATION MAP
(APRIL 2023)

ATTACHMENT 1

LOW FLOW GROUND WATER FIELD SAMPLING FORMS



LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW 18

PROJECT #: R2330031

DATE: 4-17-23

SITE NAME: RACER

PERSONNEL: ERR, ADH

SITE ADDRESS: _____

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: 15.8'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 2.61'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Hurriba, Bladder pump, Waterlevel meter

| TIME | WATER LEVEL (<small><0.3 feet once stabilized</small>) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1245 | 2.61 | 8.48°C | 1.76 | 1.25 | 7.68 | -84 | 0 | 1 | | |
| 1250 | 2.62 | 8.18°C | 1.68 | 1.11 | 7.69 | -65 | 520 | 1.5 | | |
| 1255 | 2.63 | 8.1°C | 1.70 | 1.06 | 7.68 | -62 | 322 | 2 | | |
| 1300 | 2.63 | 8.03°C | 1.72 | 1.03 | 7.68 | -59 | 243 | 2.5 | | |
| 1305 | 2.64 | 8°C | 1.74 | 1.01 | 7.67 | -56 | 165 | 3 | | |
| 1310 | 2.65 | 8°C | 1.76 | 1.00 | 7.67 | -53 | 146 | 3.25 | | |
| 1315 | 2.65 | 8.01°C | 1.77 | 0.99 | 7.66 | -49 | 132 | 3.5 | | |
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SAMPLE ID: W-R2330031-041723-ERR-001
 SAMPLE DATE: 4-17-23
 SAMPLE TIME: 1315

Notes: _____

¹ - 10% for values greater than 0.5 mg/L; if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-19

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-17-23

PERSONNEL: ERR ADH

OBSERVERS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 2.48'

DEPTH OF WELL: 14.25'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1345 | 2.48' | 8.76°C | 4.69 | 0.95 | 7.56 | -80 | 0 | 0.25 | | |
| 1350 | 2.48 | 8.73°C | 4.64 | 0.88 | 7.57 | -45 | 0 | 0.5 | | |
| 1355 | 2.49 | 8.69°C | 4.51 | 0.88 | 7.57 | -52 | 845 | 1 | | |
| 1400 | 2.49 | 8.65°C | 4.47 | 0.86 | 7.56 | -53 | 659 | 1.8 | | |
| 1405 | 2.50 | 8.65°C | 4.47 | 0.81 | 7.57 | -56 | 453 | 2 | | |
| 1410 | 2.51 | 8.64°C | 4.48 | 0.85 | 7.57 | -61 | 313 | 2.5 | | |
| 1415 | 2.51 | 8.64°C | 4.48 | 0.73 | 7.56 | -63 | 258 | 3 | | |
| 1420 | 2.52 | 8.64°C | 4.49 | 0.71 | 7.57 | -65 | 229 | 3.5 | | |
| 1425 | 2.53 | 8.67°C | 4.48 | 0.70 | 7.57 | -68 | 195 | 3.75 | | |
| 1430 | 2.54 | 8.63°C | 4.48 | 0.69 | 7.56 | -69 | 169 | 4.25 | | |
| 1435 | 2.54 | 8.64°C | 4.48 | 0.68 | 7.57 | -72 | 150 | 4.8 | | |
| 1440 | 2.55' | 8.60° | 4.48 | 0.67 | 7.57 | -73 | 140 | 5 | | |
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SAMPLE ID: U R2330031 041723 ERR 002

SAMPLE DATE: 04-17-23

SAMPLE TIME: 1440

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW 20

PROJECT #: R2330031

DATE: 4-17-23

SITE NAME: RACER

PERSONNEL: ERR ADH

SITE ADDRESS: _____

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: 14.9'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 5.8'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Homba, Bladoler pump, waterlevel meter

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1600 | 5.7' | 8.77°C | 2.52 | 0.60 | 7.48 | -87 | 1000~ | 1.25 | | |
| 1605 | 5.65 | 8.80°C | 2.53 | 0.59 | 7.47 | -93 | 285 | 1.5 | | |
| 1610 | 5.6 | 8.80°C | 2.53 | 0.59 | 7.46 | -96 | 215 | 2 | | |
| 1615 | 5.4 | 8.75°C | 2.53 | 0.59 | 7.46 | -98 | 155 | 3.5 | | |
| 1620 | 5.3 | 8.77°C | 2.53 | 0.59 | 7.46 | -100 | 130 | 5 | | |
| 1625 | 5.3 | 8.77°C | 2.53 | 0.59 | 7.46 | -102 | 112 | 5.75 | | |
| 1630 | 5.2 | 8.77°C | 2.53 | 0.57 | 7.46 | -102 | 106 | 6.25 | | |
| 1635 | 5.18 | 8.77°C | 2.53 | 0.57 | 7.46 | -102 | 96.1 | 6.5 | | |
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SAMPLE ID: W-R2330031-041723 ERR 003

SAMPLE DATE: 4-17-23

SAMPLE TIME: 1635

Notes: Turbidity took 25 min to stabilize

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MWS

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-18-23

PERSONNEL: ANH

OBSERVERS: _____

DEPTH OF WELL: 29.8'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 10.1'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 11:15 | 10.1' | 13.57° | 2.73 | 0.99 | 7.18 | -105 | 195 | 1 | | |
| 11:20 | 10.1' | 13.66° | 2.71 | 1.75 | 7.28 | -121 | 105 | 1.5 | | |
| 11:25 | 10.1' | 13.68° | 2.71 | 1.67 | 7.32 | -129 | 85.3 | 2 | | |
| 11:30 | 10.1' | 13.78° | 2.71 | 1.62 | 7.32 | -135 | 65.1 | 2.5 | | |
| 11:35 | 10.1' | 13.77° | 2.71 | 1.61 | 7.33 | -138 | 55.3 | 3 | | |
| 11:40 | 10.1' | 13.80° | 2.71 | 1.62 | 7.33 | -132 | 51.4 | 3.5 | | |
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SAMPLE ID: LR2330031 041823 ERR 004

SAMPLE DATE: 4-18-23

SAMPLE TIME: 1140

Notes: _____

¹ - 10% for values greater than 0.5 mg/L; if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW 7

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-18-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 8.87'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 4.25'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 12:50 | 4.25' | 7.71° | 1.90 | 1.08 | 7.04 | -230 | 12.7 | 1 | | |
| 12:55 | 4.25' | 7.62° | 2.12 | 0.72 | 7.07 | -258 | 2.5 | 1.75 | | |
| 13:00 | 4.25' | 7.60° | 2.24 | 0.69 | 7.10 | -244 | 0.0 | 2.25 | | |
| 13:05 | 4.25' | 7.62° | 2.36 | 0.61 | 7.12 | -228 | 0.0 | 3 | | |
| 13:10 | 4.25' | 7.60° | 2.45 | 0.56 | 7.12 | -225 | 0.0 | 3.5 | | |
| 13:15 | 4.25' | 7.60° | 2.41 | 0.55 | 7.12 | -223 | 0.0 | 4 | | |
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SAMPLE ID: JR233 0031 041823 ERR 005

SAMPLE DATE: 4-18-23

SAMPLE TIME: 13:15

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW9

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-18-23

PERSONNEL: ADH

OBSERVERS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 8.98'

DEPTH OF WELL: 14.75

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 12:10 | 8.98' | 10.77° | 2.47 | .63 | 7.06 | -79 | 8.9 | .75 | | |
| 12:15 | 8.98' | 10.79° | 2.44 | .58 | 7.05 | -86 | 8.3 | 1.75 | | |
| 12:20 | 8.98' | 10.80° | 2.43 | .54 | 7.05 | -88 | 9.0 | 2.5 | | |
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SAMPLE ID: WR2330031041823 EPR 006

SAMPLE DATE: 4-18-23

SAMPLE TIME: 1220

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: rw-4

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 5-4-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 21.55'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 11.75'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|---|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------------|-----------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1540 | 11.75' | 10.18 | 2.35 | 1.16 | 7.01 | -92.3 | 0.5 | | | |
| 1545 | 11.75' | 10.09 | 2.36 | 0.63 | 7.01 | -96 | 1.25 | | | |
| 1550 | 11.75' | 10.05 | 2.35 | 0.60 | 7.00 | -98 | 2 | | | |
| 1555 | 11.75' | 10.04 | 2.35 | 0.55 | 7.00 | -99 | 2.5 | | | |
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SAMPLE ID: WR2330031050423 ERR 007

SAMPLE DATE: 5-4-23

SAMPLE TIME: 1555

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-29

DATE: 4-18-23
 PERSONNEL: ERR ADH
 OBSERVERS: _____

PROJECT #: R2330031
 SITE NAME: RACER
 SITE ADDRESS: _____
 SITE CONDITIONS: _____

DEPTH OF WELL: 11.6'
 SCREEN LENGTH: _____
 TUBING TYPE: _____
 MONITORING EQUIPMENT: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 4.8'
 WELL DIAMETER: 2-inch
 CASING TYPE: PVC

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-----------------|--|-------------------|------------------|------------------------|-----------------|---------------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1110 | 4.81 | 9.95°C | 0.165 | 7.38 | 7.57 | 81 | 148 | 0.5 | | |
| 1155 | 4.8' | 10.19°C | 0.252 | 8.02 | 7.65 | -105 | 100 | 4.25 | | |
| 1200 | 4.9' | 10.17°C | 0.212 | 7.87 | 7.65 | -103 | 111 | 4.25 | | |
| 1205 | 4.95' | 10.18°C | 0.280 | 7.72 | 7.62 | -104 | 101 | 5.5 | | |
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SAMPLE ID: W-R2330031-041823-ERR-008
 SAMPLE DATE: 4-18-23
 SAMPLE TIME: 1205

Notes: Hardly issues...

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MMW-30

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-18-23

PERSONNEL: ERR

OBSERVERS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 3.7'

DEPTH OF WELL: 12.4'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1230 | 3.7' | 10.55°C | 0.401 | 5.91 | 7.75 | 97 | 476 | 0.5 | | |
| 1235 | 4.9 | 10.64°C | 0.337 | 7.07 | 7.82 | 124 | 452 | 1 | | |
| 1240 | 5.3 | 10.48°C | 0.320 | 8.27 | 7.93 | 92 | 431 | 1.5 | | |
| 1245 | 6.7 | 10.49°C | 0.362 | 8.85 | 8.00 | 11 | 890 | 2 | | |
| 1250 | 7.1 | 10.50°C | 0.370 | 4.37 | 8.09 | -46 | 368 | 2.5 | | |
| 1255 | 8.0 | 10.49°C | 0.352 | 9.56 | 8.09 | -70 | 330 | 3 | | |
| 1300 | 8.8 | 10.55°C | 0.383 | 9.77 | 8.17 | -76 | 322 | 3.5 | | |
| 1305 | 9.5' | 10.58°C | 0.386 | 9.71 | 8.22 | -70 | 304 | 4.25 | | |
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SAMPLE ID: V-~~R2330031~~⁰⁴¹⁸23ERR 409

SAMPLE DATE: 4-18-23

SAMPLE TIME: 1305

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MU-8

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-18-23

PERSONNEL: ERR

OBSERVERS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 0.4'

DEPTH OF WELL: 7.5'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|----------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1440 | 0.5' | 9.21 | 1.67 | 6.05 | 7.64 | -98 | 106 | 1.75 | | |
| 1445 | 0.5' | 9.20° | 1.98 | 3.98 | 7.69 | -98 | 232 | 3.0 | | |
| 1450 | 0.5' | 9.15 | 1.88 | 6.05 | 7.61 | -95 | 233 | 4.0 | | |
| 1455 | 0.5' | 9.20°c | 3.24 | 1.10 | 7.52 | -82 | 17.5 | 4.5 | | |
| 1500 | 0.5' | 9.35°c | 3.26 | 1.37 | 7.53 | -86 | 8.3 | 5.0 | | |
| 1505 | 0.5' | 9.30° | 3.25 | 1.40 | 7.52 | -89 | 7.3 | 5.5 | | |
| 1510 | 0.5' | 9.55 | 3.23 | 0.83 | 7.52 | -89 | 6.0 | 6.0 | | |
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SAMPLE ID: W R2330031 041823 ERR #010

SAMPLE DATE: 04-18-23

SAMPLE TIME: 1510

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-21

PROJECT #: R2330031

DATE: 04-19-23

SITE NAME: RACER

PERSONNEL: _____

SITE ADDRESS: _____

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: 14.55'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 6.78'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<small><0.3 feet once stabilized</small>) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|----------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1100 | 6.78' | 9.87° | 0.396 | 1.57 | 7.56 | 65 | 284 | 0.5 | | |
| 1105 | 6.78' | 10.27° | 0.382 | 3.09 | 7.43 | 92 | 182 | 1 | | |
| 1110 | 6.8' | 10.30° | 0.381 | 3.27 | 7.42 | 95 | 189 | 1.5 | | |
| 1115 | 6.8' | 10.30° | 0.378 | 3.71 | 7.46 | 98 | 174 | 2 | | |
| 1120 | 6.8' | 10.28° | 0.375 | 4.29 | 7.44 | 109 | 150 | 2.5 | | |
| 1125 | 6.8' | 10.24° | 0.374 | 4.69 | 7.44 | 108 | 134 | 3 | | |
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SAMPLE ID: W-R2330031-0419-23-ERR 011

SAMPLE DATE: 04-19-23

SAMPLE TIME: 1125

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-22

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 04-19-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 14.9'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 6.37'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|----------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1150 | 6.57' | 8.31° | 0.720 | 0.59 | 7.15 | -69 | 44.9 | 1.5 | | |
| 1155 | 6.57' | 8.36° | 0.723 | 0.65 | 7.17 | -80 | 51 | 2 | | |
| 1200 | 6.57' | 8.34° | 0.728 | 0.49 | 7.18 | -81 | 19.5 | 2.25 | | |
| 1205 | 6.57' | 8.33° | 0.726 | 0.48 | 7.20 | -85 | 19.9 | 2.50 | | |
| 1210 | 6.57' | 8.33° | 0.752 | 0.46 | 7.21 | -86 | 16 | 3 | | |
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SAMPLE ID: W R2330031 041923 EPR 012

SAMPLE DATE: 04-19-23

SAMPLE TIME: 1210

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: Mw-10

DATE: 4-19-23
 PERSONNEL: _____
 OBSERVERS: _____

PROJECT #: R2330031
 SITE NAME: RACER
 SITE ADDRESS: _____
 SITE CONDITIONS: _____

DEPTH OF WELL: 23.0'
 SCREEN LENGTH: _____
 TUBING TYPE: _____
 MONITORING EQUIPMENT: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 15.35'
 WELL DIAMETER: 2-inch
 CASING TYPE: PVC

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1240 | 15.35' | 10.77° | 2.83 | 0.61 | 7.02 | -102 | 38.9 | 1.5 | | |
| 1245 | 15.35' | 10.75° | 2.81 | 0.51 | 7.04 | -104 | 26.5 | 2 | | |
| 1250 | 15.35' | 10.78 | 2.81 | 0.53 | 7.05 | -106 | 21.4 | 2.5 | | |
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SAMPLE ID: W R2330031 041823 EPR 013
 SAMPLE DATE: 4-19-23
 SAMPLE TIME: 1250

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-34

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-19-23

PERSONNEL: ERR

OBSERVERS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 3.9'

DEPTH OF WELL: 13.4'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<small><0.3 feet once stabilized</small>) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|----------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 13:55 | 3.5 | 9.32° | 2.25 | .80 | 7.41 | -46 | 127 | 1 | | |
| 14:00 | 3.7 | 9.20° | 2.15 | .57 | 7.26 | -53 | 70.6 | 1.5 | | |
| 14:05 | 3.7 | 9.11° | 2.07 | .54 | 7.24 | -56 | 46.0 | 2 | | |
| 14:10 | 3.9 | 9.15° | 2.03 | .50 | 7.23 | -60 | 41.0 | 2.5 | | |
| 14:15 | 3.9 | 9.12° | 2.00 | .49 | 7.23 | -62 | 39.8 | 3.0 | | |
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SAMPLE ID: WR2330031041923 ERR 014

SAMPLE DATE: 4-19-23

SAMPLE TIME: 1415

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-17

PROJECT #: R2330031

DATE: 4-20-23

SITE NAME: RACER

PERSONNEL: _____

SITE ADDRESS: _____

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: 13.8'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 3.75'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1100 | 3.75' | 10.11° | 1.75 | 2.94 | 7.11 | -17 | 113 | 0.25 | | |
| 1105 | 3.75' | 11.35° | 0.664 | 8.35 | 7.24 | -20 | 94.7 | 0.75 | | |
| 1110 | 3.75' | 11.05 | 1.74 | 6.22 | 7.90 | -27 | 85.2 | 1.25 | | |
| 1115 | 3.75' | 11.15 | 1.47 | 5.94 | 7.28 | -20 | 23.8 | 2 | | |
| 1120 | 3.75' | 10.96 | 1.19 | 5.57 | 7.45 | -21 | 68.9 | 2.5 | | |
| 1125 | 3.75' | 10.92 | 1.30 | 5.88 | 7.43 | -30 | 64.1 | 3 | | |
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SAMPLE ID: W R2330031 042023 EPR 015
 SAMPLE DATE: 04-20-23
 SAMPLE TIME: 1125

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-3

PROJECT #: R2330031

DATE: 4-20-23

SITE NAME: RACER

PERSONNEL: _____

SITE ADDRESS: _____

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: 13.54'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 5.1'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-----------------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1150 | 5.1' | 10.15° | 1.09 | 6.89 | 7.36 | 10 | 72.5 | 0.25 | | |
| 1155 | 5.1' | 9.80 | 1.04 | 6.62 | 7.32 | 2 | 29.1 | 1.25 | | |
| 1200 | 5.1' | 9.73 | 1.05 | 6.34 | 7.28 | -5 | 21.1 | 2 | | |
| 1205 | 5.1' | 9.70 | 1.06 | 6.18 | 7.27 | -11 | 18.7 | 3 | | |
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SAMPLE ID: WAZ330031 042023 ERR 016
 SAMPLE DATE: 4-20-23
 SAMPLE TIME: 1205

Notes: _____

¹ - 10% for values greater than 0.5 mg/L; if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-25

DATE: 4-20-23
 PERSONNEL: ERR
 OBSERVERS: _____

PROJECT #: R2330031
 SITE NAME: RACER
 SITE ADDRESS: _____
 SITE CONDITIONS: _____

DEPTH OF WELL: 11.7'
 SCREEN LENGTH: _____
 TUBING TYPE: _____
 MONITORING EQUIPMENT: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 3.45'
 WELL DIAMETER: 2-inch
 CASING TYPE: PVC

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1440 | 3.45' | 14.68° | 0.847 | 1.39 | 7.07 | 216 | 0 | 1 | | |
| 1445 | 3.45' | 14.63° | 0.848 | 1.26 | 7.06 | 212 | 0 | 1.25 | | |
| 1450 | 3.45' | 14.87° | 0.847 | 1.12 | 7.06 | 208 | 0 | 1.75 | | |
| 1455 | 3.45' | 14.86° | 0.846 | 0.96 | 7.07 | 200 | 0 | 2 | | |
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SAMPLE ID: WR2330031042023 ERR 017
 SAMPLE DATE: 4-20-23
 SAMPLE TIME: 1455

Notes: _____

¹ - 10% for values greater than 0.5 mg/L; if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-23

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: _____

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 14.95'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 8.71'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<small><0.3 feet once stabilized</small>) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1515 | 8.71' | 18.24° | 0 | 15.03 | 7.44 | 237 | 53.9 | 0.5 | | |
| 1520 | 8.71' | 10.70° | 2.26 | 1.47 | 6.75 | -83 | 66.1 | 1 | | |
| 1525 | 8.71' | 10.74° | 2.25 | 1.44 | 6.75 | -82 | 61.5 | 1.5 | | |
| 1530 | 8.71' | 10.79 | 2.25 | 1.31 | 6.74 | -82 | 56.2 | 2.25 | | |
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SAMPLE ID: WR2330031 04 2023 ERR 018
 SAMPLE DATE: 4-20-23
 SAMPLE TIME: 1530

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-11

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 7.92'

WELL DIAMETER: 2-inch

CASING TYPE: PVC

DATE: 4-20-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 18.1'

SCREEN LENGTH: _____

TUBING TYPE: _____

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1230 | 7.92' | 9.67 | 0.589 | 6.65 | 7.21 | 184 | 185 | 0.5 | | |
| 1235 | 7.92' | 9.62 | 0.586 | 6.73 | 7.23 | 184 | 177 | 1.0 | | |
| 1240 | 7.92' | 10.12 | 0.576 | 4.87 | 7.40 | 182 | 133 | 2 | | |
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SAMPLE ID: W R2330031 042023 ERK

SAMPLE DATE: 4-20-23

SAMPLE TIME: 1240

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-27

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 3.9'

WELL DIAMETER: 2-inch

CASING TYPE: PVC

DATE: 05-05-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 13.85'

SCREEN LENGTH: _____

TUBING TYPE: _____

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1125 | 3.9' | 9.28 | 2.75 | 1.60 | 7.43 | -93 | 64 | .5 | | |
| 1130 | 3.9' | 9.24 | 2.72 | 0.96 | 7.44 | -97 | 59 | 1.0 | | |
| 1135 | 3.9' | 9.29 | 2.78 | 0.85 | 7.47 | -100 | 57.9 | 1.25 | | |
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SAMPLE ID: w R2330031 0505 23 ERR021
 SAMPLE DATE: 050523
 SAMPLE TIME: 1135

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-6

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 5-4-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH OF WELL: 16.25'

DEPTH TO WATER LEVEL FROM TOP OF CASING: 5.63'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<small><0.3 feet once stabilized</small>) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1320 | 5.65' | 16.78° | 0.717 | 7.38 | 6.53 | 347 | 91.7 | 0.5 | | |
| 1325 | 5.65' | 10.76° | 0.708 | 7.29 | 6.52 | 345 | 90.1 | 0.75 | | |
| 1330 | 5.65' | 10.76° | 0.699 | 7.31 | 6.53 | 329 | 88.2 | 1.25 | | |
| 1335 | 5.65' | 10.76° | 0.680 | 7.25 | 6.53 | 311 | 85.7 | 2 | | |
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SAMPLE ID: WR2330031050423 ERR 025
 SAMPLE DATE: 5-4-23
 SAMPLE TIME: 1335

Notes: _____

¹ - 10% for values greater than 0.5 mg/L; if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: DIP

PROJECT #: R2330031

SITE NAME: RACER

SITE ADDRESS: _____

SITE CONDITIONS: _____

DATE: 4-21-23

PERSONNEL: _____

OBSERVERS: _____

DEPTH TO WATER LEVEL FROM TOP OF CASING: 15.35'

DEPTH OF WELL: 23.0'

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<small><0.3 feet once stabilized</small>) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1625 | | 10.47 | 2.77 | 2.32 | 7.02 | -90 | 233 | 0.5 | | |
| 1630 | | 10.47 | 2.76 | 0.66 | 7.04 | -93 | 182 | 1.5 | | |
| 1635 | | 10.52 | 2.76 | 0.54 | 7.04 | -97 | 169 | 2 | | |
| 1640 | | 10.58 | 2.75 | 0.51 | 7.03 | -98 | 149 | 2.5 | | |
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SAMPLE ID: WR2330031 042123 ERR 028
 SAMPLE DATE: 4-21-23
 SAMPLE TIME: 1640

Notes: _____

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized
² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

CMW10

LOW FLOW GROUNDWATER SAMPLING FORM



SAMPLE LOCATION: MW-1R

PROJECT #: R2330031

DATE: 4-21-23

SITE NAME: RACER

PERSONNEL: _____

SITE ADDRESS: _____

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: 19.20

DEPTH TO WATER LEVEL FROM TOP OF CASING: 14.551

SCREEN LENGTH: _____

WELL DIAMETER: 2-inch

TUBING TYPE: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: _____

| TIME | WATER LEVEL (<0.3 feet once stabilized) | TEMP. (°F/°C) | COND. (µS/cm) | DO (mg/L) ¹ | Ph | ORP (mV) | TURB. (NTU) ² | VOLUME PURGED (Gallons) | PUMP RATE (ml/min) | NOTES |
|-----------------|--|---------------|---------------|------------------------|---------|-----------|--------------------------|-------------------------|--------------------|-------|
| | | +/- 3% | +/- 3% | +/- 10% | +/- 0.1 | +/- 10 mV | +/- 10% | | | |
| 1345 | | 10.16 | 2.05 | 1.13 | 7.02 | -70 | 0 | 1 | | |
| 1550 | | 10.11 | 2.06 | 1.59 | 7.03 | -75 | 0 | 2 | | |
| 1555 | | 10.10 | 2.06 | 1.65 | 7.02 | -78 | 0 | 2.5 | | |
| 1400 | | 10.10 | 2.07 | 1.68 | 7.03 | -79 | 0 | 3.5 | | |
| 1405 | | 10.10 | 2.07 | 1.65 | 7.02 | -80 | 986 | | | |
| 1410 | | 10.10 | 2.06 | 1.64 | 7.02 | -78 | 267 | | | |
| 1415 | | 10.10 | 2.07 | 1.62 | 7.03 | -78 | 249 | | | |
| 1420 | | 10.10 | 2.07 | 1.67 | 7.03 | -79 | 230 | | | |
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SAMPLE ID: WR2330031042123 ERR 027

SAMPLE DATE: 04-21-23

SAMPLE TIME: 1420

Notes: Needs development. Ton of sediment. Turbidity ~~too high to read~~ (1000+)

¹ - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

² - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

ATTACHMENT 2

Laboratory Analytical Data Reports





16-May-2023

Thomas E. Peters
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER Spring 2023 - R2330031**

Work Order: **23050810**

Dear Thomas,

ALS Environmental received 4 samples on 08-May-2023 09:30 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: FL E871106

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Client: The Mannik & Smith Group, Inc.
Project: RACER Sping 2023 - R2330031
Work Order: 23050810

Work Order Sample Summary

| <u>Lab Samp ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Tag Number</u> | <u>Collection Date</u> | <u>Date Received</u> | <u>Hold</u> |
|--------------------|-------------------------|---------------|-------------------|------------------------|----------------------|--------------------------|
| 23050810-01 | WR2330031050423ERR025 | Water | | 5/4/2023 13:35 | 5/8/2023 21:30 | <input type="checkbox"/> |
| 23050810-02 | WR2330031050423ERR007 | Water | | 5/4/2023 15:55 | 5/8/2023 21:30 | <input type="checkbox"/> |
| 23050810-03 | WR2330031050523ERR022 | Water | | 5/5/2023 11:10 | 5/8/2023 21:30 | <input type="checkbox"/> |
| 23050810-04 | WR2330031050523ERR021 | Water | | 5/5/2023 11:35 | 5/8/2023 21:30 | <input type="checkbox"/> |

ALS Group, USA

Date: 16-May-23

Client: The Mannik & Smith Group, Inc.
 Project: RACER Sping 2023 - R2330031
 Sample ID: WR2330031050423ERR025
 Collection Date: 5/4/2023 01:35 PM

Work Order: 23050810
 Lab ID: 23050810-01
 Matrix: WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|--------------|-------|-------------------------|-----------------|
| METALS BY ICP-MS | | | SW6020B | | | Prep: SW3015A / 5/12/23 | Analyst: DSC |
| <u>BatchID: 216163</u> | | | | | | | |
| Aluminum | 0.041 | | 0.0057 | 0.010 | mg/L | 1 | 5/12/2023 19:33 |
| Iron | 0.21 | | 0.047 | 0.080 | mg/L | 1 | 5/12/2023 19:33 |
| Manganese | 0.012 | | 0.0017 | 0.0050 | mg/L | 1 | 5/12/2023 19:33 |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | | Prep: SW3015A / 5/12/23 | Analyst: DSC |
| <u>BatchID: 216163</u> | | | | | | | |
| Aluminum | | U | 0.0057 | 0.010 | mg/L | 1 | 5/12/2023 19:35 |
| Iron | | U | 0.047 | 0.080 | mg/L | 1 | 5/12/2023 19:35 |
| Manganese | 0.0024 | J | 0.0017 | 0.0050 | mg/L | 1 | 5/12/2023 19:35 |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 16-May-23

Client: The Mannik & Smith Group, Inc.
Project: RACER Sping 2023 - R2330031
Sample ID: WR2330031050423ERR007
Collection Date: 5/4/2023 03:55 PM

Work Order: 23050810
Lab ID: 23050810-02
Matrix: WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|--------------|-------|-------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | | Prep: SW3015A / 5/12/23 | Analyst: DSC |
| <u>BatchID: 216163</u> | | | | | | | |
| Aluminum | 0.023 | | 0.0057 | 0.010 | mg/L | 1 | 5/12/2023 19:36 |
| Iron | 0.080 | | 0.047 | 0.080 | mg/L | 1 | 5/12/2023 19:36 |
| Manganese | 0.0042 | J | 0.0017 | 0.0050 | mg/L | 1 | 5/12/2023 19:36 |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | | Prep: SW3015A / 5/12/23 | Analyst: DSC |
| <u>BatchID: 216163</u> | | | | | | | |
| Aluminum | | U | 0.0057 | 0.010 | mg/L | 1 | 5/12/2023 20:11 |
| Iron | | U | 0.047 | 0.080 | mg/L | 1 | 5/12/2023 20:11 |
| Manganese | 0.0024 | J | 0.0017 | 0.0050 | mg/L | 1 | 5/12/2023 20:11 |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 16-May-23

Client: The Mannik & Smith Group, Inc.
Project: RACER Sping 2023 - R2330031
Sample ID: WR2330031050523ERR021
Collection Date: 5/5/2023 11:35 AM

Work Order: 23050810
Lab ID: 23050810-04
Matrix: WATER

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|--------------|-------|-------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | | Prep: SW3015A / 5/12/23 | Analyst: DSC |
| <u>BatchID: 216163</u> | | | | | | | |
| Aluminum | 0.16 | | 0.0057 | 0.010 | mg/L | 1 | 5/12/2023 20:17 |
| Iron | 7.1 | | 0.047 | 0.080 | mg/L | 1 | 5/12/2023 20:17 |
| Manganese | 0.093 | | 0.0017 | 0.0050 | mg/L | 1 | 5/12/2023 20:17 |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | | Prep: SW3015A / 5/12/23 | Analyst: DSC |
| <u>BatchID: 216163</u> | | | | | | | |
| Aluminum | U | | 0.0057 | 0.010 | mg/L | 1 | 5/12/2023 20:18 |
| Iron | 1.9 | | 0.047 | 0.080 | mg/L | 1 | 5/12/2023 20:18 |
| Manganese | 0.083 | | 0.0017 | 0.0050 | mg/L | 1 | 5/12/2023 20:18 |

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: The Mannik & Smith Group, Inc.
Project: RACER Sping 2023 - R2330031
Work Order: 23050810

Case Narrative

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. A copy of the laboratory's scope of accreditation is available upon request.

Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

Any flags on MS/MSD samples not addressed in this narrative are unrelated to samples in this report.

With the following exceptions, all sample analyses achieved analytical criteria.

Client: The Mannik & Smith Group, Inc.
Project: RACER Sping 2023 - R2330031
WorkOrder: 23050810

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| ** | Estimated Value |
| a | Analyte is non-accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| Hr | BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated. |
| J | Analyte is present at an estimated concentration between the MDL and Report Limit |
| n | Analyte accreditation is not offered |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL |
| X | Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level. |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCS D | Laboratory Control Sample Duplicate |
| LOD | Limit of Detection (see MDL) |
| LOQ | Limit of Quantitation (see PQL) |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PQL | Practical Quantitation Limit |
| RPD | Relative Percent Difference |
| TDL | Target Detection Limit |
| TNTC | Too Numerous To Count |
| A | APHA Standard Methods |
| D | ASTM |
| E | EPA |
| SW | SW-846 Update III |

| <u>Units Reported</u> | <u>Description</u> |
|-----------------------|----------------------|
| mg/L | Milligrams per Liter |

Client: The Mannik & Smith Group, Inc.
Work Order: 23050810
Project: RACER Sping 2023 - R2330031

QC BATCH REPORT

Batch ID: **216163** Instrument ID **ICPMS3** Method: **SW6020B**

| MBLK | | Sample ID: MBLK-216163-216163 | | | Units: mg/L | | Analysis Date: 5/12/2023 07:09 PM | | | |
|------------|--------|--------------------------------------|---------|---------------|-----------------------|---------------|--|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230512A | | | SeqNo: 9544680 | | Prep Date: 5/12/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | U | 0.010 | | | | | | | | |
| Iron | U | 0.080 | | | | | | | | |
| Manganese | U | 0.0050 | | | | | | | | |

| LCS | | Sample ID: LCS-216163-216163 | | | Units: mg/L | | Analysis Date: 5/12/2023 07:11 PM | | | |
|------------|---------|-------------------------------------|---------|---------------|-----------------------|---------------|--|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230512A | | | SeqNo: 9544681 | | Prep Date: 5/12/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09374 | 0.010 | 0.1 | 0 | 93.7 | 80-120 | 0 | | | |
| Iron | 10.05 | 0.080 | 10 | 0 | 100 | 80-120 | 0 | | | |
| Manganese | 0.09186 | 0.0050 | 0.1 | 0 | 91.9 | 80-120 | 0 | | | |

| MS | | Sample ID: 23050774-01BMS | | | Units: mg/L | | Analysis Date: 5/12/2023 07:25 PM | | | |
|------------|---------|----------------------------------|---------|---------------|-----------------------|---------------|--|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230512A | | | SeqNo: 9544689 | | Prep Date: 5/12/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09579 | 0.010 | 0.1 | 0.006186 | 89.6 | 75-125 | 0 | | | |
| Iron | 9.856 | 0.080 | 10 | -0.0002222 | 98.6 | 75-125 | 0 | | | |
| Manganese | 0.09108 | 0.0050 | 0.1 | 0.0002277 | 90.9 | 75-125 | 0 | | | |

| MSD | | Sample ID: 23050774-01BMSD | | | Units: mg/L | | Analysis Date: 5/12/2023 07:26 PM | | | |
|------------|---------|-----------------------------------|---------|---------------|-----------------------|---------------|--|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230512A | | | SeqNo: 9544690 | | Prep Date: 5/12/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09859 | 0.010 | 0.1 | 0.006186 | 92.4 | 75-125 | 0.09579 | 2.88 | 20 | |
| Iron | 10.04 | 0.080 | 10 | -0.0002222 | 100 | 75-125 | 9.856 | 1.81 | 20 | |
| Manganese | 0.0923 | 0.0050 | 0.1 | 0.0002277 | 92.1 | 75-125 | 0.09108 | 1.33 | 20 | |

The following samples were analyzed in this batch:

| | | |
|--------------|--------------|--------------|
| 23050810-01A | 23050810-01B | 23050810-02A |
| 23050810-02B | 23050810-03A | 23050810-03B |
| 23050810-04A | 23050810-04B | |



Chain of Custody Form

Page 1 of 1

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager:

ALS Work Order #:

Customer Information

Project Information

Parameter/Method Request for Analysis

| | | | | | | | | | | | | | |
|----------------|-----------------|------------------------------|---|-------------------------------|--|--|--|--|--|--|--|--|--|
| Purchase Order | Project Name | RACER Spring 2023 | A | Dissolved metals (Mn, Al, Fe) | | | | | | | | | |
| Quote # | Project Number | R2330031 | B | Filtered metals (Mn, Al, Fe) | | | | | | | | | |
| Company Name | Bill To Company | Mannik & Smith Group | C | TMS | | | | | | | | | |
| Send Report To | Invoice Attn. | Accounts Payable | D | | | | | | | | | | |
| Address | Address | 2365 S Haggerty rd | E | | | | | | | | | | |
| City/State/Zip | City/State/Zip | Contra, ME, 48188 | F | | | | | | | | | | |
| Phone | Phone | 734 397 3100 | G | | | | | | | | | | |
| Fax | Fax | | H | | | | | | | | | | |
| e-Mail Address | | TPeters@manniksmithgroup.com | I | | | | | | | | | | |
| | | | J | | | | | | | | | | |

| No. | Sample Description | Date | Time | Matrix | Pres. Key Numbers | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|--------------------------|--------|------|--------|-------------------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | WR 2330031050423 ERK 025 | 5-4-23 | 1335 | W | HW03 | 2 | ✓ | ✓ | | | | | | | | | |
| 2 | WR 2330031050423 ERN 007 | 5-4-23 | 1555 | W | HW05 | 2 | ✓ | ✓ | | | | | | | | | |
| 3 | WR 2330031050523 ERK 022 | 5-5-23 | 1110 | W | HW03 | 2 | ✓ | ✓ | | | | | | | | | |
| 4 | WR 2330031050523 ERK 021 | 5-5-23 | 1135 | W | HW03 | 2 | ✓ | ✓ | | | | | | | | | |

23050810

MANNIK&SMITH- The Mannik & Smith Group, Inc.

Project: RACER - R2330031

Sampler(s): Please Print & Sign
Eric Robinson Eric Robins

Relinquished by: [Signature] Date: 5/18/23 Time: 1325

Received by: [Signature] Date: 5/18/23 Time: 1325

Notes: Received 5/18/23 1330 early arrival.

Shipment Method: 10 BD 5 BD 3 BD 2 BD 1 BD

Turnaround Time: (Business Days)

QC Package: (Check Box Below)

Level II: Standard QC Level III: Raw Data

TRRP LRC TRRP Level IV

Other: _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NAOH 5-Na₂S₂O₃ 6-NAHSO₄ 7-Other 8-4°C 9-5035A

Logged by (Laboratory): [Signature] Date: 5/18/23 Time: 1700

Checked by (Laboratory): [Signature] Date: 5/18/23 Time: 1700

Cooler Temp °C: 3.70

pH Verified: 8.13

Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **08-May-23 21:30**

Work Order: **23050810**

Received by: **KYB**

Checklist completed by Harly Yablonski 09-May-23
eSignature Date

Reviewed by: Bill Carey 09-May-23
eSignature Date

Matrices: Water

Carrier name: Courier

| | | | |
|---|--|--|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample(s) received on ice? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temperature(s)/Thermometer(s): | <input type="text" value="3.1/4.1C"/> | | <input type="text" value="IR3"/> |
| Cooler(s)/Kit(s): | <input type="text"/> | | |
| Date/Time sample(s) sent to storage: | <input type="text" value="5/9/2023 9:13:53 AM"/> | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted by: | <input type="text"/> | | |

Login Notes: pH<2

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

CorrectiveAction:



09-May-2023

Thomas E. Peters
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **VB LF**

Work Order: **23042009**

Dear Thomas,

ALS Environmental received 28 samples on 24-Apr-2023 10:30 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 60.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: MI: 0022

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Client: The Mannik & Smith Group, Inc.
Project: VB LF
Work Order: 23042009

Work Order Sample Summary

| <u>Lab Samp ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Tag Number</u> | <u>Collection Date</u> | <u>Date Received</u> | <u>Hold</u> |
|--------------------|-------------------------|---------------|-------------------|------------------------|----------------------|--------------------------|
| 23042009-01 | WR2330031041723ERR001 | Water | | 4/17/2023 13:15 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-02 | WR2330031041723ERR002 | Water | | 4/17/2023 14:40 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-03 | WR2330031041723ERR003 | Water | | 4/17/2023 16:35 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-04 | WR2330031041823ERR004 | Water | | 4/18/2023 11:40 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-05 | WR2330031041823ERR005 | Water | | 4/18/2023 13:15 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-06 | WR2330031041823ERR006 | Water | | 4/18/2023 12:20 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-07 | WR2330031042123ERR007 | Water | | 4/21/2023 14:10 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-08 | WR2330031041823ERR008 | Water | | 4/18/2023 12:05 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-09 | WR2330031041823ERR009 | Water | | 4/18/2023 13:05 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-10 | WR2330031041823ERR010 | Water | | 4/18/2023 15:10 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-11 | WR2330031041923ERR011 | Water | | 4/19/2023 11:25 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-12 | WR2330031041923ERR012 | Water | | 4/19/2023 12:10 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-13 | WR2330031041923ERR013 | Water | | 4/19/2023 12:50 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-14 | WR2330031041923ERR014 | Water | | 4/19/2023 14:15 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-15 | WR2330031042023ERR015 | Water | | 4/20/2023 11:25 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-16 | WR2330031042023ERR016 | Water | | 4/20/2023 12:05 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-17 | WR2330031042023ERR017 | Water | | 4/20/2023 14:55 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-18 | WR2330031042023ERR018 | Water | | 4/20/2023 15:30 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-19 | WR2330031042023ERR019 | Water | | 4/20/2023 16:10 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-20 | WR2330031042023ERR020 | Water | | 4/20/2023 12:40 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-21 | WR2330031042023ERR021 | Water | | 4/20/2023 14:55 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-22 | WR2330031042023ERR022 | Water | | 4/20/2023 11:20 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-23 | WR2330031042023ERR023 | Water | | 4/20/2023 12:30 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-24 | WR2330031042023ERR024 | Water | | 4/20/2023 13:30 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-25 | WR2330031042123ERR025 | Water | | 4/21/2023 13:00 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-26 | WR2330031042123ERR026 | Water | | 4/21/2023 13:55 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-27 | WR2330031042123ERR027 | Water | | 4/21/2023 14:20 | 4/24/2023 22:30 | <input type="checkbox"/> |
| 23042009-28 | WR2330031042123ERR028 | Water | | 4/21/2023 16:40 | 4/24/2023 22:30 | <input type="checkbox"/> |

Client: The Mannik & Smith Group, Inc.
Project: VB LF
WorkOrder: 23042009

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| ** | Estimated Value |
| a | Analyte is non-accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| Hr | BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated. |
| J | Analyte is present at an estimated concentration between the MDL and Report Limit |
| n | Analyte accreditation is not offered |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL |
| X | Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level. |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| LOD | Limit of Detection (see MDL) |
| LOQ | Limit of Quantitation (see PQL) |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PQL | Practical Quantitation Limit |
| RPD | Relative Percent Difference |
| TDL | Target Detection Limit |
| TNTC | Too Numerous To Count |
| A | APHA Standard Methods |
| D | ASTM |
| E | EPA |
| SW | SW-846 Update III |

| <u>Units Reported</u> | <u>Description</u> |
|-----------------------|----------------------|
| µg/L | Micrograms per Liter |
| mg/L | Milligrams per Liter |

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Case Narrative

Samples ERR022, ERR025, ERR007, and ERR021 will be resampled by client - bottles not labelled correctly.

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. A copy of the laboratory's scope of accreditation is available upon request.

Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

Any flags on MS/MSD samples not addressed in this narrative are unrelated to samples in this report.

With the following exceptions, all sample analyses achieved analytical criteria.

Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **24-Apr-23 22:30**

Work Order: **23042009**

Received by: **KYB**

Checklist completed by Harly Yablonski 25-Apr-23
eSignature Date

Reviewed by: Bill Carey 25-Apr-23
eSignature Date

Matrices: water

Carrier name: Courier

| | | | |
|---|---|--|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample(s) received on ice? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temperature(s)/Thermometer(s): | <input type="text" value="2.6/3.6C"/> | | <input type="text" value="IR3"/> |
| Cooler(s)/Kit(s): | <input type="text"/> | | |
| Date/Time sample(s) sent to storage: | <input type="text" value="4/25/2023 8:29:22 AM"/> | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | No VOA vials submitted <input type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted by: | <input type="text"/> | | |

Login Notes: pH<2

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Client: The Mannik & Smith Group, Inc.
Work Order: 23042009
Project: VB LF

QC BATCH REPORT

Batch ID: **215375** Instrument ID **ICPMS3** Method: **SW6020B**

| MBLK | | Sample ID: MBLK-215375-215375 | | | Units: mg/L | | Analysis Date: 5/2/2023 06:45 PM | | | |
|-------------|--------|--------------------------------------|---------|---------------|-----------------------|---------------|---|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | | SeqNo: 9501554 | | Prep Date: 5/2/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | U | 0.010 | | | | | | | | |
| Iron | U | 0.080 | | | | | | | | |
| Manganese | U | 0.0050 | | | | | | | | |

| LCS | | Sample ID: LCS-215375-215375 | | | Units: mg/L | | Analysis Date: 5/2/2023 06:47 PM | | | |
|------------|---------|-------------------------------------|---------|---------------|-----------------------|---------------|---|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | | SeqNo: 9501555 | | Prep Date: 5/2/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09952 | 0.010 | 0.1 | 0 | 99.5 | 80-120 | 0 | | | |
| Iron | 10.28 | 0.080 | 10 | 0 | 103 | 80-120 | 0 | | | |
| Manganese | 0.09767 | 0.0050 | 0.1 | 0 | 97.7 | 80-120 | 0 | | | |

| MS | | Sample ID: 23042049-07CMS | | | Units: mg/L | | Analysis Date: 5/2/2023 07:02 PM | | | |
|------------|--------|----------------------------------|---------|---------------|-----------------------|---------------|---|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | | SeqNo: 9501564 | | Prep Date: 5/2/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.1095 | 0.010 | 0.1 | 0.007986 | 102 | 75-125 | 0 | | | |
| Iron | 10.18 | 0.080 | 10 | 0.291 | 98.9 | 75-125 | 0 | | | |
| Manganese | 0.5163 | 0.0050 | 0.1 | 0.4496 | 66.7 | 75-125 | 0 | | | SO |

| MSD | | Sample ID: 23042049-07CMSD | | | Units: mg/L | | Analysis Date: 5/2/2023 07:04 PM | | | |
|------------|--------|-----------------------------------|---------|---------------|-----------------------|---------------|---|------|--------------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | | SeqNo: 9501565 | | Prep Date: 5/2/2023 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.1182 | 0.010 | 0.1 | 0.007986 | 110 | 75-125 | 0.1095 | 7.59 | 20 | |
| Iron | 10.86 | 0.080 | 10 | 0.291 | 106 | 75-125 | 10.18 | 6.4 | 20 | |
| Manganese | 0.5447 | 0.0050 | 0.1 | 0.4496 | 95 | 75-125 | 0.5163 | 5.35 | 20 | O |

The following samples were analyzed in this batch: 23042009-01A 23042009-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

Batch ID: 215376

Instrument ID ICPMS3

Method: SW6020B

| MBLK | | Sample ID: MBLK-215376-215376 | | | | Units: mg/L | | Analysis Date: 5/2/2023 07:32 PM | | |
|------------|--------|-------------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501582 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | U | 0.010 | | | | | | | | |
| Iron | U | 0.080 | | | | | | | | |
| Manganese | U | 0.0050 | | | | | | | | |

| LCS | | Sample ID: LCS-215376-215376 | | | | Units: mg/L | | Analysis Date: 5/2/2023 07:34 PM | | |
|------------|---------|------------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501583 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09998 | 0.010 | 0.1 | 0 | 100 | 80-120 | 0 | | | |
| Iron | 10.3 | 0.080 | 10 | 0 | 103 | 80-120 | 0 | | | |
| Manganese | 0.09883 | 0.0050 | 0.1 | 0 | 98.8 | 80-120 | 0 | | | |

| MS | | Sample ID: 23042049-01CMS | | | | Units: mg/L | | Analysis Date: 5/2/2023 08:18 PM | | |
|------------|--------|---------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501608 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.1939 | 0.010 | 0.1 | 0.06036 | 134 | 75-125 | 0 | | | S |
| Iron | 10.16 | 0.080 | 10 | 0.1414 | 100 | 75-125 | 0 | | | |
| Manganese | 0.2267 | 0.0050 | 0.1 | 0.1208 | 106 | 75-125 | 0 | | | |

| MSD | | Sample ID: 23042049-01CMSD | | | | Units: mg/L | | Analysis Date: 5/2/2023 08:20 PM | | |
|------------|--------|----------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501609 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.3008 | 0.010 | 0.1 | 0.06036 | 240 | 75-125 | 0.1939 | 43.2 | 20 | SR |
| Iron | 10.29 | 0.080 | 10 | 0.1414 | 101 | 75-125 | 10.16 | 1.24 | 20 | |
| Manganese | 0.2441 | 0.0050 | 0.1 | 0.1208 | 123 | 75-125 | 0.2267 | 7.38 | 20 | |

The following samples were analyzed in this batch:

| | | |
|--------------|--------------|--------------|
| 23042009-02A | 23042009-02B | 23042009-03A |
| 23042009-03B | 23042009-04A | 23042009-04B |
| 23042009-05A | 23042009-05B | 23042009-06A |
| 23042009-06B | 23042009-08A | 23042009-08B |
| 23042009-09A | 23042009-09B | 23042009-10A |
| 23042009-10B | 23042009-11A | 23042009-11B |
| 23042009-12A | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

Batch ID: 215377

Instrument ID ICPMS3

Method: SW6020B

| MBLK | | Sample ID: MBLK-215377-215377 | | | | Units: mg/L | | Analysis Date: 5/2/2023 08:25 PM | | |
|------------|--------|-------------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501612 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | U | 0.010 | | | | | | | | |
| Iron | U | 0.080 | | | | | | | | |
| Manganese | U | 0.0050 | | | | | | | | |

| LCS | | Sample ID: LCS-215377-215377 | | | | Units: mg/L | | Analysis Date: 5/2/2023 08:26 PM | | |
|------------|---------|------------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501613 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09878 | 0.010 | 0.1 | 0 | 98.8 | 80-120 | 0 | | | |
| Iron | 10.06 | 0.080 | 10 | 0 | 101 | 80-120 | 0 | | | |
| Manganese | 0.09588 | 0.0050 | 0.1 | 0 | 95.9 | 80-120 | 0 | | | |

| MS | | Sample ID: 23042049-02CMS | | | | Units: mg/L | | Analysis Date: 5/2/2023 09:42 PM | | |
|------------|--------|---------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501663 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.6827 | 0.010 | 0.1 | 0.3327 | 350 | 75-125 | 0 | | | S |
| Iron | 10.64 | 0.080 | 10 | 0.5377 | 101 | 75-125 | 0 | | | |
| Manganese | 0.7431 | 0.0050 | 0.1 | 0.6453 | 97.7 | 75-125 | 0 | | | O |

| MSD | | Sample ID: 23042049-02CMSD | | | | Units: mg/L | | Analysis Date: 5/2/2023 09:44 PM | | |
|------------|--------|----------------------------|---------|----------------|------|---------------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501664 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 1.236 | 0.010 | 0.1 | 0.3327 | 904 | 75-125 | 0.6827 | 57.7 | 20 | SR |
| Iron | 11.2 | 0.080 | 10 | 0.5377 | 107 | 75-125 | 10.64 | 5.15 | 20 | |
| Manganese | 0.7555 | 0.0050 | 0.1 | 0.6453 | 110 | 75-125 | 0.7431 | 1.66 | 20 | O |

The following samples were analyzed in this batch:

| | | |
|--------------|--------------|--------------|
| 23042009-12B | 23042009-13A | 23042009-13B |
| 23042009-14A | 23042009-14B | 23042009-15A |
| 23042009-15B | 23042009-16A | 23042009-16B |
| 23042009-17A | 23042009-17B | 23042009-18A |
| 23042009-18B | 23042009-19A | 23042009-19B |
| 23042009-20A | 23042009-20B | 23042009-23A |
| 23042009-23B | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
 Work Order: 23042009
 Project: VB LF

QC BATCH REPORT

Batch ID: **215379** Instrument ID **ICPMS3** Method: **SW6020B**

| MBLK | | Sample ID: MBLK-215379-215379 | | | | Units: mg/L | | Analysis Date: 5/2/2023 09:46 PM | | |
|------------|--------|--------------------------------------|---------|-----------------------|------|----------------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501665 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | U | 0.010 | | | | | | | | |
| Iron | U | 0.080 | | | | | | | | |
| Manganese | U | 0.0050 | | | | | | | | |

| LCS | | Sample ID: LCS-215379-215379 | | | | Units: mg/L | | Analysis Date: 5/2/2023 09:47 PM | | |
|------------|---------|-------------------------------------|---------|-----------------------|------|----------------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501667 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09132 | 0.010 | 0.1 | 0 | 91.3 | 80-120 | 0 | | | |
| Iron | 9.06 | 0.080 | 10 | 0 | 90.6 | 80-120 | 0 | | | |
| Manganese | 0.0891 | 0.0050 | 0.1 | 0 | 89.1 | 80-120 | 0 | | | |

| MS | | Sample ID: 23042049-03CMS | | | | Units: mg/L | | Analysis Date: 5/2/2023 10:08 PM | | |
|------------|--------|----------------------------------|---------|-----------------------|------|----------------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501681 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.4904 | 0.010 | 0.1 | 0.1031 | 387 | 75-125 | 0 | | | S |
| Iron | 11.07 | 0.080 | 10 | 0.3853 | 107 | 75-125 | 0 | | | |
| Manganese | 0.8138 | 0.0050 | 0.1 | 0.7088 | 105 | 75-125 | 0 | | | O |

| MSD | | Sample ID: 23042049-03CMSD | | | | Units: mg/L | | Analysis Date: 5/2/2023 10:10 PM | | |
|------------|--------|-----------------------------------|---------|-----------------------|------|----------------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: ICPMS3_230502A | | SeqNo: 9501682 | | Prep Date: 5/2/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.5645 | 0.010 | 0.1 | 0.1031 | 461 | 75-125 | 0.4904 | 14.1 | 20 | S |
| Iron | 10.9 | 0.080 | 10 | 0.3853 | 105 | 75-125 | 11.07 | 1.52 | 20 | |
| Manganese | 0.7938 | 0.0050 | 0.1 | 0.7088 | 84.9 | 75-125 | 0.8138 | 2.5 | 20 | O |

The following samples were analyzed in this batch:

| | | |
|--------------|--------------|--------------|
| 23042009-24A | 23042009-24B | 23042009-26A |
| 23042009-26B | 23042009-27A | 23042009-27B |
| 23042009-28A | 23042009-28B | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 23042009
Project: VB LF

QC BATCH REPORT

Batch ID: **215823** Instrument ID **ICPMS3** Method: **SW6020B**

| MBLK | | Sample ID: MBLK-215823-215823 | | | | Units: mg/L | | Analysis Date: 5/9/2023 01:20 PM | | |
|------------|--------|--------------------------------------|---------|-----------------------|------|----------------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: ICPMS3_230509A | | SeqNo: 9525623 | | Prep Date: 5/9/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | U | 0.010 | | | | | | | | |
| Iron | U | 0.080 | | | | | | | | |
| Manganese | U | 0.0050 | | | | | | | | |

| LCS | | Sample ID: LCS-215823-215823 | | | | Units: mg/L | | Analysis Date: 5/9/2023 01:21 PM | | |
|------------|---------|-------------------------------------|---------|-----------------------|------|----------------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: ICPMS3_230509A | | SeqNo: 9525624 | | Prep Date: 5/9/2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Aluminum | 0.09661 | 0.010 | 0.1 | 0 | 96.6 | 80-120 | 0 | | | |
| Iron | 9.739 | 0.080 | 10 | 0 | 97.4 | 80-120 | 0 | | | |
| Manganese | 0.09462 | 0.0050 | 0.1 | 0 | 94.6 | 80-120 | 0 | | | |

The following samples were analyzed in this batch: 23042009-28A 23042009-28B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
 Work Order: 23042009
 Project: VB LF

QC BATCH REPORT

Batch ID: **R369855a** Instrument ID **VMS12** Method: **SW8260D**

| MBLK | | Sample ID: 12V-BLKW1-230502-R369855a | | | | Units: µg/L | | Analysis Date: 5/2/2023 03:07 PM | | |
|--------------------------------|--------|--------------------------------------|---------|----------------|------|---------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: VMS12_230502A | | SeqNo: 9501330 | | Prep Date: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | U | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | U | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | U | 1.0 | | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane | U | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | U | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | U | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | U | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | U | 1.0 | | | | | | | | |
| 1,2-Dibromoethane | U | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 1,2-Dichloroethane | U | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | U | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 2-Butanone | U | 5.0 | | | | | | | | |
| 2-Hexanone | U | 5.0 | | | | | | | | |
| 4-Methyl-2-pentanone | U | 1.0 | | | | | | | | |
| Acetone | U | 10 | | | | | | | | |
| Benzene | U | 1.0 | | | | | | | | |
| Bromodichloromethane | U | 1.0 | | | | | | | | |
| Bromoform | U | 1.0 | | | | | | | | |
| Bromomethane | U | 1.0 | | | | | | | | |
| Carbon disulfide | U | 1.0 | | | | | | | | |
| Carbon tetrachloride | U | 1.0 | | | | | | | | |
| Chlorobenzene | U | 1.0 | | | | | | | | |
| Chloroethane | U | 1.0 | | | | | | | | |
| Chloroform | U | 1.0 | | | | | | | | |
| Chloromethane | U | 1.0 | | | | | | | | |
| cis-1,2-Dichloroethene | U | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | U | 1.0 | | | | | | | | |
| Cyclohexane | U | 2.0 | | | | | | | | |
| Dibromochloromethane | U | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | U | 1.0 | | | | | | | | |
| Ethylbenzene | U | 1.0 | | | | | | | | |
| Isopropylbenzene | U | 1.0 | | | | | | | | |
| Methyl acetate | U | 2.0 | | | | | | | | |
| Methyl tert-butyl ether | U | 1.0 | | | | | | | | |
| Methylcyclohexane | U | 1.0 | | | | | | | | |
| Methylene chloride | U | 5.0 | | | | | | | | |
| Styrene | U | 1.0 | | | | | | | | |
| Tetrachloroethene | U | 1.0 | | | | | | | | |
| Toluene | U | 1.0 | | | | | | | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| | | | | | | | | |
|------------------------------------|----------------------------|------------------------|----|---|------|--------|---|--|
| Batch ID: R369855a | Instrument ID VMS12 | Method: SW8260D | | | | | | |
| trans-1,2-Dichloroethene | U | 1.0 | | | | | | |
| trans-1,3-Dichloropropene | U | 1.0 | | | | | | |
| Trichloroethene | U | 1.0 | | | | | | |
| Trichlorofluoromethane | U | 1.0 | | | | | | |
| Vinyl chloride | U | 1.0 | | | | | | |
| Xylenes, Total | U | 3.0 | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 20.42 | 0 | 20 | 0 | 102 | 80-120 | 0 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 19.57 | 0 | 20 | 0 | 97.8 | 80-120 | 0 | |
| <i>Surr: Dibromofluoromethane</i> | 19.45 | 0 | 20 | 0 | 97.2 | 80-120 | 0 | |
| <i>Surr: Toluene-d8</i> | 20.6 | 0 | 20 | 0 | 103 | 80-120 | 0 | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
 Work Order: 23042009
 Project: VB LF

QC BATCH REPORT

Batch ID: **R369855a** Instrument ID **VMS12** Method: **SW8260D**

| LCS | | | | Sample ID: 12V-LCSW1-230502-R369855a | | Units: µg/L | | Analysis Date: 5/2/2023 01:54 PM | | |
|--------------------------------|--------|-----------------------|---------|--------------------------------------|------|---------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: VMS12_230502A | | SeqNo: 9501328 | | Prep Date: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 21.02 | 1.0 | 20 | 0 | 105 | 75-119 | 0 | | | |
| 1,1,1,2-Tetrachloroethane | 22.84 | 1.0 | 20 | 0 | 114 | 80-123 | 0 | | | |
| 1,1,2-Trichloroethane | 21.73 | 1.0 | 20 | 0 | 109 | 83-118 | 0 | | | |
| 1,1,2-Trichlorotrifluoroethane | 22.69 | 1.0 | 20 | 0 | 113 | 64-133 | 0 | | | |
| 1,1-Dichloroethane | 21.29 | 1.0 | 20 | 0 | 106 | 73-122 | 0 | | | |
| 1,1-Dichloroethene | 23.78 | 1.0 | 20 | 0 | 119 | 66-131 | 0 | | | |
| 1,2,4-Trichlorobenzene | 24.37 | 1.0 | 20 | 0 | 122 | 73-127 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 19.98 | 1.0 | 20 | 0 | 99.9 | 52-141 | 0 | | | |
| 1,2-Dibromoethane | 22.14 | 1.0 | 20 | 0 | 111 | 60-159 | 0 | | | |
| 1,2-Dichlorobenzene | 22.73 | 1.0 | 20 | 0 | 114 | 80-119 | 0 | | | |
| 1,2-Dichloroethane | 20.21 | 1.0 | 20 | 0 | 101 | 78-121 | 0 | | | |
| 1,2-Dichloropropane | 20.79 | 1.0 | 20 | 0 | 104 | 78-120 | 0 | | | |
| 1,3-Dichlorobenzene | 22.22 | 1.0 | 20 | 0 | 111 | 80-120 | 0 | | | |
| 1,4-Dichlorobenzene | 21.73 | 1.0 | 20 | 0 | 109 | 81-119 | 0 | | | |
| 2-Butanone | 20.92 | 5.0 | 20 | 0 | 105 | 69-147 | 0 | | | |
| 2-Hexanone | 22.76 | 5.0 | 20 | 0 | 114 | 67-140 | 0 | | | |
| 4-Methyl-2-pentanone | 28.14 | 1.0 | 20 | 0 | 141 | 68-199 | 0 | | | |
| Acetone | 16.42 | 10 | 20 | 0 | 82.1 | 70-166 | 0 | | | |
| Benzene | 21.52 | 1.0 | 20 | 0 | 108 | 78-120 | 0 | | | |
| Bromodichloromethane | 21.5 | 1.0 | 20 | 0 | 108 | 73-126 | 0 | | | |
| Bromoform | 19.6 | 1.0 | 20 | 0 | 98 | 60-124 | 0 | | | |
| Bromomethane | 12.37 | 1.0 | 20 | 0 | 61.8 | 20-183 | 0 | | | |
| Carbon disulfide | 25.94 | 1.0 | 20 | 0 | 130 | 67-159 | 0 | | | |
| Carbon tetrachloride | 23.02 | 1.0 | 20 | 0 | 115 | 69-124 | 0 | | | |
| Chlorobenzene | 21.41 | 1.0 | 20 | 0 | 107 | 80-118 | 0 | | | |
| Chloroethane | 19.89 | 1.0 | 20 | 0 | 99.4 | 35-136 | 0 | | | |
| Chloroform | 20.2 | 1.0 | 20 | 0 | 101 | 75-119 | 0 | | | |
| Chloromethane | 15.45 | 1.0 | 20 | 0 | 77.2 | 26-117 | 0 | | | |
| cis-1,2-Dichloroethene | 20.64 | 1.0 | 20 | 0 | 103 | 75-123 | 0 | | | |
| cis-1,3-Dichloropropene | 21.23 | 1.0 | 20 | 0 | 106 | 69-120 | 0 | | | |
| Cyclohexane | 20.22 | 2.0 | 20 | 0 | 101 | 66-128 | 0 | | | |
| Dibromochloromethane | 19.61 | 1.0 | 20 | 0 | 98 | 63-117 | 0 | | | |
| Dichlorodifluoromethane | 19.95 | 1.0 | 20 | 0 | 99.8 | 36-133 | 0 | | | |
| Ethylbenzene | 21.22 | 1.0 | 20 | 0 | 106 | 76-116 | 0 | | | |
| Isopropylbenzene | 21.16 | 1.0 | 20 | 0 | 106 | 77-118 | 0 | | | |
| Methyl tert-butyl ether | 20.14 | 1.0 | 20 | 0 | 101 | 77-137 | 0 | | | |
| Methylcyclohexane | 22.2 | 1.0 | 20 | 0 | 111 | 66-125 | 0 | | | |
| Methylene chloride | 22.22 | 5.0 | 20 | 0 | 111 | 68-125 | 0 | | | |
| Styrene | 21.45 | 1.0 | 20 | 0 | 107 | 76-123 | 0 | | | |
| Tetrachloroethene | 20.94 | 1.0 | 20 | 0 | 105 | 80-124 | 0 | | | |
| Toluene | 21.69 | 1.0 | 20 | 0 | 108 | 78-116 | 0 | | | |
| trans-1,2-Dichloroethene | 22.44 | 1.0 | 20 | 0 | 112 | 73-124 | 0 | | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| | | | | | | | | |
|------------------------------------|----------------------------|------------------------|----|---|------|--------|---|--|
| Batch ID: R369855a | Instrument ID VMS12 | Method: SW8260D | | | | | | |
| trans-1,3-Dichloropropene | 21.01 | 1.0 | 20 | 0 | 105 | 67-118 | 0 | |
| Trichloroethene | 19.36 | 1.0 | 20 | 0 | 96.8 | 75-122 | 0 | |
| Trichlorofluoromethane | 17.42 | 1.0 | 20 | 0 | 87.1 | 52-115 | 0 | |
| Vinyl chloride | 19.88 | 1.0 | 20 | 0 | 99.4 | 49-122 | 0 | |
| Xylenes, Total | 63.92 | 3.0 | 60 | 0 | 107 | 77-119 | 0 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 20.28 | 0 | 20 | 0 | 101 | 80-120 | 0 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 19.95 | 0 | 20 | 0 | 99.8 | 80-120 | 0 | |
| <i>Surr: Dibromofluoromethane</i> | 20.8 | 0 | 20 | 0 | 104 | 80-120 | 0 | |
| <i>Surr: Toluene-d8</i> | 21.26 | 0 | 20 | 0 | 106 | 80-120 | 0 | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

QC BATCH REPORT

Work Order: 23042009

Project: VB LF

Batch ID: R369855a

Instrument ID VMS12

Method: SW8260D

| MS | | | | Sample ID: 23042312-04A MS | | Units: µg/L | | Analysis Date: 5/3/2023 12:03 AM | | |
|--------------------------------|--------|-----------------------|---------|----------------------------|------|---------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: VMS12_230502A | | SeqNo: 9501352 | | Prep Date: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 21.42 | 1.0 | 20 | 0 | 107 | 75-119 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 21.6 | 1.0 | 20 | 0 | 108 | 80-123 | 0 | | | |
| 1,1,2-Trichloroethane | 20.93 | 1.0 | 20 | 0 | 105 | 83-118 | 0 | | | |
| 1,1,2-Trichlorotrifluoroethane | 24.73 | 1.0 | 20 | 0 | 124 | 64-133 | 0 | | | |
| 1,1-Dichloroethane | 21.57 | 1.0 | 20 | 0 | 108 | 73-122 | 0 | | | |
| 1,1-Dichloroethene | 25.03 | 1.0 | 20 | 0 | 125 | 66-131 | 0 | | | |
| 1,2,4-Trichlorobenzene | 20.19 | 1.0 | 20 | 0 | 101 | 73-127 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 16.99 | 1.0 | 20 | 0 | 85 | 52-141 | 0 | | | |
| 1,2-Dibromoethane | 20.78 | 1.0 | 20 | 0 | 104 | 60-159 | 0 | | | |
| 1,2-Dichlorobenzene | 20.96 | 1.0 | 20 | 0 | 105 | 80-119 | 0 | | | |
| 1,2-Dichloroethane | 20.16 | 1.0 | 20 | 0 | 101 | 78-121 | 0 | | | |
| 1,2-Dichloropropane | 20.51 | 1.0 | 20 | 0 | 103 | 78-120 | 0 | | | |
| 1,3-Dichlorobenzene | 21.15 | 1.0 | 20 | 0 | 106 | 80-120 | 0 | | | |
| 1,4-Dichlorobenzene | 21.12 | 1.0 | 20 | 0 | 106 | 81-119 | 0 | | | |
| 2-Butanone | 20.19 | 5.0 | 20 | 0 | 101 | 69-147 | 0 | | | |
| 2-Hexanone | 22.27 | 5.0 | 20 | 0 | 111 | 67-140 | 0 | | | |
| 4-Methyl-2-pentanone | 25.78 | 1.0 | 20 | 0 | 129 | 68-199 | 0 | | | |
| Acetone | 17.97 | 10 | 20 | 0 | 89.8 | 70-166 | 0 | | | |
| Benzene | 21.3 | 1.0 | 20 | 0 | 106 | 78-120 | 0 | | | |
| Bromodichloromethane | 19.58 | 1.0 | 20 | 0 | 97.9 | 73-126 | 0 | | | |
| Bromoform | 16.16 | 1.0 | 20 | 0 | 80.8 | 60-124 | 0 | | | |
| Bromomethane | 7.43 | 1.0 | 20 | 0 | 37.2 | 20-183 | 0 | | | |
| Carbon disulfide | 22.54 | 1.0 | 20 | 0 | 113 | 67-159 | 0 | | | |
| Carbon tetrachloride | 22.19 | 1.0 | 20 | 0 | 111 | 69-124 | 0 | | | |
| Chlorobenzene | 21.32 | 1.0 | 20 | 0 | 107 | 80-118 | 0 | | | |
| Chloroethane | 21.09 | 1.0 | 20 | 0 | 105 | 35-136 | 0 | | | |
| Chloroform | 20.8 | 1.0 | 20 | 0 | 104 | 75-119 | 0 | | | |
| Chloromethane | 15.69 | 1.0 | 20 | 0 | 78.4 | 26-117 | 0 | | | |
| cis-1,2-Dichloroethene | 20.9 | 1.0 | 20 | 0 | 104 | 75-123 | 0 | | | |
| cis-1,3-Dichloropropene | 19.64 | 1.0 | 20 | 0 | 98.2 | 69-120 | 0 | | | |
| Cyclohexane | 22.02 | 2.0 | 20 | 0 | 110 | 66-128 | 0 | | | |
| Dibromochloromethane | 16.82 | 1.0 | 20 | 0 | 84.1 | 63-117 | 0 | | | |
| Dichlorodifluoromethane | 21.45 | 1.0 | 20 | 0 | 107 | 36-133 | 0 | | | |
| Ethylbenzene | 21.37 | 1.0 | 20 | 0 | 107 | 76-116 | 0 | | | |
| Isopropylbenzene | 20.65 | 1.0 | 20 | 0 | 103 | 77-118 | 0 | | | |
| Methyl tert-butyl ether | 20.05 | 1.0 | 20 | 0 | 100 | 77-137 | 0 | | | |
| Methylcyclohexane | 22.23 | 1.0 | 20 | 0 | 111 | 66-125 | 0 | | | |
| Methylene chloride | 22.02 | 5.0 | 20 | 0 | 110 | 68-125 | 0 | | | |
| Styrene | 21.22 | 1.0 | 20 | 0 | 106 | 76-123 | 0 | | | |
| Tetrachloroethene | 21.08 | 1.0 | 20 | 0 | 105 | 80-124 | 0 | | | |
| Toluene | 21.62 | 1.0 | 20 | 0 | 108 | 78-116 | 0 | | | |
| trans-1,2-Dichloroethene | 22.13 | 1.0 | 20 | 0 | 111 | 73-124 | 0 | | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| | | | | | | | | |
|------------------------------------|----------------------------|------------------------|----|---|------|--------|---|--|
| Batch ID: R369855a | Instrument ID VMS12 | Method: SW8260D | | | | | | |
| trans-1,3-Dichloropropene | 18.15 | 1.0 | 20 | 0 | 90.8 | 67-118 | 0 | |
| Trichloroethene | 20.06 | 1.0 | 20 | 0 | 100 | 75-122 | 0 | |
| Trichlorofluoromethane | 18.59 | 1.0 | 20 | 0 | 93 | 52-115 | 0 | |
| Vinyl chloride | 20.58 | 1.0 | 20 | 0 | 103 | 49-122 | 0 | |
| Xylenes, Total | 64.07 | 3.0 | 60 | 0 | 107 | 77-119 | 0 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 20.47 | 0 | 20 | 0 | 102 | 80-120 | 0 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 20.01 | 0 | 20 | 0 | 100 | 80-120 | 0 | |
| <i>Surr: Dibromofluoromethane</i> | 20.73 | 0 | 20 | 0 | 104 | 80-120 | 0 | |
| <i>Surr: Toluene-d8</i> | 20.58 | 0 | 20 | 0 | 103 | 80-120 | 0 | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
 Work Order: 23042009
 Project: VB LF

QC BATCH REPORT

Batch ID: **R369855a** Instrument ID **VMS12** Method: **SW8260D**

| DUP | | Sample ID: 23042312-03A DUP | | | | Units: µg/L | | Analysis Date: 5/2/2023 11:38 PM | | |
|--------------------------------|--------|-----------------------------|---------|----------------|------|---------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: VMS12_230502A | | SeqNo: 9501351 | | Prep Date: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,1,1,2-Tetrachloroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,1,2-Trichloroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,1,2-Trichlorotrifluoroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,1-Dichloroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,1-Dichloroethene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,2,4-Trichlorobenzene | 0.56 | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | J |
| 1,2-Dibromo-3-chloropropane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,2-Dibromoethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,2-Dichlorobenzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,2-Dichloroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,2-Dichloropropane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,3-Dichlorobenzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 1,4-Dichlorobenzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 2-Butanone | U | 5.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 2-Hexanone | U | 5.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| 4-Methyl-2-pentanone | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Acetone | U | 10 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Benzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Bromodichloromethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Bromoform | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Bromomethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Carbon disulfide | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Carbon tetrachloride | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Chlorobenzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Chloroethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Chloroform | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Chloromethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| cis-1,2-Dichloroethene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| cis-1,3-Dichloropropene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Cyclohexane | U | 2.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Dibromochloromethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Dichlorodifluoromethane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Ethylbenzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Isopropylbenzene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Methyl acetate | U | 2.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Methyl tert-butyl ether | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Methylcyclohexane | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Methylene chloride | U | 5.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Styrene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Tetrachloroethene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |
| Toluene | U | 1.0 | 0 | 0 | 0 | | 0 | 0 | 30 | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| Batch ID: R369855a | Instrument ID VMS12 | Method: SW8260D | | | | | | | |
|------------------------------------|----------------------------|------------------------|-----------|----------|-------------|---------------|--------------|--------------|-----------|
| trans-1,2-Dichloroethene | U | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| trans-1,3-Dichloropropene | U | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| Trichloroethene | U | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| Trichlorofluoromethane | U | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| Vinyl chloride | U | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| Xylenes, Total | U | 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>20.32</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>102</i> | <i>80-120</i> | <i>20.79</i> | <i>2.29</i> | <i>30</i> |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>19.76</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>98.8</i> | <i>80-120</i> | <i>19.9</i> | <i>0.706</i> | <i>30</i> |
| <i>Surr: Dibromofluoromethane</i> | <i>19.35</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>96.8</i> | <i>80-120</i> | <i>20.24</i> | <i>4.5</i> | <i>30</i> |
| <i>Surr: Toluene-d8</i> | <i>20.89</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>104</i> | <i>80-120</i> | <i>21</i> | <i>0.525</i> | <i>30</i> |

The following samples were analyzed in this batch:

23042009-13C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

Batch ID: R369893a

Instrument ID VMS9

Method: SW8260D

| MBLK | | Sample ID: 9V-BLKW2-230502-R369893a | | | | Units: µg/L | | Analysis Date: 5/2/2023 07:55 PM | | |
|--------------------------------|--------|-------------------------------------|---------|----------------|------|---------------|---------------|----------------------------------|-----------|------|
| Client ID: | | Run ID: VMS9_230502B | | SeqNo: 9501386 | | Prep Date: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | U | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | U | 1.0 | | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane | U | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | U | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | U | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | U | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | U | 1.0 | | | | | | | | |
| 1,2-Dibromoethane | U | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 1,2-Dichloroethane | U | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | U | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | U | 1.0 | | | | | | | | |
| 2-Butanone | U | 5.0 | | | | | | | | |
| 2-Hexanone | U | 5.0 | | | | | | | | |
| 4-Methyl-2-pentanone | U | 1.0 | | | | | | | | |
| Acetone | U | 10 | | | | | | | | |
| Benzene | U | 1.0 | | | | | | | | |
| Bromodichloromethane | U | 1.0 | | | | | | | | |
| Bromoform | U | 1.0 | | | | | | | | |
| Bromomethane | U | 1.0 | | | | | | | | |
| Carbon disulfide | U | 1.0 | | | | | | | | |
| Carbon tetrachloride | U | 1.0 | | | | | | | | |
| Chlorobenzene | U | 1.0 | | | | | | | | |
| Chloroethane | U | 1.0 | | | | | | | | |
| Chloroform | U | 1.0 | | | | | | | | |
| Chloromethane | U | 1.0 | | | | | | | | |
| cis-1,2-Dichloroethene | U | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | U | 1.0 | | | | | | | | |
| Cyclohexane | U | 2.0 | | | | | | | | |
| Dibromochloromethane | U | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | U | 1.0 | | | | | | | | |
| Ethylbenzene | U | 1.0 | | | | | | | | |
| Isopropylbenzene | U | 1.0 | | | | | | | | |
| Methyl acetate | U | 2.0 | | | | | | | | |
| Methyl tert-butyl ether | U | 1.0 | | | | | | | | |
| Methylcyclohexane | U | 1.0 | | | | | | | | |
| Methylene chloride | U | 5.0 | | | | | | | | |
| Styrene | U | 1.0 | | | | | | | | |
| Tetrachloroethene | U | 1.0 | | | | | | | | |
| Toluene | U | 1.0 | | | | | | | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| | | | | | | | | |
|------------------------------------|---------------------------|------------------------|-----------|----------|-------------|---------------|----------|--|
| Batch ID: R369893a | Instrument ID VMS9 | Method: SW8260D | | | | | | |
| trans-1,2-Dichloroethene | U | 1.0 | | | | | | |
| trans-1,3-Dichloropropene | U | 1.0 | | | | | | |
| Trichloroethene | U | 1.0 | | | | | | |
| Trichlorofluoromethane | U | 1.0 | | | | | | |
| Vinyl chloride | U | 1.0 | | | | | | |
| Xylenes, Total | U | 3.0 | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>20.04</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>100</i> | <i>80-120</i> | <i>0</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>19.53</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>97.6</i> | <i>80-120</i> | <i>0</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>19.27</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>96.4</i> | <i>80-120</i> | <i>0</i> | |
| <i>Surr: Toluene-d8</i> | <i>19.27</i> | <i>0</i> | <i>20</i> | <i>0</i> | <i>96.4</i> | <i>80-120</i> | <i>0</i> | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
 Work Order: 23042009
 Project: VB LF

QC BATCH REPORT

Batch ID: **R369893a** Instrument ID **VMS9** Method: **SW8260D**

| LCS | | Sample ID: 9V-LCSW2-230502-R369893a | | | | Units: µg/L | | Analysis Date: 5/2/2023 07:08 PM | | |
|--------------------------------|--------|--|---------|-----------------------|------|--------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: VMS9_230502B | | SeqNo: 9501384 | | Prep Date: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 18.23 | 1.0 | 20 | 0 | 91.2 | 75-119 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 19 | 1.0 | 20 | 0 | 95 | 80-123 | 0 | | | |
| 1,1,2-Trichloroethane | 19.45 | 1.0 | 20 | 0 | 97.2 | 83-118 | 0 | | | |
| 1,1,2-Trichlorotrifluoroethane | 19.79 | 1.0 | 20 | 0 | 99 | 64-133 | 0 | | | |
| 1,1-Dichloroethane | 20.2 | 1.0 | 20 | 0 | 101 | 73-122 | 0 | | | |
| 1,1-Dichloroethene | 21.04 | 1.0 | 20 | 0 | 105 | 66-131 | 0 | | | |
| 1,2,4-Trichlorobenzene | 21.62 | 1.0 | 20 | 0 | 108 | 73-127 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 19.02 | 1.0 | 20 | 0 | 95.1 | 52-141 | 0 | | | |
| 1,2-Dibromoethane | 18.68 | 1.0 | 20 | 0 | 93.4 | 60-159 | 0 | | | |
| 1,2-Dichlorobenzene | 19.4 | 1.0 | 20 | 0 | 97 | 80-119 | 0 | | | |
| 1,2-Dichloroethane | 18.32 | 1.0 | 20 | 0 | 91.6 | 78-121 | 0 | | | |
| 1,2-Dichloropropane | 19.54 | 1.0 | 20 | 0 | 97.7 | 78-120 | 0 | | | |
| 1,3-Dichlorobenzene | 19.84 | 1.0 | 20 | 0 | 99.2 | 80-120 | 0 | | | |
| 1,4-Dichlorobenzene | 18.83 | 1.0 | 20 | 0 | 94.2 | 81-119 | 0 | | | |
| 2-Butanone | 19.8 | 5.0 | 20 | 0 | 99 | 69-147 | 0 | | | |
| 2-Hexanone | 21.47 | 5.0 | 20 | 0 | 107 | 67-140 | 0 | | | |
| 4-Methyl-2-pentanone | 28.49 | 1.0 | 20 | 0 | 142 | 68-199 | 0 | | | |
| Acetone | 19.33 | 10 | 20 | 0 | 96.6 | 70-166 | 0 | | | |
| Benzene | 20.31 | 1.0 | 20 | 0 | 102 | 78-120 | 0 | | | |
| Bromodichloromethane | 18.22 | 1.0 | 20 | 0 | 91.1 | 73-126 | 0 | | | |
| Bromoform | 18.76 | 1.0 | 20 | 0 | 93.8 | 60-124 | 0 | | | |
| Bromomethane | 18.11 | 1.0 | 20 | 0 | 90.6 | 20-183 | 0 | | | |
| Carbon disulfide | 21.79 | 1.0 | 20 | 0 | 109 | 67-159 | 0 | | | |
| Carbon tetrachloride | 18.63 | 1.0 | 20 | 0 | 93.2 | 69-124 | 0 | | | |
| Chlorobenzene | 20.14 | 1.0 | 20 | 0 | 101 | 80-118 | 0 | | | |
| Chloroethane | 21.14 | 1.0 | 20 | 0 | 106 | 35-136 | 0 | | | |
| Chloroform | 19.32 | 1.0 | 20 | 0 | 96.6 | 75-119 | 0 | | | |
| Chloromethane | 13.41 | 1.0 | 20 | 0 | 67 | 26-117 | 0 | | | |
| cis-1,2-Dichloroethene | 18.84 | 1.0 | 20 | 0 | 94.2 | 75-123 | 0 | | | |
| cis-1,3-Dichloropropene | 21.02 | 1.0 | 20 | 0 | 105 | 69-120 | 0 | | | |
| Cyclohexane | 17.79 | 2.0 | 20 | 0 | 89 | 66-128 | 0 | | | |
| Dibromochloromethane | 17.35 | 1.0 | 20 | 0 | 86.8 | 63-117 | 0 | | | |
| Dichlorodifluoromethane | 17.15 | 1.0 | 20 | 0 | 85.8 | 36-133 | 0 | | | |
| Ethylbenzene | 20.39 | 1.0 | 20 | 0 | 102 | 76-116 | 0 | | | |
| Isopropylbenzene | 20.25 | 1.0 | 20 | 0 | 101 | 77-118 | 0 | | | |
| Methyl tert-butyl ether | 21.63 | 1.0 | 20 | 0 | 108 | 77-137 | 0 | | | |
| Methylcyclohexane | 18.42 | 1.0 | 20 | 0 | 92.1 | 66-125 | 0 | | | |
| Methylene chloride | 20.62 | 5.0 | 20 | 0 | 103 | 68-125 | 0 | | | |
| Styrene | 21.96 | 1.0 | 20 | 0 | 110 | 76-123 | 0 | | | |
| Tetrachloroethene | 22.87 | 1.0 | 20 | 0 | 114 | 80-124 | 0 | | | |
| Toluene | 20.2 | 1.0 | 20 | 0 | 101 | 78-116 | 0 | | | |
| trans-1,2-Dichloroethene | 21.91 | 1.0 | 20 | 0 | 110 | 73-124 | 0 | | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| | | | | | | | | |
|------------------------------------|---------------------------|------------------------|----|---|------|--------|---|--|
| Batch ID: R369893a | Instrument ID VMS9 | Method: SW8260D | | | | | | |
| trans-1,3-Dichloropropene | 19.58 | 1.0 | 20 | 0 | 97.9 | 67-118 | 0 | |
| Trichloroethene | 18.68 | 1.0 | 20 | 0 | 93.4 | 75-122 | 0 | |
| Trichlorofluoromethane | 14.04 | 1.0 | 20 | 0 | 70.2 | 52-115 | 0 | |
| Vinyl chloride | 15.6 | 1.0 | 20 | 0 | 78 | 49-122 | 0 | |
| Xylenes, Total | 60.24 | 3.0 | 60 | 0 | 100 | 77-119 | 0 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 19.93 | 0 | 20 | 0 | 99.6 | 80-120 | 0 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 20.92 | 0 | 20 | 0 | 105 | 80-120 | 0 | |
| <i>Surr: Dibromofluoromethane</i> | 18.79 | 0 | 20 | 0 | 94 | 80-120 | 0 | |
| <i>Surr: Toluene-d8</i> | 20.22 | 0 | 20 | 0 | 101 | 80-120 | 0 | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

QC BATCH REPORT

Work Order: 23042009

Project: VB LF

Batch ID: **R369893a** Instrument ID **VMS9** Method: **SW8260D**

| MS | | | | Sample ID: 23041907-18A MS | | Units: µg/L | | Analysis Date: 5/3/2023 01:39 AM | | |
|--------------------------------|--------|-----|-----------------------------|-----------------------------------|-----------------------|--------------------|---------------|---|---------------|------|
| Client ID: | | | Run ID: VMS9_230502B | | SeqNo: 9501408 | | Prep Date: | | DF: 10 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 198.1 | 10 | 200 | 0 | 99 | 75-119 | 0 | | | |
| 1,1,2,2-Tetrachloroethane | 188.8 | 10 | 200 | 0 | 94.4 | 80-123 | 0 | | | |
| 1,1,2-Trichloroethane | 202.3 | 10 | 200 | 0 | 101 | 83-118 | 0 | | | |
| 1,1,2-Trichlorotrifluoroethane | 254.1 | 10 | 200 | 0 | 127 | 64-133 | 0 | | | |
| 1,1-Dichloroethane | 196.3 | 10 | 200 | 0 | 98.2 | 73-122 | 0 | | | |
| 1,1-Dichloroethene | 235.7 | 10 | 200 | 0 | 118 | 66-131 | 0 | | | |
| 1,2,4-Trichlorobenzene | 200.2 | 10 | 200 | 0 | 100 | 73-127 | 0 | | | |
| 1,2-Dibromo-3-chloropropane | 222.3 | 10 | 200 | 0 | 111 | 52-141 | 0 | | | |
| 1,2-Dibromoethane | 197.9 | 10 | 200 | 0 | 99 | 60-159 | 0 | | | |
| 1,2-Dichlorobenzene | 194.1 | 10 | 200 | 0 | 97 | 80-119 | 0 | | | |
| 1,2-Dichloroethane | 180 | 10 | 200 | 0 | 90 | 78-121 | 0 | | | |
| 1,2-Dichloropropane | 204.4 | 10 | 200 | 0 | 102 | 78-120 | 0 | | | |
| 1,3-Dichlorobenzene | 200.6 | 10 | 200 | 0 | 100 | 80-120 | 0 | | | |
| 1,4-Dichlorobenzene | 189.9 | 10 | 200 | 0 | 95 | 81-119 | 0 | | | |
| 2-Butanone | 204 | 50 | 200 | 0 | 102 | 69-147 | 0 | | | |
| 2-Hexanone | 198.4 | 50 | 200 | 0 | 99.2 | 67-140 | 0 | | | |
| 4-Methyl-2-pentanone | 254.5 | 10 | 200 | 0 | 127 | 68-199 | 0 | | | |
| Acetone | 194.1 | 100 | 200 | 5.6 | 94.2 | 70-166 | 0 | | | |
| Benzene | 209.2 | 10 | 200 | 0 | 105 | 78-120 | 0 | | | |
| Bromodichloromethane | 192.2 | 10 | 200 | 0 | 96.1 | 73-126 | 0 | | | |
| Bromoform | 187.7 | 10 | 200 | 0 | 93.8 | 60-124 | 0 | | | |
| Bromomethane | 219.4 | 10 | 200 | 0 | 110 | 20-183 | 0 | | | |
| Carbon disulfide | 263.7 | 10 | 200 | 0 | 132 | 67-159 | 0 | | | |
| Carbon tetrachloride | 222.3 | 10 | 200 | 0 | 111 | 69-124 | 0 | | | |
| Chlorobenzene | 207.6 | 10 | 200 | 0 | 104 | 80-118 | 0 | | | |
| Chloroethane | 289.2 | 10 | 200 | 0 | 145 | 35-136 | 0 | | | S |
| Chloroform | 191.4 | 10 | 200 | 0 | 95.7 | 75-119 | 0 | | | |
| Chloromethane | 146.4 | 10 | 200 | 0 | 73.2 | 26-117 | 0 | | | |
| cis-1,2-Dichloroethene | 188.6 | 10 | 200 | 0 | 94.3 | 75-123 | 0 | | | |
| cis-1,3-Dichloropropene | 194.5 | 10 | 200 | 0 | 97.2 | 69-120 | 0 | | | |
| Cyclohexane | 205.9 | 20 | 200 | 0 | 103 | 66-128 | 0 | | | |
| Dibromochloromethane | 195.5 | 10 | 200 | 0 | 97.8 | 63-117 | 0 | | | |
| Dichlorodifluoromethane | 232.3 | 10 | 200 | 0 | 116 | 36-133 | 0 | | | |
| Ethylbenzene | 209.9 | 10 | 200 | 0 | 105 | 76-116 | 0 | | | |
| Isopropylbenzene | 209.1 | 10 | 200 | 0 | 105 | 77-118 | 0 | | | |
| Methyl tert-butyl ether | 198.2 | 10 | 200 | 0 | 99.1 | 77-137 | 0 | | | |
| Methylcyclohexane | 206.2 | 10 | 200 | 0 | 103 | 66-125 | 0 | | | |
| Methylene chloride | 201 | 50 | 200 | 0 | 100 | 68-125 | 0 | | | |
| Styrene | 217.8 | 10 | 200 | 0 | 109 | 76-123 | 0 | | | |
| Tetrachloroethene | 214.1 | 10 | 200 | 0 | 107 | 80-124 | 0 | | | |
| Toluene | 194.1 | 10 | 200 | 0 | 97 | 78-116 | 0 | | | |
| trans-1,2-Dichloroethene | 203.3 | 10 | 200 | 0 | 102 | 73-124 | 0 | | | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| | | | | | | | | |
|------------------------------------|---------------------------|------------------------|------------|----------|-------------|---------------|----------|--|
| Batch ID: R369893a | Instrument ID VMS9 | Method: SW8260D | | | | | | |
| trans-1,3-Dichloropropene | 176.3 | 10 | 200 | 0 | 88.2 | 67-118 | 0 | |
| Trichloroethene | 292.2 | 10 | 200 | 109.5 | 91.4 | 75-122 | 0 | |
| Trichlorofluoromethane | 211.2 | 10 | 200 | 0 | 106 | 52-115 | 0 | |
| Vinyl chloride | 167.9 | 10 | 200 | 0 | 84 | 49-122 | 0 | |
| Xylenes, Total | 604.4 | 30 | 600 | 0 | 101 | 77-119 | 0 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>180.8</i> | <i>0</i> | <i>200</i> | <i>0</i> | <i>90.4</i> | <i>80-120</i> | <i>0</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>197.1</i> | <i>0</i> | <i>200</i> | <i>0</i> | <i>98.6</i> | <i>80-120</i> | <i>0</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>188.1</i> | <i>0</i> | <i>200</i> | <i>0</i> | <i>94</i> | <i>80-120</i> | <i>0</i> | |
| <i>Surr: Toluene-d8</i> | <i>185.1</i> | <i>0</i> | <i>200</i> | <i>0</i> | <i>92.6</i> | <i>80-120</i> | <i>0</i> | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
 Work Order: 23042009
 Project: VB LF

QC BATCH REPORT

Batch ID: **R369893a** Instrument ID **VMS9** Method: **SW8260D**

| MSD | | | | Sample ID: 23041907-18A MSD | | Units: µg/L | | Analysis Date: 5/3/2023 01:55 AM | | |
|--------------------------------|--------|-----------------------------|---------|------------------------------------|------|--------------------|---------------|---|-----------|------|
| Client ID: | | Run ID: VMS9_230502B | | SeqNo: 9501409 | | Prep Date: | | DF: 10 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,1,1-Trichloroethane | 212 | 10 | 200 | 0 | 106 | 75-119 | 198.1 | 6.78 | 30 | |
| 1,1,2,2-Tetrachloroethane | 202.9 | 10 | 200 | 0 | 101 | 80-123 | 188.8 | 7.2 | 30 | |
| 1,1,2-Trichloroethane | 218 | 10 | 200 | 0 | 109 | 83-118 | 202.3 | 7.47 | 30 | |
| 1,1,2-Trichlorotrifluoroethane | 274.4 | 10 | 200 | 0 | 137 | 64-133 | 254.1 | 7.68 | 30 | S |
| 1,1-Dichloroethane | 215.5 | 10 | 200 | 0 | 108 | 73-122 | 196.3 | 9.32 | 30 | |
| 1,1-Dichloroethene | 243.2 | 10 | 200 | 0 | 122 | 66-131 | 235.7 | 3.13 | 30 | |
| 1,2,4-Trichlorobenzene | 215 | 10 | 200 | 0 | 108 | 73-127 | 200.2 | 7.13 | 30 | |
| 1,2-Dibromo-3-chloropropane | 216 | 10 | 200 | 0 | 108 | 52-141 | 222.3 | 2.87 | 30 | |
| 1,2-Dibromoethane | 222.1 | 10 | 200 | 0 | 111 | 60-159 | 197.9 | 11.5 | 30 | |
| 1,2-Dichlorobenzene | 203.6 | 10 | 200 | 0 | 102 | 80-119 | 194.1 | 4.78 | 30 | |
| 1,2-Dichloroethane | 205.3 | 10 | 200 | 0 | 103 | 78-121 | 180 | 13.1 | 30 | |
| 1,2-Dichloropropane | 208 | 10 | 200 | 0 | 104 | 78-120 | 204.4 | 1.75 | 30 | |
| 1,3-Dichlorobenzene | 197.6 | 10 | 200 | 0 | 98.8 | 80-120 | 200.6 | 1.51 | 30 | |
| 1,4-Dichlorobenzene | 194 | 10 | 200 | 0 | 97 | 81-119 | 189.9 | 2.14 | 30 | |
| 2-Butanone | 202.2 | 50 | 200 | 0 | 101 | 69-147 | 204 | 0.886 | 30 | |
| 2-Hexanone | 202.5 | 50 | 200 | 0 | 101 | 67-140 | 198.4 | 2.05 | 30 | |
| 4-Methyl-2-pentanone | 269.9 | 10 | 200 | 0 | 135 | 68-199 | 254.5 | 5.87 | 30 | |
| Acetone | 234.5 | 100 | 200 | 5.6 | 114 | 70-166 | 194.1 | 18.9 | 30 | |
| Benzene | 226.5 | 10 | 200 | 0 | 113 | 78-120 | 209.2 | 7.94 | 30 | |
| Bromodichloromethane | 220.8 | 10 | 200 | 0 | 110 | 73-126 | 192.2 | 13.8 | 30 | |
| Bromoform | 225.5 | 10 | 200 | 0 | 113 | 60-124 | 187.7 | 18.3 | 30 | |
| Bromomethane | 393.3 | 10 | 200 | 0 | 197 | 20-183 | 219.4 | 56.8 | 30 | SR |
| Carbon disulfide | 275.7 | 10 | 200 | 0 | 138 | 67-159 | 263.7 | 4.45 | 30 | |
| Carbon tetrachloride | 226.4 | 10 | 200 | 0 | 113 | 69-124 | 222.3 | 1.83 | 30 | |
| Chlorobenzene | 227.5 | 10 | 200 | 0 | 114 | 80-118 | 207.6 | 9.15 | 30 | |
| Chloroethane | 460.5 | 10 | 200 | 0 | 230 | 35-136 | 289.2 | 45.7 | 30 | SR |
| Chloroform | 207.7 | 10 | 200 | 0 | 104 | 75-119 | 191.4 | 8.17 | 30 | |
| Chloromethane | 142.4 | 10 | 200 | 0 | 71.2 | 26-117 | 146.4 | 2.77 | 30 | |
| cis-1,2-Dichloroethene | 206.7 | 10 | 200 | 0 | 103 | 75-123 | 188.6 | 9.16 | 30 | |
| cis-1,3-Dichloropropene | 219.6 | 10 | 200 | 0 | 110 | 69-120 | 194.5 | 12.1 | 30 | |
| Cyclohexane | 219.8 | 20 | 200 | 0 | 110 | 66-128 | 205.9 | 6.53 | 30 | |
| Dibromochloromethane | 211.8 | 10 | 200 | 0 | 106 | 63-117 | 195.5 | 8 | 30 | |
| Dichlorodifluoromethane | 233.8 | 10 | 200 | 0 | 117 | 36-133 | 232.3 | 0.644 | 30 | |
| Ethylbenzene | 210.6 | 10 | 200 | 0 | 105 | 76-116 | 209.9 | 0.333 | 30 | |
| Isopropylbenzene | 217.9 | 10 | 200 | 0 | 109 | 77-118 | 209.1 | 4.12 | 30 | |
| Methyl tert-butyl ether | 214.2 | 10 | 200 | 0 | 107 | 77-137 | 198.2 | 7.76 | 30 | |
| Methylcyclohexane | 223.9 | 10 | 200 | 0 | 112 | 66-125 | 206.2 | 8.23 | 30 | |
| Methylene chloride | 212.7 | 50 | 200 | 0 | 106 | 68-125 | 201 | 5.66 | 30 | |
| Styrene | 234.2 | 10 | 200 | 0 | 117 | 76-123 | 217.8 | 7.26 | 30 | |
| Tetrachloroethene | 262.8 | 10 | 200 | 0 | 131 | 80-124 | 214.1 | 20.4 | 30 | S |
| Toluene | 213.7 | 10 | 200 | 0 | 107 | 78-116 | 194.1 | 9.61 | 30 | |
| trans-1,2-Dichloroethene | 213.9 | 10 | 200 | 0 | 107 | 73-124 | 203.3 | 5.08 | 30 | |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.

Work Order: 23042009

Project: VB LF

QC BATCH REPORT

| Batch ID: R369893a | Instrument ID VMS9 | Method: SW8260D | | | | | | | | |
|------------------------------------|---------------------------|------------------------|-----|-------|------|--------|-------|------|----|--|
| trans-1,3-Dichloropropene | 203.8 | 10 | 200 | 0 | 102 | 67-118 | 176.3 | 14.5 | 30 | |
| Trichloroethene | 311.9 | 10 | 200 | 109.5 | 101 | 75-122 | 292.2 | 6.52 | 30 | |
| Trichlorofluoromethane | 228 | 10 | 200 | 0 | 114 | 52-115 | 211.2 | 7.65 | 30 | |
| Vinyl chloride | 188.4 | 10 | 200 | 0 | 94.2 | 49-122 | 167.9 | 11.5 | 30 | |
| Xylenes, Total | 653.2 | 30 | 600 | 0 | 109 | 77-119 | 604.4 | 7.76 | 30 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 195.4 | 0 | 200 | 0 | 97.7 | 80-120 | 180.8 | 7.76 | 30 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 204 | 0 | 200 | 0 | 102 | 80-120 | 197.1 | 3.44 | 30 | |
| <i>Surr: Dibromofluoromethane</i> | 201.3 | 0 | 200 | 0 | 101 | 80-120 | 188.1 | 6.78 | 30 | |
| <i>Surr: Toluene-d8</i> | 203.2 | 0 | 200 | 0 | 102 | 80-120 | 185.1 | 9.32 | 30 | |

The following samples were analyzed in this batch:

23042009-18C 23042009-28C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Chain of Custody Form

ALS Group USA, Corp

Work Order

| | | | | | |
|----------------|------------------------------------|----------------|--|---------------------------------------|----------------------|
| Company Name | The Mannik & Smith Group, Inc. | Purchase Order | | Parameter/Method Request for Analysis | |
| Send Report To | Tom Peters | Company Name | The Mannik & Smith Group, Inc. | A | Dissolved Mn, Al, Fe |
| Project Name | VB LF | Invoice Attn | Accounts Payable | B | Filtered Mn, Al, Fe |
| Address | 2365 Haggerty Road South Suite 100 | Project # | | C | VOCs |
| City/State/Zip | Canton, MI 48188 | Address | 2365 Haggerty Road South Suite 100 Suite 100 | D | |
| Phone | 7343973100 | City/State/Zip | Canton, MI 48188 | E | |
| e-Mail Address | tpeters@mnniksmithgroup.com | Phone | 7343973100 | F | |
| | | e-Mail Address | | G | |
| | | | | H | |
| | | | | I | |
| | | | | J | |

| # | Sample Description | Date | Time | Matrix | Preservative | # Bottles | A | B | C | D | E | F | G | I |
|----|-------------------------|---------|------|--------|--------------|-----------|---|---|---|---|---|---|---|---|
| 1 | WR2330031042023 ERR 021 | 4-20-23 | 1455 | ✓ | HNO3 | 2 | X | X | | | | | | |
| 2 | WR2330031042023 ERR 022 | 4-20-23 | 1120 | ↓ | | | X | X | | | | | | |
| 3 | WR2330031042023 ERR 023 | 4-20-23 | 1230 | ↓ | | | X | X | | | | | | |
| 4 | WR2330031042023 ERR 024 | 4-20-23 | 1330 | ↓ | | | X | X | | | | | | |
| 5 | WR2330031042123 ERR 025 | 4-21-23 | 1300 | ↓ | | | X | X | | | | | | |
| 6 | WR2330031042123 ERR 026 | 4-21-23 | 1355 | ↓ | | | X | X | | | | | | |
| 7 | WR2330031042123 ERR 027 | 4-21-23 | 1420 | ↓ | | | X | X | | | | | | |
| 8 | WR2330031042123 ERR 028 | 4-21-23 | 1640 | ↓ | HNO3 HCL | 3 | X | X | X | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |

23042009
 MANNIK&SMITH: The Mannik & Smith Group, Inc.
 Project: VBLF

Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Relinquished by: _____ Date: 4/21/23 Time: 10:54

Received by: _____ Date: 4/21/23 Time: 10:54

Required Turnaround Time: _____ Std 10 Wk days _____ 5 Wk days _____ 2 Wk days _____ 24 hr

Resins Due: _____

NOTES: IR3 2.6°C
2133

QC Reporting Level: (check box below):

| | |
|------------------------------|--------|
| Level II: Standard QC | Other: |
| Level III: Std QC + Raw data | |
| Level IV: SW846 CLP-Like | |



Chain of Custody Form

ALS Group USA, Corp

| |
|------------|
| Work Order |
|------------|

| | | | | | |
|------------------|------------------------------------|------------------|--|---------------------------------------|---|
| Company Name | The Mannik & Smith Group, Inc. | Purchase Order | | Parameter/Method Request for Analysis | |
| Send Report To | Tom Peters | Company Name | The Mannik & Smith Group, Inc. | A | Dissolved Metals (Cu, Al, Fe) Filtered Metals (Cu, Al, Fe) VOCs |
| Project Name | VBLF | Invoice Attr | Accounts Payable | B | |
| Address | 2365 Haggerty Road South Suite 100 | Project # | R2330031 | C | |
| Address | 2365 Haggerty Road South Suite 100 | Address | 2365 Haggerty Road South Suite 100 Suite 100 | D | |
| City, State, Zip | Canton, MI 48188 | City, State, Zip | Canton, MI 48188 | E | |
| Phone | 7343973100 | Phone | 7343973100 | F | |
| e-Mail Address | tpeters@mnniksmithgroup.com | e-Mail Address | | G | |
| | | | | H | |
| | | | | I | |
| | | | | J | |

| # | Sample Description | Date | Time | Matrix | Preservative | # Bottles | A | B | C | D | E | F | | |
|----|-----------------------|---------|------|--------|--------------|-----------|---|---|---|---|---|---|--|--|
| 1 | WR2330031041723ERR001 | 4-17-23 | 1315 | W | HNO3 | 2 | X | X | | | | | | |
| 2 | WR2330031041723ERR002 | 4-17-23 | 1440 | ↓ | | | X | X | | | | | | |
| 3 | WR2330031041723ERR003 | 4-17-23 | 1635 | | | | X | X | | | | | | |
| 4 | WR2330031041823ERR004 | 4-18-23 | 1140 | | | | X | X | | | | | | |
| 5 | WR2330031041823ERR005 | 4-18-23 | 1315 | | | | X | X | | | | | | |
| 6 | WR2330031041823ERR006 | 4-18-23 | 1220 | | | | X | X | | | | | | |
| 7 | WR2330031042123ERR007 | 4-21-23 | 1410 | | | | X | X | | | | | | |
| 8 | WR2330031041823ERR008 | 4-18-23 | 1205 | | | | X | X | | | | | | |
| 9 | WR2330031041823ERR009 | 4-18-23 | 1305 | | | | X | X | | | | | | |
| 10 | WR2330031041823ERR010 | 4-18-23 | 1510 | | | | X | X | | | | | | |

23042009

MANNIK&SMITH: The Mannik & Smith Group, Inc.
Project: VBLF



Notes:

| | | | | | | | | | |
|--|---------|-------|--------------------|--|-------|---|--------|--------------------|--|
| Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental. | | | | Required Turnaround Time: _____ | | | | Results Due: _____ | |
| Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NAOH 5-NA2S2O3 6-NAHSO4 7-Other 8-4 degrees C 9-5036 | | | | Std 10 Wk days ___ 5 Wk days ___ 2 Wk days ___ 24 hr | | | | | |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: | NOTES: IR3 2.6°C pH33 | | | |
| Erin [Signature] | 4-21-23 | 1054 | [Signature] | 4/21/23 | 10:57 | QC Reporting Level: (check box below) | | | |
| [Signature] | 4/21/23 | 500 | [Signature] | 4/21/23 | 500 | <input type="checkbox"/> Level II: Standard QC | Other: | | |
| [Signature] | 4/24/23 | 2230 | Korley [Signature] | 4/24/23 | 2230 | <input type="checkbox"/> Level III: Std QC + Raw data | | | |
| | | | | | | <input type="checkbox"/> Level IV: SW846 CLP-Like | | | |



Chain of Custody Form

ALS Group USA, Corp

| |
|------------|
| Work Order |
| |

| | | | | | |
|----------------|------------------------------------|----------------|--|---------------------------------------|----------------------|
| Company Name | The Mannik & Smith Group, Inc. | Purchase Order | | Parameter/Method Request for Analysis | |
| Send Report To | Tom Peters | Company Name | The Mannik & Smith Group, Inc. | A | Dissolved Mn, Al, Fe |
| Project Name | VB LF | Invoice Attn | Accounts Payable | B | filtered Mn, Al, Fe |
| Address | 2365 Haggerty Road South Suite 100 | Project # | | C | VOC |
| City State Zip | Canton, MI 48188 | Address | 2365 Haggerty Road South Suite 100 Suite 100 | D | |
| Phone | 7343973100 | City State Zip | Canton, MI 48188 | E | |
| e-Mail Address | tpeters@mannik-smithgroup.com | Phone | 7343973100 | F | |
| | | e-Mail Address | | G | |
| | | | | H | |
| | | | | I | |
| | | | | J | |

| # | Sample Description | Date | Time | Matrix | Preservative | # Bottles | A | B | C | D | E | F | Notes |
|----|-------------------------|---------|------|--------|--------------|-----------|---|---|---|---|---|---|-------|
| 1 | WR2330031041923 ERR 011 | 4-19-23 | 1125 | W | HNO3 | 2 | X | X | | | | | |
| 2 | WR2330031041923 ERR 012 | 4-19-23 | 1210 | ↓ | HNO3 | 2 | X | X | | | | | |
| 3 | WR2330031041923 ERR 013 | 4-19-23 | 1250 | | HNO3 HCL | 3 | X | X | X | | | | |
| 4 | WR2330031041923 ERR 014 | 4-19-23 | 1415 | | HNO3 | 2 | X | X | | | | | |
| 5 | WR2330031042023 ERR 015 | 4-20-23 | 1125 | | HNO3 | 2 | X | X | | | | | |
| 6 | WR2330031042023 ERR 016 | 4-20-23 | 1205 | | HNO3 | 2 | X | X | | | | | |
| 7 | WR2330031042023 ERR 017 | 4-20-23 | 1455 | | HNO3 | 2 | X | X | | | | | |
| 8 | WR2330031042023 ERR 018 | 4-20-23 | 1530 | | HNO3 HCL | 3 | X | X | X | | | | |
| 9 | WR2330031042023 ERR 019 | 4-20-23 | 1610 | | HNO3 | 2 | X | X | | | | | |
| 10 | WR2330031042023 ERR 020 | 4-20-23 | 1240 | | HNO3 | 2 | X | X | | | | | |

23042009

MANNIK&SMITH: The Mannik & Smith Group, Inc.
Project: VBLF

| | | | | | | | | | | | | | |
|--|---------|-------|--------------------|---------|-------|---------------------------------------|--|--------------------|--|-----------|--|-------|--|
| Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental. | | | | | | Required Turnaround Time: _____ | | Results Due: _____ | | | | | |
| Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NAOH 5-NA2S2O3 6-NAHSO4 7-Other 8- degrees C 9-5035 | | | | | | Std 10 Wk days | | 5 Wk days | | 2 Wk days | | 24 hr | |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: | NOTES: IR3 2.0°C PH33 | | | | | | | |
| <i>[Signature]</i> | 4/24/23 | 1054 | <i>[Signature]</i> | 4/21/23 | 1015 | QC Reporting Level: (check box below) | | | | | | | |
| <i>[Signature]</i> | 4/21/23 | 500 | <i>[Signature]</i> | 4/21/23 | 500 | Level II: Standard QC | | Other: | | | | | |
| <i>[Signature]</i> | 4/24/23 | 2230 | <i>[Signature]</i> | 4/24/23 | 2230 | Level III: Std QC + Raw data | | | | | | | |
| | | | | | | Level IV: SW846 CLP-Like | | | | | | | |



Chain of Custody Form

ALS Group USA, Corp

Work Order

| | | | | |
|----------------|------------------------------------|----------------|------------------------------------|---------------------------------------|
| Company Name | The Mannik & Smith Group, Inc. | Purchase Order | The Mannik & Smith Group, Inc. | Parameter/Method Request for Analysis |
| Send Report To | Tom Peters | Invoice Attn. | Accounts Payable | Dissolved Metals (Mn, Al, Fe) |
| Project Name | WBLF | Project # | R2330031 | Filterend Metals (Mn, Al, Fe) |
| Address | 2365 Haggerty Road South Suite 100 | Address | 2365 Haggerty Road South Suite 100 | VOCs |
| City/State/Zip | Carleton, MI 48188 | City/State/Zip | Carleton, MI 48188 | |
| Phone | 7343973100 | Phone | 7343973100 | |
| e-Mail Address | tpeters@manniksmith.com | e-Mail Address | | |

| # | Sample Description | Date | Time | Matrix | Preservative | # Bottles | A | B | C | D | E | F |
|----|--------------------------|----------|------|--------|--------------|-----------|---|---|---|---|---|---|
| 1 | WR2330031 041723 ERR 001 | 4-17-23 | 1315 | W | HNO3 | 2 | X | X | | | | |
| 2 | WR2330031 041723 ERR 002 | 04-17-23 | 1440 | | | | X | X | | | | |
| 3 | WR2330031 041723 ERR 003 | 4-17-23 | 1635 | | | | X | X | | | | |
| 4 | WR2330031 041823 ERR 004 | 4-18-23 | 1140 | | | | X | X | | | | |
| 5 | WR2330031 041823 ERR 005 | 4-18-23 | 1315 | | | | X | X | | | | |
| 6 | WR2330031 041823 ERR 006 | 4-18-23 | 1220 | | | | X | X | | | | |
| 7 | WR2330031 042123 ERR 007 | 4-21-23 | 1410 | | | | X | X | | | | |
| 8 | WR2330031 041823 ERR 008 | 4-18-23 | 1205 | | | | X | X | | | | |
| 9 | WR2330031 041823 ERR 009 | 4-18-23 | 1305 | | | | X | X | | | | |
| 10 | WR2330031 041823 ERR 010 | 4-18-23 | 1510 | | | | X | X | | | | |

23042009

MANNIK&SMITH: The Mannik & Smith Group, Inc.
Project: WBLF

Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Preservative key: 1-HCl, 2-HNO3, 3-H2SO4, 4-NaOH, 5-Ha2SO3, 6-NaHSO4, 7-Other, 8-4 degrees C, 9-5035

Required Turnaround Time: Std 10 WK days, 5 WK days, 2 WK days, 24 hr

Results Due:

Rating: 1-4

Retiquised by: [Signature]

Date: 4/21/23

Time: 1054

Received by: [Signature]

Date: 4/21/23

Time: 10:54

Notes: IR3 2.0°C

Level II: Standard QC

Level III: Std QC + Raw data

Level IV: SW846 CLP-Like



Chain of Custody Form

ALS Group USA, Corp

Work Order

| | | | | |
|----------------|------------------------------------|----------------|--|---------------------------------------|
| Company Name | The Mannik & Smith Group, Inc. | Purchase Order | The Mannik & Smith Group, Inc. | Parameter/Method Request for Analysis |
| Send Report To | Tom Peters | Invoice Attr. | Accounts Payable | A. Dissolved Mn, Al, Fe |
| Project Name | VBLF | Project # | | B. Filtered Mn, Al, Fe |
| Address | 2365 Haggerty Road South Sulte 100 | Address | 2365 Haggerty Road South Sulte 100 Sulte 100 | C. VDC |
| City/State/Zip | Canton, MI 48188 | City/State/Zip | Canton, MI 48188 | D. |
| Phone | 7343973100 | Phone | 7343973100 | E. |
| e-Mail Address | tpeters@manniksmithgroup.com | e-Mail Address | | F. |
| | | | | G. |
| | | | | H. |
| | | | | I. |
| | | | | J. |

| # | Sample Description | Date | Time | Matrix | Preservative | # Bottles | A | B | C | D | E | F |
|----|--------------------------|---------|------|--------|--------------|-----------|---|---|---|---|---|---|
| 1 | WR2330031 041923 ERR 011 | 4-19-23 | 1125 | W | HNO3 | 2 | X | X | | | | |
| 2 | WR2330031 041923 ERR 012 | 4-19-23 | 1210 | | HNO3 | 2 | X | X | | | | |
| 3 | WR2330031 041923 ERR 013 | 4-19-23 | 1250 | | HNO3 HCL | 3 | X | X | X | | | |
| 4 | WR2330031 041923 ERR 014 | 4-19-23 | 1415 | | HNO3 | 2 | X | X | | | | |
| 5 | WR2330031 042023 ERR 015 | 4-20-23 | 1125 | | HNO3 | 2 | X | X | | | | |
| 6 | WR2330031 042023 ERR 016 | 4-20-23 | 1205 | | HNO3 | 2 | X | X | | | | |
| 7 | WR2330031 042023 ERR 019 | 4-20-23 | 1455 | | HNO3 | 2 | X | X | | | | |
| 8 | WR2330031 042023 ERR 018 | 4-20-23 | 1530 | | HNO3 HCL | 3 | X | X | X | | | |
| 9 | WR2330031 042023 ERR 019 | 4-20-23 | 1610 | | HNO3 | 2 | X | X | | | | |
| 10 | WR2330031 042023 ERR 020 | 4-20-23 | 1240 | | HNO3 | 2 | X | X | | | | |

23042009

MANNIK&SMITH, The Mannik & Smith Group, Inc.
Project: VBLF



Notes

Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Preservative key: 1-HCl, 2-HNO3, 3-H2SO4, 4-H2O2, 5-Na2S2O3, 6-NaHSO4, 7-Other, 8-4 degrees C, 9-5036

Required Turnaround Time: _____
 Std 1: 0 Wk days _____ 5 Wk days _____ 2 Wk days _____ 24 hr

Results Due: _____

Relinquished by: *[Signature]* Date: 4/24/23 Time: 1054 Received by: *[Signature]* Date: 4/21/23 Time: 1054

QC Reporting Level: (check box below)
 Level II: Standard OC
 Level III: Std OC + Raw data
 Level IV: SIV046 CL-File

Other: *[Handwritten notes]*



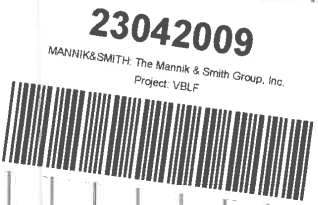
Chain of Custody Form

ALS Group USA, Corp

Work Order

| | | | | |
|----------------|------------------------------------|----------------|------------------------------------|---------------------------------------|
| Company Name | The Mannik & Smith Group, Inc. | Purchase Order | The Mannik & Smith Group, Inc. | Parameter/Method Request for Analysis |
| Send Report To | Tom Peters | Company Name | Accounts Payable | A Dissolved Mn, Al, Fe |
| Project Name | VB LF | Invoice Attn. | | B Filtered Mn, Al, Fe |
| Address | 2365 Haggerty Road South Suite 100 | Project # | | C VOCs |
| City/State/Zip | Canton, MI 48188 | Address | 2365 Haggerty Road South Suite 100 | D |
| Phone | 7343973100 | City/State/Zip | Canton, MI 48188 | E |
| e-Mail Address | tpeters@mnniksmithgroup.com | Phone | 7343973100 | F |
| | | e-Mail Address | | G |
| | | | | H |
| | | | | I |
| | | | | J |

| # | Sample Description | Date | Time | Matrix | Preservative | # Bottles | A | B | C | D | E | F | G |
|----|--------------------------|---------|------|--------|--------------|-----------|---|---|---|---|---|---|---|
| 1 | WR2330031 042023 ERR 021 | 4-20-21 | 1455 | ✓ | HNO3 | 2 | X | X | | | | | |
| 2 | WR2330031 042023 ERR 022 | 4-20-23 | 1120 | | | | X | X | | | | | |
| 3 | WR2330031 042023 ERR 023 | 4-20-23 | 1230 | | | | X | X | | | | | |
| 4 | WR2330031 042023 ERR 024 | 4-20-23 | 1330 | | | | X | X | | | | | |
| 5 | WR2330031 042123 ERR 025 | 4-21-23 | 1300 | | | | X | X | | | | | |
| 6 | WR2330031 042123 ERR 026 | 4-21-23 | 1355 | | | | X | X | | | | | |
| 7 | WR2330031 042123 ERR 027 | 4-21-23 | 1420 | | | | X | X | | | | | |
| 8 | WR2330031 042123 ERR 028 | 4-21-23 | 1640 | | HNO3 | 3 | X | X | X | | | | |
| 9 | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | |



Notes: Any changes must be made in writing once samples and OOC form have been submitted to ALS Environmental.

Preservative Key: 1-HCL, 2-HNO3, 3-H2SO4, 4-NaOH, 5-Na2S2O3, 6-NaHSO4, 7-Other, 8-4 degrees C, 9-5036

Required Turnaround Time: Std 10 Wk days, 5 Wk days, 2 Wk days, 24 hr

Received Due:

Requisitioned by: [Signature] Date: 4/21/23 Time: 10:54 Received by: [Signature] Date: 4/21/23 Time: 10:54

QC Reporting Level: (check box below)

Level II: Standard OC
Level III: Std OC + Raw data
Level IV: SIV/96 QLP-Like

Other: [Signature]

NOTES: IR3 2.6°C

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041723ERR001

Lab ID: 23042009-01

Collection Date: 4/17/2023 01:15 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.22 | | 0.010 | mg/L | 1 | 5/2/2023 06:48 PM |
| Iron | 1.2 | | 0.080 | mg/L | 1 | 5/2/2023 06:48 PM |
| Manganese | 0.29 | | 0.0050 | mg/L | 1 | 5/2/2023 06:48 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.011 | | 0.010 | mg/L | 1 | 5/2/2023 06:50 PM |
| Iron | 0.58 | | 0.080 | mg/L | 1 | 5/2/2023 06:50 PM |
| Manganese | 0.31 | | 0.0050 | mg/L | 1 | 5/2/2023 06:50 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041723ERR002

Lab ID: 23042009-02

Collection Date: 4/17/2023 02:40 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.49 | | 0.010 | mg/L | 1 | 5/2/2023 07:36 PM |
| Iron | 2.2 | | 0.080 | mg/L | 1 | 5/2/2023 07:36 PM |
| Manganese | 0.46 | | 0.0050 | mg/L | 1 | 5/2/2023 07:36 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.046 | | 0.010 | mg/L | 1 | 5/2/2023 07:37 PM |
| Iron | 1.5 | | 0.080 | mg/L | 1 | 5/2/2023 07:37 PM |
| Manganese | 0.47 | | 0.0050 | mg/L | 1 | 5/2/2023 07:37 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.
Project: VB LF
Sample ID: WR2330031041723ERR003
Collection Date: 4/17/2023 04:35 PM

Work Order: 23042009
Lab ID: 23042009-03
Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.27 | | 0.010 | mg/L | 1 | 5/2/2023 07:43 PM |
| Iron | 5.6 | | 0.080 | mg/L | 1 | 5/2/2023 07:43 PM |
| Manganese | 0.20 | | 0.0050 | mg/L | 1 | 5/2/2023 07:43 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.011 | | 0.010 | mg/L | 1 | 5/2/2023 07:44 PM |
| Iron | 5.0 | | 0.080 | mg/L | 1 | 5/2/2023 07:44 PM |
| Manganese | 0.18 | | 0.0050 | mg/L | 1 | 5/2/2023 07:44 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041823ERR004

Lab ID: 23042009-04

Collection Date: 4/18/2023 11:40 AM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.052 | | 0.010 | mg/L | 1 | 5/2/2023 07:46 PM |
| Iron | 7.0 | | 0.080 | mg/L | 1 | 5/2/2023 07:46 PM |
| Manganese | 0.070 | | 0.0050 | mg/L | 1 | 5/2/2023 07:46 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 07:48 PM |
| Iron | 6.7 | | 0.080 | mg/L | 1 | 5/2/2023 07:48 PM |
| Manganese | 0.069 | | 0.0050 | mg/L | 1 | 5/2/2023 07:48 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041823ERR005

Lab ID: 23042009-05

Collection Date: 4/18/2023 01:15 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.017 | | 0.010 | mg/L | 1 | 5/2/2023 07:50 PM |
| Iron | 5.3 | | 0.080 | mg/L | 1 | 5/2/2023 07:50 PM |
| Manganese | 0.38 | | 0.0050 | mg/L | 1 | 5/2/2023 07:50 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 07:52 PM |
| Iron | 5.4 | | 0.080 | mg/L | 1 | 5/2/2023 07:52 PM |
| Manganese | 0.39 | | 0.0050 | mg/L | 1 | 5/2/2023 07:52 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041823ERR006

Lab ID: 23042009-06

Collection Date: 4/18/2023 12:20 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.0068 | J | 0.010 | mg/L | 1 | 5/2/2023 07:53 PM |
| Iron | 17 | | 0.080 | mg/L | 1 | 5/2/2023 07:53 PM |
| Manganese | 0.26 | | 0.0050 | mg/L | 1 | 5/2/2023 07:53 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.0087 | J | 0.010 | mg/L | 1 | 5/2/2023 07:55 PM |
| Iron | 18 | | 0.080 | mg/L | 1 | 5/2/2023 07:55 PM |
| Manganese | 0.29 | | 0.0050 | mg/L | 1 | 5/2/2023 07:55 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041823ERR008

Lab ID: 23042009-08

Collection Date: 4/18/2023 12:05 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.011 | | 0.010 | mg/L | 1 | 5/2/2023 07:57 PM |
| Iron | 4.5 | | 0.080 | mg/L | 1 | 5/2/2023 07:57 PM |
| Manganese | 0.14 | | 0.0050 | mg/L | 1 | 5/2/2023 07:57 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 07:59 PM |
| Iron | 4.3 | | 0.080 | mg/L | 1 | 5/2/2023 07:59 PM |
| Manganese | 0.14 | | 0.0050 | mg/L | 1 | 5/2/2023 07:59 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041823ERR009

Lab ID: 23042009-09

Collection Date: 4/18/2023 01:05 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.36 | | 0.010 | mg/L | 1 | 5/2/2023 08:04 PM |
| Iron | 0.67 | | 0.080 | mg/L | 1 | 5/2/2023 08:04 PM |
| Manganese | 0.10 | | 0.0050 | mg/L | 1 | 5/2/2023 08:04 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.017 | | 0.010 | mg/L | 1 | 5/2/2023 08:06 PM |
| Iron | 0.30 | | 0.080 | mg/L | 1 | 5/2/2023 08:06 PM |
| Manganese | 0.065 | | 0.0050 | mg/L | 1 | 5/2/2023 08:06 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.
 Project: VB LF
 Sample ID: WR2330031041823ERR010
 Collection Date: 4/18/2023 03:10 PM

Work Order: 23042009
 Lab ID: 23042009-10
 Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.010 | | 0.010 | mg/L | 1 | 5/2/2023 08:07 PM |
| Iron | 3.4 | | 0.080 | mg/L | 1 | 5/2/2023 08:07 PM |
| Manganese | 0.18 | | 0.0050 | mg/L | 1 | 5/2/2023 08:07 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 08:09 PM |
| Iron | 3.3 | | 0.080 | mg/L | 1 | 5/2/2023 08:09 PM |
| Manganese | 0.18 | | 0.0050 | mg/L | 1 | 5/2/2023 08:09 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041923ERR011

Lab ID: 23042009-11

Collection Date: 4/19/2023 11:25 AM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.47 | | 0.010 | mg/L | 1 | 5/2/2023 08:11 PM |
| Iron | 3.2 | | 0.080 | mg/L | 1 | 5/2/2023 08:11 PM |
| Manganese | 0.52 | | 0.0050 | mg/L | 1 | 5/2/2023 08:11 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.030 | | 0.010 | mg/L | 1 | 5/2/2023 08:13 PM |
| Iron | 0.24 | | 0.080 | mg/L | 1 | 5/2/2023 08:13 PM |
| Manganese | 0.11 | | 0.0050 | mg/L | 1 | 5/2/2023 08:13 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041923ERR012

Lab ID: 23042009-12

Collection Date: 4/19/2023 12:10 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 06:59 | Analyst: STP |
| Aluminum | 0.029 | | 0.010 | mg/L | 1 | 5/2/2023 08:14 PM |
| Iron | 3.5 | | 0.080 | mg/L | 1 | 5/2/2023 08:14 PM |
| Manganese | 0.055 | | 0.0050 | mg/L | 1 | 5/2/2023 08:14 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 08:28 PM |
| Iron | 2.9 | | 0.080 | mg/L | 1 | 5/2/2023 08:28 PM |
| Manganese | 0.052 | | 0.0050 | mg/L | 1 | 5/2/2023 08:28 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.
Project: VB LF
Sample ID: WR2330031041923ERR013
Collection Date: 4/19/2023 12:50 PM

Work Order: 23042009
Lab ID: 23042009-13
Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|------------|------|----------------|-------------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.088 | | 0.010 | mg/L | 1 | 5/2/2023 08:30 PM |
| Iron | 19 | | 0.080 | mg/L | 1 | 5/2/2023 08:30 PM |
| Manganese | 0.50 | | 0.0050 | mg/L | 1 | 5/2/2023 08:30 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.033 | | 0.010 | mg/L | 1 | 5/2/2023 08:32 PM |
| Iron | 20 | | 0.080 | mg/L | 1 | 5/2/2023 08:32 PM |
| Manganese | 0.51 | | 0.0050 | mg/L | 1 | 5/2/2023 08:32 PM |
| VOLATILE ORGANIC COMPOUNDS | | | SW8260D | | | Analyst: BAM |
| 1,1,1-Trichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,1,2,2-Tetrachloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,1,2-Trichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,1,2-Trichlorotrifluoroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,1-Dichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,1-Dichloroethene | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,2,4-Trichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,2-Dibromo-3-chloropropane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,2-Dibromoethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,2-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,2-Dichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,2-Dichloropropane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,3-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 1,4-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 2-Butanone | | U | 5.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 2-Hexanone | | U | 5.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| 4-Methyl-2-pentanone | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Acetone | 7.4 | J | 10 | µg/L | 1 | 5/2/2023 05:11 PM |
| Benzene | 3.2 | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Bromodichloromethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Bromoform | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Bromomethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Carbon disulfide | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Carbon tetrachloride | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Chlorobenzene | 29 | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Chloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Chloroform | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Chloromethane | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| cis-1,2-Dichloroethene | | U | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041923ERR013

Lab ID: 23042009-13

Collection Date: 4/19/2023 12:50 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-----------------------------|--------|------|--------------|-------|-----------------|-------------------|
| cis-1,3-Dichloropropene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Cyclohexane | U | | 2.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Dibromochloromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Dichlorodifluoromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Ethylbenzene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Isopropylbenzene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Methyl acetate | U | | 2.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Methyl tert-butyl ether | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Methylcyclohexane | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Methylene chloride | U | | 5.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Styrene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Tetrachloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Toluene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| trans-1,2-Dichloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| trans-1,3-Dichloropropene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Trichloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Trichlorofluoromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Vinyl chloride | U | | 1.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Xylenes, Total | U | | 3.0 | µg/L | 1 | 5/2/2023 05:11 PM |
| Surr: 1,2-Dichloroethane-d4 | 101 | | 80-120 | %REC | 1 | 5/2/2023 05:11 PM |
| Surr: 4-Bromofluorobenzene | 94.6 | | 80-120 | %REC | 1 | 5/2/2023 05:11 PM |
| Surr: Dibromofluoromethane | 96.4 | | 80-120 | %REC | 1 | 5/2/2023 05:11 PM |
| Surr: Toluene-d8 | 103 | | 80-120 | %REC | 1 | 5/2/2023 05:11 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031041923ERR014

Lab ID: 23042009-14

Collection Date: 4/19/2023 02:15 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.018 | | 0.010 | mg/L | 1 | 5/2/2023 08:34 PM |
| Iron | 2.6 | | 0.080 | mg/L | 1 | 5/2/2023 08:34 PM |
| Manganese | 0.29 | | 0.0050 | mg/L | 1 | 5/2/2023 08:34 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 08:35 PM |
| Iron | 2.2 | | 0.080 | mg/L | 1 | 5/2/2023 08:35 PM |
| Manganese | 0.30 | | 0.0050 | mg/L | 1 | 5/2/2023 08:35 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042023ERR015

Lab ID: 23042009-15

Collection Date: 4/20/2023 11:25 AM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.13 | | 0.010 | mg/L | 1 | 5/2/2023 08:37 PM |
| Iron | 11 | | 0.080 | mg/L | 1 | 5/2/2023 08:37 PM |
| Manganese | 0.11 | | 0.0050 | mg/L | 1 | 5/2/2023 08:37 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 08:39 PM |
| Iron | 2.1 | | 0.080 | mg/L | 1 | 5/2/2023 08:39 PM |
| Manganese | 0.077 | | 0.0050 | mg/L | 1 | 5/2/2023 08:39 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042023ERR016

Lab ID: 23042009-16

Collection Date: 4/20/2023 12:05 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.023 | | 0.010 | mg/L | 1 | 5/2/2023 08:41 PM |
| Iron | 2.7 | | 0.080 | mg/L | 1 | 5/2/2023 08:41 PM |
| Manganese | 0.029 | | 0.0050 | mg/L | 1 | 5/2/2023 08:41 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 08:46 PM |
| Iron | 2.8 | | 0.080 | mg/L | 1 | 5/2/2023 08:46 PM |
| Manganese | 0.029 | | 0.0050 | mg/L | 1 | 5/2/2023 08:46 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042023ERR017

Lab ID: 23042009-17

Collection Date: 4/20/2023 02:55 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 3.2 | | 0.10 | mg/L | 10 | 5/3/2023 01:34 PM |
| Iron | 6.9 | | 0.080 | mg/L | 1 | 5/2/2023 08:47 PM |
| Manganese | 4.2 | | 0.050 | mg/L | 10 | 5/3/2023 01:34 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.011 | | 0.010 | mg/L | 1 | 5/2/2023 08:49 PM |
| Iron | U | | 0.080 | mg/L | 1 | 5/2/2023 08:49 PM |
| Manganese | 0.20 | | 0.0050 | mg/L | 1 | 5/2/2023 08:49 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.
Project: VB LF
Sample ID: WR2330031042023ERR018
Collection Date: 4/20/2023 03:30 PM

Work Order: 23042009
Lab ID: 23042009-18
Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|------------|------|----------------|-------------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.13 | | 0.010 | mg/L | 1 | 5/2/2023 08:51 PM |
| Iron | 13 | | 0.080 | mg/L | 1 | 5/2/2023 08:51 PM |
| Manganese | 0.095 | | 0.0050 | mg/L | 1 | 5/2/2023 08:51 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.013 | | 0.010 | mg/L | 1 | 5/2/2023 08:53 PM |
| Iron | 13 | | 0.080 | mg/L | 1 | 5/2/2023 08:53 PM |
| Manganese | 0.088 | | 0.0050 | mg/L | 1 | 5/2/2023 08:53 PM |
| VOLATILE ORGANIC COMPOUNDS | | | SW8260D | | | Analyst: HJ |
| 1,1,1-Trichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,1,2,2-Tetrachloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,1,2-Trichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,1,2-Trichlorotrifluoroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,1-Dichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,1-Dichloroethene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,2,4-Trichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,2-Dibromo-3-chloropropane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,2-Dibromoethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,2-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,2-Dichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,2-Dichloropropane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,3-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 1,4-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 2-Butanone | | U | 5.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 2-Hexanone | | U | 5.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| 4-Methyl-2-pentanone | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Acetone | | U | 10 | µg/L | 1 | 5/2/2023 11:33 PM |
| Benzene | 1.2 | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Bromodichloromethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Bromoform | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Bromomethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Carbon disulfide | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Carbon tetrachloride | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Chlorobenzene | 39 | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Chloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Chloroform | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Chloromethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| cis-1,2-Dichloroethene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042023ERR018

Lab ID: 23042009-18

Collection Date: 4/20/2023 03:30 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-----------------------------|--------|------|--------------|-------|-----------------|-------------------|
| cis-1,3-Dichloropropene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Cyclohexane | U | | 2.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Dibromochloromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Dichlorodifluoromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Ethylbenzene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Isopropylbenzene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Methyl acetate | U | | 2.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Methyl tert-butyl ether | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Methylcyclohexane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Methylene chloride | U | | 5.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Styrene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Tetrachloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Toluene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| trans-1,2-Dichloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| trans-1,3-Dichloropropene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Trichloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Trichlorofluoromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Vinyl chloride | U | | 1.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Xylenes, Total | U | | 3.0 | µg/L | 1 | 5/2/2023 11:33 PM |
| Surr: 1,2-Dichloroethane-d4 | 98.2 | | 80-120 | %REC | 1 | 5/2/2023 11:33 PM |
| Surr: 4-Bromofluorobenzene | 93.3 | | 80-120 | %REC | 1 | 5/2/2023 11:33 PM |
| Surr: Dibromofluoromethane | 102 | | 80-120 | %REC | 1 | 5/2/2023 11:33 PM |
| Surr: Toluene-d8 | 96.1 | | 80-120 | %REC | 1 | 5/2/2023 11:33 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042023ERR019

Lab ID: 23042009-19

Collection Date: 4/20/2023 04:10 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.015 | | 0.010 | mg/L | 1 | 5/2/2023 08:55 PM |
| Iron | 0.061 | J | 0.080 | mg/L | 1 | 5/2/2023 08:55 PM |
| Manganese | | U | 0.0050 | mg/L | 1 | 5/2/2023 08:55 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | | U | 0.010 | mg/L | 1 | 5/2/2023 08:56 PM |
| Iron | | U | 0.080 | mg/L | 1 | 5/2/2023 08:56 PM |
| Manganese | | U | 0.0050 | mg/L | 1 | 5/2/2023 08:56 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042023ERR020

Lab ID: 23042009-20

Collection Date: 4/20/2023 12:40 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.10 | | 0.010 | mg/L | 1 | 5/2/2023 08:58 PM |
| Iron | 9.1 | | 0.080 | mg/L | 1 | 5/2/2023 08:58 PM |
| Manganese | 0.86 | | 0.0050 | mg/L | 1 | 5/2/2023 08:58 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | | U | 0.010 | mg/L | 1 | 5/2/2023 09:00 PM |
| Iron | | U | 0.080 | mg/L | 1 | 5/2/2023 09:00 PM |
| Manganese | 0.024 | | 0.0050 | mg/L | 1 | 5/2/2023 09:00 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042123ERR026

Lab ID: 23042009-26

Collection Date: 4/21/2023 01:55 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.039 | | 0.010 | mg/L | 1 | 5/2/2023 09:53 PM |
| Iron | 5.8 | | 0.080 | mg/L | 1 | 5/2/2023 09:53 PM |
| Manganese | 0.23 | | 0.0050 | mg/L | 1 | 5/2/2023 09:53 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.0062 | J | 0.010 | mg/L | 1 | 5/2/2023 09:54 PM |
| Iron | 4.0 | | 0.080 | mg/L | 1 | 5/2/2023 09:54 PM |
| Manganese | 0.23 | | 0.0050 | mg/L | 1 | 5/2/2023 09:54 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042123ERR027

Lab ID: 23042009-27

Collection Date: 4/21/2023 02:20 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|--------|------|----------------|-------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | 0.36 | | 0.010 | mg/L | 1 | 5/2/2023 09:59 PM |
| Iron | 15 | | 0.080 | mg/L | 1 | 5/2/2023 09:59 PM |
| Manganese | 0.32 | | 0.0050 | mg/L | 1 | 5/2/2023 09:59 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/2/23 07:00 | Analyst: STP |
| Aluminum | U | | 0.010 | mg/L | 1 | 5/2/2023 10:01 PM |
| Iron | 15 | | 0.080 | mg/L | 1 | 5/2/2023 10:01 PM |
| Manganese | 0.54 | | 0.0050 | mg/L | 1 | 5/2/2023 10:01 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.
Project: VB LF
Sample ID: WR2330031042123ERR028
Collection Date: 4/21/2023 04:40 PM

Work Order: 23042009
Lab ID: 23042009-28
Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-------------------------------------|------------|------|----------------|-------------|----------------------------|---------------------|
| METALS BY ICP-MS | | | SW6020B | | Prep: SW3005A 5/9/23 06:55 | Analyst: STP |
| Aluminum | 0.45 | | 0.010 | mg/L | 1 | 5/9/2023 01:23 PM |
| Iron | 19 | | 0.080 | mg/L | 1 | 5/9/2023 01:23 PM |
| Manganese | 0.55 | | 0.0050 | mg/L | 1 | 5/9/2023 01:23 PM |
| METALS BY ICP-MS (DISSOLVED) | | | SW6020B | | Prep: SW3005A 5/9/23 06:55 | Analyst: STP |
| Aluminum | 0.0082 | J | 0.010 | mg/L | 1 | 5/9/2023 01:25 PM |
| Iron | 21 | | 0.080 | mg/L | 1 | 5/9/2023 01:25 PM |
| Manganese | 0.67 | | 0.0050 | mg/L | 1 | 5/9/2023 01:25 PM |
| VOLATILE ORGANIC COMPOUNDS | | | SW8260D | | | Analyst: HJ |
| 1,1,1-Trichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,1,2,2-Tetrachloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,1,2-Trichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,1,2-Trichlorotrifluoroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,1-Dichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,1-Dichloroethene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,2,4-Trichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,2-Dibromo-3-chloropropane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,2-Dibromoethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,2-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,2-Dichloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,2-Dichloropropane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,3-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 1,4-Dichlorobenzene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 2-Butanone | | U | 5.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 2-Hexanone | | U | 5.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| 4-Methyl-2-pentanone | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Acetone | | U | 10 | µg/L | 1 | 5/2/2023 11:18 PM |
| Benzene | 2.4 | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Bromodichloromethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Bromoform | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Bromomethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Carbon disulfide | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Carbon tetrachloride | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Chlorobenzene | 21 | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Chloroethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Chloroform | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Chloromethane | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| cis-1,2-Dichloroethene | | U | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-May-2023

Client: The Mannik & Smith Group, Inc.

Project: VB LF

Work Order: 23042009

Sample ID: WR2330031042123ERR028

Lab ID: 23042009-28

Collection Date: 4/21/2023 04:40 PM

Matrix: WATER

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|-----------------------------|--------|------|--------------|-------|-----------------|-------------------|
| cis-1,3-Dichloropropene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Cyclohexane | U | | 2.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Dibromochloromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Dichlorodifluoromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Ethylbenzene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Isopropylbenzene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Methyl acetate | U | | 2.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Methyl tert-butyl ether | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Methylcyclohexane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Methylene chloride | U | | 5.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Styrene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Tetrachloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Toluene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| trans-1,2-Dichloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| trans-1,3-Dichloropropene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Trichloroethene | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Trichlorofluoromethane | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Vinyl chloride | U | | 1.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Xylenes, Total | U | | 3.0 | µg/L | 1 | 5/2/2023 11:18 PM |
| Surr: 1,2-Dichloroethane-d4 | 100 | | 80-120 | %REC | 1 | 5/2/2023 11:18 PM |
| Surr: 4-Bromofluorobenzene | 96.1 | | 80-120 | %REC | 1 | 5/2/2023 11:18 PM |
| Surr: Dibromofluoromethane | 97.2 | | 80-120 | %REC | 1 | 5/2/2023 11:18 PM |
| Surr: Toluene-d8 | 105 | | 80-120 | %REC | 1 | 5/2/2023 11:18 PM |

Note: See Qualifiers page for a list of qualifiers and their definitions.