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MEMO

To: Brandon Pursel, USEPA
From: Francis Biehl, PE and Jason Martinez
CC: Grant Trigger, RACER Trust; David Favero, RACER Trust
Date: March 25, 2016

Project #: R2330021
Re: RACER Van Buren Landfill Site – November 2015 Semi-Annual Ground Water Sampling Results

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The Mannik & Smith Group, Inc. (MSG) has been performing site investigation 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.

The November 2015 Semi Annual Ground Water Sampling activities completed on the General Motors Property are summarized in a separate memo.

NOVEMBER 2015 SEMI-ANNUAL GROUND WATER MONITORING

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, on November 10, 2015 via email. The modifications included analyzing all monitoring wells for total and dissolved Aluminum, Iron, Manganese and VOCs samples from MW-1, MW-23, and MW-24. In addition, all monitoring wells will be analyzed for total metals and dissolved metals (Aluminum, Iron and Manganese). *Table 1, Analytes for Semi-Annual Ground Water Monitoring* depicts the analyte list utilized during the November semi-annual ground water monitoring.

The November 2015 Semi-Annual Ground Water Sampling was completed between November 16, 2015 and November 20, 2015 and included sampling of all monitoring wells associated with the Site. Furthermore, in order to assess ground water quality south of Ecorse Road (obtaining access to the Willow Run Airport Property to install monitoring wells is in progress) and to assist in confirmation of background concentrations (primarily for dissolved iron, aluminum, and manganese), a monitoring well located at the Willow Run Powertrain Plant (CRA-266M) was sampled during the November 2015 semi-annual monitoring event and will be included in future sampling events. In previous monitoring events, static ground water elevations were measured at three (3) other Willow Run Powertrain Plant wells (CRA-265M, CRA-833M, and CRA-834M) near CRA-266M to aid in ground water flow assessment. These three (3) wells were inaccessible during the November 2015 ground water sampling event and therefore not measured.

Ground water sampling field sheets can be found in *Attachment 1, November 2015 Field Sheets.* 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 and Iron. Manganese was

not analyzed during the November 16, 2015 monitoring event Mg (Magnesium) inadvertently noted on Chain of Custody in lieu of Mn (Manganese).

HYDROGEOLOGY

Hydraulic monitoring data was collected from all existing monitoring wells (water depth for MW-14 was mistakenly not measured). Based on the collected data, ground water appears to flow radially from a local ground water high (ground water mounding) in the central portion of the Site (similar to what has been reported in the Phase IV investigation report) similar to what has been presented in previous reports. Ground water elevation contours and ground water flow from the November, 2015 ground water hydraulic monitoring data are illustrated on *Figure 2, Ground Water Elevation Contour Map (November, 2015).*

GROUND WATER SAMPLE RESULTS

A summary of ground water sample analytical results compared to non-residential cleanup criteria are summarized in *Table 2, Summary of Ground Water Sample Results.* Results from compared to residential cleanup criteria, and are summarized in *Table 3*. The laboratory reports can be found in *Attachment 2, Laboratory Analytical Data Reports.* The distribution of contaminants detected at concentrations exceeding applicable criteria (Health-Based DW) are depicted on *Figure 3, Monitoring Well Analytical Summary through November 2015 Semi-Annual Ground Water Monitoring (Exceedances Only).*

SUMMARY AND RECOMMENDATIONS

In summary, the ground water sample analytical results from the November 2015 Semi-Annual Ground Water Sampling Event were very similar to previous ground water sampling results. The results indicate that ground water samples collected to date from wells along the northern and western perimeter of the Site (monitoring wells MW-1, MW-5, MW-7, MW-9, and MW-10) contain concentrations of dissolved iron above applicable criteria (MDEQ Part 201 Non-residential Health-Based DW criteria). Samples collected from MW-11 (also located at the northern Site perimeter) continue to contain dissolved aluminum and iron concentrations below MDEQ Part 201 Non-residential Health-Based DW criteria.

It is apparent upon examination of the ground water sample analytical results that ground water south of the Site along Ecorse Road contains dissolved iron at concentrations above MDEQ Part 201 Residential Health-Based DW criteria, and that these concentrations have generally remained consistent for all sampling events. Ground water north of the Site contains dissolved iron at concentrations above MDEQ Part 201 Residential Health-Based DW criteria, and it appears dissolved iron is migrating beneath Michigan Avenue, although based on a limited data set.

Based on dissolved iron concentrations over time and (more importantly) within periphery monitoring wells located off-Site (depicted in the attached supporting documentation), in conjunction with the length of time that the landfill has been closed (approximately 46 years), the contaminant plume related to the Site (i.e., existing area of groundwater contamination) appears to be stable. Additional delineation (well installation / sampling) is planned in order to define the plume boundary south of Ecorse Road. Access was obtained from the Wayne County Airport Authority (WCAA) and two monitoring wells were recently installed on March 10, 2016. Sampling of these two wells is expected to occur as part of the Spring 2016 Semi-Annual Ground Water Sampling Event on their property. This additional delineation is not anticipated to provide results that alter the above conclusion that the contaminant plume related to the Site appears stable. With the exception of the proposed monitoring well installations south of Ecorse Road and a continued routine ground water monitoring program, we are not proposing any additional investigation at this time.

While dissolved metal concentrations are more indicative of ground water quality compared to total metals, there is a concern that the total 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. Due to this concern, during subsequent sampling event the sediment accumulation in all monitoring wells will be measured. The wells will be redeveloped prior the following November monitoring if sediment accumulation exceeds approximately 0.5 feet. In addition, subsequent monitoring events will include the 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.

TABLES

Table 1
Proposed Analytes for Semi-Annual Ground Water Monitoring

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

Monitoring Well (MW) ID	Location	Purpose of MW[1]	VOCs	Total Metals[2]	Dissolved Metals[2]
USEPA Testing Method			8260	6020A/7470	6020A/7470
MW-1	North Perimeter of Site	Hydro Assessment, Metals		√	√
MW-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	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	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 (Smith Property)	Hydro Assessment, Metals		√	√
MW-22	North of Site (Smith Property)	Hydro Assessment, Metals		√	√
MW-23	North of Site (Smith Property)	Hydro Assessment, VOCs, Metals	√	√	√
MW-24	North of Site (Smith Property)	Hydro Assessment, VOCs, Metals	√	√	√
MW-25	North of Site (Smith Property)	Hydro Assessment, Metals		√	√
MW-26	North of Site (Smith 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	GM Property	Hydro Assessment, Metals		√	√
MW-33	GM Property	Hydro Assessment, Metals		√	√
MW-34	Rawsonville Rd/Michigan Ave	Hydro Assessment, Metals		√	√
Proposed[3]	Willow Run Airport	Hydro Assessment, Metals		√	√
Proposed[3]	Willow Run Airport	Hydro Assessment, Metals		√	√
CRA-265M	Willow Run Powertrain Plant	Hydro Assessment			
CRA-266M	Willow Run Powertrain Plant	Hydro Assessment, Metals		√	√
CRA-833M	Willow Run Powertrain Plant	Hydro Assessment			
CRA-834M	Willow Run Powertrain Plant	Hydro Assessment			
Total Number of Samples			3	31	31

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] = Subject to being granted access and installed.

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-1	W-R2330009-043013-MJF-002	4/30/2013	<25	<1.0	<1.0	<50	<50	0.66 J	<1.0	<5.0	<1.0	7.3	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A]	W-R2330009-080713-ZTR-007	8/7/2013																						
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	<25	<1.0	<1.0	<50	<50	0.78 J	<1.0	<5.0	<1.0	6.9	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A]	W-R2330009-111413-ACN-013	11/14/2013																						
MW-1	W-R2330009-111413-ACN-013	11/14/2013	<25	<1.0	<1.0	<50	6.9 J	0.81 J	<1.0	<5.0	<1.0	9.9	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A]	W-R2330012-032814-ACN-009	3/28/2014																						
MW-1	W-R2330012-032814-ACN-009	3/28/2014	<25	<1.0	<1.0	<50	<50	0.57 J	<1.0	<5.0	<1.0	5.1	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A]	W-R2330012-12214-JCH-026	12/2/2014																						
MW-1	W-R2330012-12214-JCH-026	12/2/2014	<25	<1.0	<1.0	<50	<50	0.59 J	<1.0	<5.0	<1.0	3.5 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A] (DUP)	W-R2330012-12214-JCH-027	12/2/2014																						
MW-1 (DUP)	W-R2330012-12214-JCH-027	12/2/2014	<25	<1.0	<1.0	<50	<50	0.60 J	<1.0	<5.0	<1.0	3.2 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A]	W-R2330017-031915-ACN-021	3/19/2015																						
MW-1	W-R2330017-031915-ACN-021	3/19/2015	<25	<1.0	<1.0	<50	<50	0.35 J	<1.0	<5.0	<1.0	4.3 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-1[A]	W-R2330017-111915-AEP-021	11/19/2015																						
MW-1	W-R2330017-111915-AEP-021	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330004-090512-MJF-01	9/5/2012	<25	<1.0	<1.0	<50	<50	0.66 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3	W-R2330009-050213-MJF-009	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3[A]	W-R2330009-080713-ZTR-004	8/7/2013																						
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3[A]	W-R2330009-111213-ACN-002	11/12/2013																						
MW-3	W-R2330009-111213-ACN-002	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3[A]	W-R2330012-032714-ACN-007	3/27/2014																						
MW-3	W-R2330012-032714-ACN-007	3/27/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3[A]	W-R2330012-091514-ACN-001	9/15/2014																						
MW-3	W-R2330012-091514-ACN-001	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS	NS	NS	NS
MW-3[A]	W-R2330012-12114-JCH-019	12/1/2014																						
MW-3	W-R2330012-12114-JCH-019	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3[A]	W-R2330017-031915-JCH-015	3/19/2015																						
MW-3	W-R2330017-031915-JCH-015	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-3[A]	W-R2330017-111915-JPM-018	11/19/2015																						
MW-3	W-R2330017-111915-JPM-018	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330004-090512-MJF-02	9/5/2012	<25	<1.0	<1.0	<50	12 J	0.39 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	<25	<1.0	<1.0	<50	8.5 J	0.43 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4	W-R2330009-050213-MJF-010	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4[A]	W-R2330009-080713-ZTR-005	8/7/2013																						
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4[A]	W-R2330009-111213-ACN-003	11/12/2013																						
MW-4	W-R2330009-111213-ACN-003	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0

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			Semivolatile Organic Compounds (SVOCs)																					
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-1	W-R2330009-043013-MJF-002	4/30/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	1.0 J	<5.0	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.1 J	0.43 J	15
MW-1[A]	W-R2330009-080713-ZTR-007	8/7/2013																						67	0.21 J	23
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.3 J	0.27 J	23
MW-1[A]	W-R2330009-111413-ACN-013	11/14/2013																						33 J	0.19 J	28
MW-1	W-R2330009-111413-ACN-013	11/14/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.8 J	0.21 J	27
MW-1[A]	W-R2330012-032814-ACN-009	3/28/2014																						14 J	0.18 J	16 J
MW-1	W-R2330012-032814-ACN-009	3/28/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<100	0.19 J	16
MW-1[A]	W-R2330012-12214-JCH-026	12/2/2014																						120	0.23 J	26
MW-1	W-R2330012-12214-JCH-026	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.3 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.0 J	0.24 J	25
MW-1[A] (DUP)	W-R2330012-12214-JCH-027	12/2/2014																						74	0.19 J	25
MW-1 (DUP)	W-R2330012-12214-JCH-027	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.5 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.3 J	0.18 J	25
MW-1[A]	W-R2330017-031915-ACN-021	3/19/2015																						30 J	0.26 J	27
MW-1	W-R2330017-031915-ACN-021	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	18 J	0.31 J	27
MW-1[A]	W-R2330017-111915-AEP-021	11/19/2015																						210	NS	NS
MW-1	W-R2330017-111915-AEP-021	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.2 J	NS	NS
MW-3	W-R2330004-090512-MJF-01	9/5/2012	<10	<10	<5.0	4.2 J	<5.0	<5.0	<5.0	<10	<5.0	0.85 J	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.0 J	0.29 J	14
MW-3	W-R2330009-050213-MJF-009	5/2/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	1.4 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	0.51 J	1.5 J
MW-3[A]	W-R2330009-080713-ZTR-004	8/7/2013																						120	0.28 J	3.9 J
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.2 J	0.40 J	3.8 J
MW-3[A]	W-R2330009-111213-ACN-002	11/12/2013																						190	0.33 J	3.3 J
MW-3	W-R2330009-111213-ACN-002	11/12/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.1 J	0.31 J	3.7 J
MW-3[A]	W-R2330012-032714-ACN-007	3/27/2014																						450	0.22 J	0.76 J
MW-3	W-R2330012-032714-ACN-007	3/27/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	89 J	0.24 J	0.62 J
MW-3[A]	W-R2330012-091514-ACN-001	9/15/2014																						610	0.27 J	4.1 J
MW-3	W-R2330012-091514-ACN-001	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.4 J	0.30 J	3.4 J
MW-3[A]	W-R2330012-12114-JCH-019	12/1/2014																						820	0.24 J	2.7 J
MW-3	W-R2330012-12114-JCH-019	12/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	0.21 J	2.2 J
MW-3[A]	W-R2330017-031915-JCH-015	3/19/2015																						260	0.28 J	2.8 J
MW-3	W-R2330017-031915-JCH-015	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.4 J	0.41 J	1.7 J
MW-3[A]	W-R2330017-111915-JPM-018	11/19/2015																						240	NS	NS
MW-3	W-R2330017-111915-JPM-018	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10 J	NS	NS
MW-4	W-R2330004-090512-MJF-02	9/5/2012	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<0.84	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.6 J	0.097 J	1.4 J
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<0.84	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	11 J	0.14 J	1.2 J
MW-4	W-R2330009-050213-MJF-010	5/2/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	13 J	0.21 J	<5.0
MW-4[A]	W-R2330009-080713-ZTR-005	8/7/2013																						4.5 J	0.22 J	<5.0
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	170	0.12 J	<5.0
MW-4[A]	W-R2330009-111213-ACN-003	11/12/2013																						490	0.23 J	1.7 J
MW-4	W-R2330009-111213-ACN-003	11/12/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	0.19 J	1.1 J

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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-1	W-R2330009-043013-MJF-002	4/30/2013	1,500	<1.0	<1.0	1.1 J	2.8 J	1.3 J	<0.005	17,000	<3.0	<50	130	<0.2	5.3 J	<5.0	<0.20	<2.0	1.4 J	9.1 J
MW-1[A]	W-R2330009-080713-ZTR-007	8/7/2013	1,700	<1.0	0.17 J	1.5 J	3.4 J	3.3 J		25,000	0.25 J	<50	120	<0.2	8.0 J	<5.0	<0.20	<2.0	2.0 J	6.0 J
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	1,900	<1.0	0.10 J	1.3 J	3.7 J	1.2 J	<0.005	25,000	0.076 J	<50	120	<0.2	7.4 J	<5.0	<0.20	<2.0	1.7 J	5.6 J
MW-1[A]	W-R2330009-111413-ACN-013	11/14/2013	2,200	<1.0	<1.0	2.0 J	3.1 J	0.62 J		21,000	0.17 J	<50	86	<0.2	7.7 J	<5.0	<0.20	<2.0	1.7 J	3.4 J
MW-1	W-R2330009-111413-ACN-013	11/14/2013	2,200	<1.0	0.12 J	2.5 J	3.7 J	<4.0	0.0044 J	21,000	<3.0	<50	90	<0.2	8.2 J	<5.0	<0.20	<2.0	1.8 J	3.4 J
MW-1[A]	W-R2330012-032814-ACN-009	3/28/2014	1,300	0.15 J	<1.0	0.78 J	2.6 J	2.4 J		17,000	0.13 J	<50	69	<0.2	7.5 J	0.71 J	<0.2	<2.0	1.8 J	2.0 J
MW-1	W-R2330012-032814-ACN-009	3/28/2014	1,600	0.19 J	0.18 J	2.7 J	3.0 J	2.0 J	6.7 J	18,000	<3.0	<50	65	<0.2	7.5 J	<5.0	<0.2	<2.0	1.6 J	1.4 J
MW-1[A]	W-R2330012-12214-JCH-026	12/2/2014	1,700	<1.0	0.062 J	1.6 J	1.9 J	0.55 J		18,000	<3.0	<50	83	<0.2	4.0 J	<5.0	<0.20	<2.0	2.1 J	3.6 J
MW-1	W-R2330012-12214-JCH-026	12/2/2014	1,700	<1.0	<1.0	1.2 J	2.0 J	<4.0	3.9 J	17,000	<3.0	<50	80	<0.2	3.8 J	<5.0	<0.20	<2.0	1.5 J	<50
MW-1[A] (DUP)	W-R2330012-12214-JCH-027	12/2/2014	1,800	<1.0	<1.0	1.4 J	2.0 J	0.17 J		18,000	<3.0	<50	81	<0.2	3.5 J	<5.0	<0.20	<2.0	2.1 J	3.2 J
MW-1 (DUP)	W-R2330012-12214-JCH-027	12/2/2014	1,700	<1.0	<1.0	1.4 J	1.8 J	<4.0	4.6 J	17,000	<3.0	<50	78	<0.2	3.6 J	<5.0	<0.20	<2.0	1.8 J	<50
MW-1[A]	W-R2330017-031915-ACN-021	3/19/2015	1,900	<1.0	<1.0	1.3 J	2.3 J	1.1 J		21,000	<3.0	<50	81	<0.2	5.1 J	<5.0	<0.20	<2.0	2.1 J	3.3 J
MW-1	W-R2330017-031915-ACN-021	3/19/2015	2,000	<1.0	<1.0	1.3 J	2.2 J	0.50 J	<5.0	21,000	<3.0	<50	81	<0.2	5.0 J	<5.0	<0.20	<2.0	1.6 J	3.5 J
MW-1[A]	W-R2330017-111915-AEP-021	11/19/2015	NS	NS	NS	NS	NS	NS		23,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-1	W-R2330017-111915-AEP-021	11/19/2015	NS	NS	NS	NS	NS	NS	NS	23,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330004-090512-MJF-01	9/5/2012	900	<1.0	<1.0	1.1 J	4.2 J	0.39 J		9,300	0.12 J	<50	86	<0.2	15 J	0.91 J	<0.20	<2.0	0.60 J	3.7 J
MW-3	W-R2330009-050213-MJF-009	5/2/2013	220	<1.0	0.047 J	0.86 J	1.5 J	3.2 J	<0.005	2,000	0.11 J	<50	67	<0.2	4.9 J	0.98 J	<0.20	0.49 J	0.53 J	2.3 J
MW-3[A]	W-R2330009-080713-ZTR-004	8/7/2013	300	<1.0	0.11 J	0.84 J	0.95 J	5.4		4,000	0.24 J	<50	44 J	<0.2	5.6 J	3.6 J	<0.20	<2.0	0.75 J	4.4 J
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	320	<1.0	0.063 J	4.5 J	1.9 J	3.5 J	<0.005	4,000	<3.0	<50	46 J	<0.2	7.2 J	3.6 J	<0.20	<2.0	0.60 J	2.4 J
MW-3[A]	W-R2330009-111213-ACN-002	11/12/2013	260	<1.0	<1.0	1.1 J	1.0 J	2.1 J		3,800	0.30 J	<50	38 J	<0.2	6.4 J	5.6	<0.20	<2.0	0.88 J	4.3 J
MW-3	W-R2330009-111213-ACN-002	11/12/2013	300	<1.0	<1.0	0.46 J	1.3 J	1.3 J	<0.005	3,900	<3.0	<50	36 J	<0.2	6.6 J	5.0 J	<0.20	<2.0	0.32 J	2.6 J
MW-3[A]	W-R2330012-032714-ACN-007	3/27/2014	130	<1.0	<1.0	0.48 J	0.84 J	2.6 J		2,000	0.79 J	<50	33 J	<0.2	4.8 J	1.2 J	<0.20	<2.0	1.1 J	5.9 J
MW-3	W-R2330012-032714-ACN-007	3/27/2014	150 J	<1.0	<1.0	<10	1.5 J	2.1 J	<0.005	1,400	0.079 J	<50	23 J	<0.2	4.8 J	1.3 J	<0.20	<2.0	0.41 J	1.9 J
MW-3[A]	W-R2330012-091514-ACN-001	9/15/2014	310	0.23 J	<1.0	0.97 J	1.5 J	3.0 J		4,900	0.63 J	<50	130	0.057 J	8.9 J	0.76 J	<0.20	0.22 J	1.6 J	8.0 J
MW-3	W-R2330012-091514-ACN-001	9/15/2014	370	<1.0	<1.0	0.35 J	1.9 J	2.4 J	NS	4,700	<3.0	<50	110	0.058 J	8.0 J	1.4 J	<0.20	<2.0	0.56 J	3.8 J
MW-3[A]	W-R2330012-12114-JCH-019	12/1/2014	340	<1.0	<1.0	1.5 J	1.5 J	3.5 J		5,200	0.98 J	<50	74	<0.2	7.8 J	1.5 J	<0.20	<2.0	2.1 J	9.1 J
MW-3	W-R2330012-12114-JCH-019	12/1/2014	350	<1.0	<1.0	0.32 J	1.3 J	2.2 J	<5.0	4,400	<3.0	<50	66	<0.2	7.0 J	1.6 J	<0.20	<2.0	0.56 J	4.2 J
MW-3[A]	W-R2330017-031915-JCH-015	3/19/2015	290	<1.0	0.11 J	0.75 J	0.74 J	2.4 J		4,600	<3.0	<50	37 J	<0.2	4.7 J	1.3 J	0.055 J	<2.0	0.65 J	4.5 J
MW-3	W-R2330017-031915-JCH-015	3/19/2015	370	<1.0	0.11 J	0.48 J	1.3 J	2.1 J	<5.0	5,000	<3.0	<50	39 J	<0.2	5.9 J	2.2 J	0.081 J	<2.0	<4.0	<50
MW-3[A]	W-R2330017-111915-JPM-018	11/19/2015	NS	NS	NS	NS	NS	NS		11,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330017-111915-JPM-018	11/19/2015	NS	NS	NS	NS	NS	NS	NS	11,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330004-090512-MJF-02	9/5/2012	470	<1.0	<1.0	1.1 J	1.2 J	<4.0	<0.005	14,000	<3.0	<50	56	<0.2	2.4 J	0.46 J	<0.20	<2.0	0.75 J	1.9 J
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	480	<1.0	<1.0	0.85 J	1.3 J	0.26 J	<0.005	15,000	0.034 J	<50	55	<0.2	2.4 J	<5.0	<0.025	<2.0	0.73 J	2.4 J
MW-4	W-R2330009-050213-MJF-010	5/2/2013	410	<1.0	<1.0	0.84 J	2.7 J	<4.0	<0.005	11,000	<3.0	<50	490	<0.2	2.8 J	<5.0	<0.20	<2.0	0.85 J	1.1 J
MW-4[A]	W-R2330009-080713-ZTR-005	8/7/2013	480	<1.0	0.29 J	0.80 J	2.4 J	2.7 J		16,000	<3.0	<50	77	<0.2	4.0 J	<5.0	<0.20	<2.0	1.0 J	2.4 J
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	490	<1.0	0.29 J	1.4 J	1.5 J	2.6 J	<0.005	16,000	0.30 J	<50	80	<0.2	4.0 J	1.0 J	<0.20	<2.0	1.4 J	3.5 J
MW-4[A]	W-R2330009-111213-ACN-003	11/12/2013	460	<1.0	<1.0	2.9 J	2.2 J	1.4 J		16,000	1.2 J	<50	96	<0.2	8.4 J	<5.0	<0.20	<2.0	2.1 J	7.5 J
MW-4	W-R2330009-111213-ACN-003	11/12/2013	460	<1.0	0.34 J	0.78 J	2.0 J	0.65 J	<0.005	15,000	<3.0	<50	70	<0.2	4.7 J	<5.0	<0.20	<2.0	0.94 J	2.8 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-4[A]	W-R2330012-032714-ACN-006	3/27/2014																						
MW-4	W-R2330012-032714-ACN-006	3/27/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4[A]	W-R2330012-12114-JCH-020	12/1/2014																						
MW-4	W-R2330012-12114-JCH-020	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4[A]	W-R2330017-031715-ACN-010	3/17/2015																						
MW-4	W-R2330017-031715-ACN-010	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-4[A]	W-R2330017-112015-JPM-033	11/20/2015																						
MW-4	W-R2330017-112015-JPM-033	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330009-050113-MJF-004	5/1/2013	<25	<1.0	<1.0	<50	6.9 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5[A]	W-R2330009-080813-ZTR-009	8/8/2013																						
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5[A]	W-R2330009-111213-ACN-004	11/12/2013																						
MW-5	W-R2330009-111213-ACN-004	11/12/2013	<25	<1.0	<1.0	<50	15 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5[A]	W-R2330012-032814-ACN-008	3/28/2014																						
MW-5	W-R2330012-032814-ACN-008	3/28/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5[A]	W-R2330012-12214-JCH-025	12/2/2014																						
MW-5	W-R2330012-12214-JCH-025	12/2/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5[A]	W-R2330017-031915-JCH-018	3/19/2015																						
MW-5	W-R2330012-031915-JCH-018	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-5[A]	W-R2330017-112015-JPM-031	11/20/2015																						
MW-5	W-R2330017-112015-JPM-031	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330004-090512-MJF-04	9/5/2012	<25	<1.0	<1.0	<50	11 J	4.9	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6	W-R2330009-050213-MJF-012	5/2/2013	<25	<1.0	<1.0	<50	<50	2.8	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6[A]	W-R2330009--080713-ZTR-002	8/7/2013																						
MW-6	W-R2330009--080713-ZTR-002	8/7/2013	<25	<1.0	<1.0	<50	<50	4.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6[A]	W-R2330009-111313-ACN-011	11/13/2013																						
MW-6	W-R2330009-111313-ACN-011	11/13/2013	<25	<1.0	<1.0	<50	<50	4.6	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6[A]	W-R2330012-032714-ACN-004	3/27/2014																						
MW-6	W-R2330012-032714-ACN-004	3/27/2014	<25	<1.0	<1.0	<50	<50	2.7	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6[A]	W-R2330012-12214-JCH-023	12/2/2014																						
MW-6	W-R2330012-12214-JCH-023	12/2/2014	<25	<1.0	<1.0	<50	<50	3.2	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	1.3 J	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6[A]	W-R2330017-031715-ACN-012	3/17/2015																						
MW-6	W-R2330017-031715-ACN-012	3/17/2015	<25	<1.0	<1.0	<50	<50	2.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-6[A]	W-R2330017-111915-JPM-023	11/19/2015																						
MW-6	W-R2330017-111915-JPM-023	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330009-050213-MJF-008	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-7[A]	W-R2330009-080613-ZTR-001	8/6/2013																						

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)																						
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-4[A]	W-R2330012-032714-ACN-006	3/27/2014																						2,800	0.40 J	5.1
MW-4	W-R2330012-032714-ACN-006	3/27/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.0 J	0.23 J	2.9 J
MW-4[A]	W-R2330012-12114-JCH-020	12/1/2014																						500	0.35 J	2.8 J
MW-4	W-R2330012-12114-JCH-020	12/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.5 J	0.37 J	2.5 J
MW-4[A]	W-R2330017-031715-ACN-010	3/17/2015																						3,100	0.33 J	2.3 J
MW-4	W-R2330017-031715-ACN-010	3/17/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.1 J	0.23 J	0.97 J
MW-4[A]	W-R2330017-112015-JPM-033	11/20/2015																						84	NS	NS
MW-4	W-R2330017-112015-JPM-033	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6 J	NS	NS
MW-5	W-R2330009-050113-MJF-004	5/1/2013	<10	<10	<5.0	<10	1.3 J	<5.0	<5.0	<10	<5.0	1.2 J	<4.0	<5.0	0.99 J	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	15 J	0.17 J	31
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	<10	<10	<5.0	<10	1.3 J	<5.0	<5.0	<10	<5.0	1.2 J	<4.0	<5.0	0.93 J	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	12 J	0.27 J	31
MW-5[A]	W-R2330009-080813-ZTR-009	8/8/2013																						330	2.2 J	34
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.7 J	0.27 J	31
MW-5[A]	W-R2330009-111213-ACN-004	11/12/2013																						420	0.26 J	40
MW-5	W-R2330009-111213-ACN-004	11/12/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	13 J	0.20 J	38
MW-5[A]	W-R2330012-032814-ACN-008	3/28/2014																						1,100	0.50 J	40
MW-5	W-R2330012-032814-ACN-008	3/28/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<2.0	0.25 J	31
MW-5[A]	W-R2330012-12214-JCH-025	12/2/2014																						280	0.20 J	33
MW-5	W-R2330012-12214-JCH-025	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.4 J	0.19 J	32
MW-5[A]	W-R2330017-031915-JCH-018	3/19/2015																						360	0.24 J	34
MW-5	W-R2330012-031915-JCH-018	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.9 J	0.29 J	30
MW-5[A]	W-R2330017-112015-JPM-031	11/20/2015																						3,100	NS	NS
MW-5	W-R2330017-112015-JPM-031	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	150	NS	NS
MW-6	W-R2330004-090512-MJF-04	9/5/2012	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	17 J	0.16 J	9.4
MW-6	W-R2330009-050213-MJF-012	5/2/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	1.4 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.5 J	0.15 J	3.7 J
MW-6[A]	W-R2330009--080713-ZTR-002	8/7/2013																						47 J	0.11 J	6.0
MW-6	W-R2330009--080713-ZTR-002	8/7/2013	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.8 J	0.15 J	5.5
MW-6[A]	W-R2330009-111313-ACN-011	11/13/2013																						200 J	0.16 J	5.4 J
MW-6	W-R2330009-111313-ACN-011	11/13/2013	<10	<10	<5.0	<10	0.47 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	160	0.14 J	5.5 J
MW-6[A]	W-R2330012-032714-ACN-004	3/27/2014																						76	0.15 J	3.0 J
MW-6	W-R2330012-032714-ACN-004	3/27/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.6 J	0.17 J	3.4 J
MW-6[A]	W-R2330012-12214-JCH-023	12/2/2014																						320	0.17 J	4.5 J
MW-6	W-R2330012-12214-JCH-023	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.6 J	0.17 J	4.8 J
MW-6[A]	W-R2330017-031715-ACN-012	3/17/2015																						300	0.35 J	3.1 J
MW-6	W-R2330017-031715-ACN-012	3/17/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	0.58 J	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.3 J	0.41 J	1.9 J
MW-6[A]	W-R2330017-111915-JPM-023	11/19/2015																						30 J	NS	NS
MW-6	W-R2330017-111915-JPM-023	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.7 J	NS	NS
MW-7	W-R2330009-050213-MJF-008	5/2/2013	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	0.95 J	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.4 J	0.84 J	0.87 J
MW-7[A]	W-R2330009-080613-ZTR-001	8/6/2013																						39 J	0.39 J	18

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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-4[A]	W-R2330012-032714-ACN-006	3/27/2014	480	0.095 J	<1.0	4.5 J	5.7 J	9.6 J		20,000	7.5	<50	700	<0.2	16 J	1.4 J	<0.20	0.12 J	8.5	35 J
MW-4	W-R2330012-032714-ACN-006	3/27/2014	450	<1.0	<1.0	0.37 J	2.4 J	2.0 J	3.4 J	15,000	<3.0	<50	410	<0.2	8.4 J	<5.0	<0.20	<2.0	0.74 J	20 J
MW-4[A]	W-R2330012-12114-JCH-020	12/1/2014	430	<1.0	<1.0	1.3 J	2.0 J	1.9 J		14,000	0.71 J	<50	110	<0.2	6.2 J	<5.0	<0.20	<2.0	2.2 J	6.5 J
MW-4	W-R2330012-12114-JCH-020	12/1/2014	410	<1.0	<1.0	0.54 J	1.8 J	0.95 J	<5.0	12,000	<3.0	<50	100	<0.2	5.4 J	<5.0	<0.20	<2.0	1.0 J	3.1 J
MW-4[A]	W-R2330017-031715-ACN-010	3/17/2015	500	<1.0	<1.0	4.7 J	3.4 J	7.8		20,000	4.4	<50	140	<0.2	11 J	<5.0	0.029 J	<2.0	6.6	23 J
MW-4	W-R2330017-031715-ACN-010	3/17/2015	450	<1.0	<1.0	0.55 J	1.7 J	1.1 J	<5.0	16,000	<3.0	<50	69	<0.2	4.4 J	<5.0	<0.20	<2.0	0.71 J	<50
MW-4[A]	W-R2330017-112015-JPM-033	11/20/2015	NS	NS	NS	NS	NS	NS		12,000	NS	140,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330017-112015-JPM-033	11/20/2015	NS	NS	NS	NS	NS	NS	NS	11,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330009-050113-MJF-004	5/1/2013	1,300	<1.0	<1.0	1.5 J	2.3 J	<4.0	<0.005	5,300	0.3 J	<50	56	<0.2	3.5 J	0.69 J	<0.20	<2.0	1.3 J	1.1 J
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	1,300	<1.0	<1.0	1.9 J	2.3 J	<4.0	<0.005	5,400	0.061 J	<50	58	<0.2	3.9 J	0.67 J	<0.20	0.069 J	1.2 J	1.1 J
MW-5[A]	W-R2330009-080813-ZTR-009	8/8/2013	1,500	<1.0	0.84 J	2.1 J	2.3 J	3.5 J		5,300	2.1 J	<50	56	<0.2	4.9 J	0.75 J	<0.20	<2.0	2.2 J	10 J
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	1,400	<1.0	0.16 J	1.6 J	3.1 J	2.1 J	<0.005	4,300	0.069 J	<50	50	<0.2	4.3 J	<5.0	<0.20	<2.0	1.4 J	3.1 J
MW-5[A]	W-R2330009-111213-ACN-004	11/12/2013	1,400	<1.0	0.98 J	2.6 J	2.6 J	3.5 J		6,500	4.9 J	<50	81 J	<0.2	6.3 J	<5.0	<0.20	<2.0	2.5 J	11 J
MW-5	W-R2330009-111213-ACN-004	11/12/2013	1,300	<1.0	0.57 J	2.9 J	2.6 J	<4.0	0.0016	5,900	<3.0	<50	71 J	<0.2	5.9 J	<5.0	<0.20	<2.0	1.3 J	2.4 J
MW-5[A]	W-R2330012-032814-ACN-008	3/28/2014	1,300	0.25 J	0.49 J	3.3 J	3.1 J	8.0 J		8,100	12 J	<50	93	<0.2	9.2 J	<5.0	0.051 J	<2.0	4.2	26 J
MW-5	W-R2330012-032814-ACN-008	3/28/2014	1,200	<1.0	<1.0	0.61 J	2.6 J	1.0 J	2.6 J	4,500	0.34	<50	57	<0.2	6.5 J	0.70 J	<0.20	<2.0	1.3 J	0.65 J
MW-5[A]	W-R2330012-12214-JCH-025	12/2/2014	1,400	<1.0	2.1	1.7 J	2.0 J	0.86 J		5,500	1.4 J	<50	79	<0.2	3.4 J	<5.0	0.029 J	<2.0	2.1 J	6.0 J
MW-5	W-R2330012-12214-JCH-025	12/2/2014	1,400	<1.0	0.026 J	1.7 J	1.9 J	<4.0	<5.0	5,000	2.4 J	<50	73	<0.2	3.4 J	<5.0	<0.20	<2.0	1.5 J	<50
MW-5[A]	W-R2330017-031915-JCH-018	3/19/2015	1,400	<1.0	5.3	2.2 J	2.4 J	3.9 J		6,200	2.3 J	<50	81	<0.2	5.5 J	<5.0	<0.20	<2.0	2.2 J	9.3 J
MW-5	W-R2330012-031915-JCH-018	3/19/2015	1,500	<1.0	<1.0	1.3 J	2.6 J	0.98 J	<5.0	5,200	<3.0	<50	73	<0.2	4.8 J	<5.0	<0.20	<2.0	1.5 J	<50
MW-5[A]	W-R2330017-112015-JPM-031	11/20/2015	NS	NS	NS	NS	NS	NS		13,000	NS	150,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330017-112015-JPM-031	11/20/2015	NS	NS	NS	NS	NS	NS	NS	6,400	NS	140,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330004-090512-MJF-04	9/5/2012	580	<1.0	<1.0	1.0 J	2.4 J	0.31 J	<0.005	26,000	0.057 J	<50	500	<0.2	3.8 J	0.051 J	<0.025	<2.0	1.2 J	1.5 J
MW-6	W-R2330009-050213-MJF-012	5/2/2013	480	<1.0	<1.0	1.6 J	1.5 J	<4.0	<0.005	18,000	0.31 J	<50	640	<0.2	5.0 J	<5.0	<0.20	<2.0	0.99 J	2.1 J
MW-6[A]	W-R2330009--080713-ZTR-002	8/7/2013	540	<1.0	0.19 J	0.94 J	1.9 J	4.40		22,000	0.29 J	<50	790	<0.2	7.5 J	<5.0	<0.20	<2.0	1.3 J	3.8 J
MW-6	W-R2330009--080713-ZTR-002	8/7/2013	550	<1.0	0.25 J	0.75 J	2.4 J	3.5 J	<0.005	21,000	0.063 J	<50	750	<0.2	7.6 J	<5.0	<0.20	<2.0	1.3 J	3.2 J
MW-6[A]	W-R2330009-111313-ACN-011	11/13/2013	520	<1.0	0.25 J	1.8 J	1.7 J	1.4 J		18,000	0.55 J	<50	430	<0.2	8.5 J	<5.0	<0.20	<2.0	1.6 J	3.7 J
MW-6	W-R2330009-111313-ACN-011	11/13/2013	520	<1.0	0.43 J	2.2 J	1.7 J	1.3 J	<0.005	18,000	0.41 J	<50	430	<0.2	8.5 J	<5.0	<0.20	<2.0	1.6 J	3.3 J
MW-6[A]	W-R2330012-032714-ACN-004	3/27/2014	460	<1.0	<1.0	0.56 J	2.0 J	2.0 J		11,000	0.31 J	<50	410	<0.2	11 J	<5.0	<0.20	0.084 J	1.2 J	5.0 J
MW-6	W-R2330012-032714-ACN-004	3/27/2014	460	<1.0	<1.0	0.37 J	1.4 J	1.9 J	1.3 J	10,000	<3.0	<50	410	<0.2	12 J	<5.0	<0.20	<2.0	0.99 J	3.0 J
MW-6[A]	W-R2330012-12214-JCH-023	12/2/2014	570	<1.0	0.068 J	1.7 J	1.1 J	0.85 J		18,000	<3.0	<50	420	<0.2	4.9 J	<5.0	0.027 J	<2.0	2.2 J	14 J
MW-6	W-R2330012-12214-JCH-023	12/2/2014	540	<1.0	<1.0	0.53 J	1.0 J	<4.0	<5.0	17,000	<3.0	<50	410	<0.2	4.2 J	<5.0	0.020 J	<2.0	1.8 J	<50
MW-6[A]	W-R2330017-031715-ACN-012	3/17/2015	430	<1.0	0.098 J	1.5 J	1.7 J	4.1		12,000	1.1 J	<50	500	<0.2	15 J	<5.0	<0.20	<2.0	1.9 J	42 J
MW-6	W-R2330017-031715-ACN-012	3/17/2015	360	<1.0	<1.0	0.42 J	1.5 J	2.0 J	<5.0	11,000	<3.0	<50	470	<0.2	14 J	<5.0	<0.20	<2.0	0.84 J	33 J
MW-6[A]	W-R2330017-111915-JPM-023	11/19/2015	NS	NS	NS	NS	NS	NS		22,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330017-111915-JPM-023	11/19/2015	NS	NS	NS	NS	NS	NS	NS	22,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330009-050213-MJF-008	5/2/2013	450	<1.0	<1.0	1.4 J	3.4 J	2.1 J	<0.005	3,400	0.074 J	<50	530	<0.2	11 J	<5.0	<0.20	<2.0	1.2 J	40 J
MW-7[A]	W-R2330009-080613-ZTR-001	8/6/2013	520	<1.0	0.43 J	1.4 J	3.8 J	2.2 J		8,100	0.47 J	<50	910	<0.2	14 J	<5.0	<0.20	<2.0	1.4 J	44 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-7	W-R2330009-080613-ZTR-001	8/6/2013	<25	<1.0	<1.0	<50	5.5 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-7[A]	W-R2330009-111313-ACN-006	11/13/2013																						
MW-7	W-R2330009-111313-ACN-006	11/13/2013	<25	<1.0	<1.0	<50	12 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-7[A]	W-R2330012-032614-ACN-001	3/26/2014																						
MW-7	W-R2330012-032614-ACN-001	3/26/2014	<25	<1.0	<1.0	<50	<50.0	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-7[A]	W-R2330012-112614-JCH-015	11/26/2014																						
MW-7	W-R2330012-112614-JCH-015	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-7[A]	W-R2330017-031715-JCH-013	3/17/2015																						
MW-7	W-R2330017-031715-JCH-013	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-7[A]	W-R2330017-111615-AEP-005	11/16/2015																						
MW-7	W-R2330017-111615-AEP-005	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330009-050313-MJF-013	5/3/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-8[A]	W-R2330009-080713-ZTR-008	8/7/2013																						
MW-8	W-R2330009-080713-ZTR-008	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-8[A]	W-R2330009-111213-ACN-005	11/12/2013																						
MW-8	W-R2330009-111213-ACN-005	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-8[A]	W-R2330012-112614-JCH-014	11/26/2014																						
MW-8	W-R2330012-112614-JCH-014	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-8[A]	W-R2330017-032015-JCH-029	3/20/2015																						
MW-8	W-R2330017-032015-JCH-029	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-8[A]	W-R2330017-111615-AEP-004	11/16/2015																						
MW-8	W-R2330017-111615-AEP-004	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330009-050113-MJF-007	5/1/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-9[A]	W-R2330009-080813-ZTR-013	8/8/2013																						
MW-9	W-R2330009-080813-ZTR-013	8/8/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-9[A]	W-R2330009-111413-ACN-012	11/14/2013																						
MW-9	W-R2330009-111413-ACN-012	11/14/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-9[A]	W-R2330012-12214-JCH-024	12/2/2014																						
MW-9	W-R2330012-12214-JCH-024	12/2/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-9[A]	W-R2330012-032614-ACN-003	3/26/2014																						
MW-9	W-R2330012-032614-ACN-003	3/26/2014	<25	<1.0	<1.0	<50	<50	0.36 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-9[A]	W-R2330017-031915-JCH-017	3/19/2015																						
MW-9	W-R2330012-031915-JCH-017	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-9[A]	W-R2330017-112015-AFB-030	11/20/2015																						
MW-9	W-R2330017-112015-AFB-030	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330009-050113-MJF-003	5/1/2013	<25	<1.0	<1.0	<50	4.3 J	8.6	<1.0	<5.0	25	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A]	W-R2330009-080813-ZTR-010	8/8/2013																						
MW-10	W-R2330009-080813-ZTR-010	8/8/2013	<25	<1.0	<1.0	<50	<50	8.5	<1.0	<5.0	24	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0

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			Semivolatile Organic Compounds (SVOCs)																						
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-7	W-R2330009-080613-ZTR-001	8/6/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.3 J	0.48 J	17
MW-7[A]	W-R2330009-111313-ACN-006	11/13/2013																						21 J	0.58 J	7.0 J
MW-7	W-R2330009-111313-ACN-006	11/13/2013	<10	<10	<5.0	<10	0.18 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.9 J	0.57 J	6.4 J
MW-7[A]	W-R2330012-032614-ACN-001	3/26/2014																						11 J	0.18 J	3.5 J
MW-7	W-R2330012-032614-ACN-001	3/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.6 J	0.16 J	3.4 J
MW-7[A]	W-R2330012-112614-JCH-015	11/26/2014																						20 J	0.18 J	4.5 J
MW-7	W-R2330012-112614-JCH-015	11/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.4 J	0.18 J	3.2 J
MW-7[A]	W-R2330017-031715-JCH-013	3/17/2015																						130	0.21 J	2.9 J
MW-7	W-R2330017-031715-JCH-013	3/17/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.1 J	0.26 J	2.4 J
MW-7[A]	W-R2330017-111615-AEP-005	11/16/2015																						69	NS	NS
MW-7	W-R2330017-111615-AEP-005	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	35 J	NS	NS
MW-8	W-R2330009-050313-MJF-013	5/3/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	1.4 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	11 J	0.21 J	1.2 J
MW-8[A]	W-R2330009-080713-ZTR-008	8/7/2013																						51	0.16 J	4.1 J
MW-8	W-R2330009-080713-ZTR-008	8/7/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.3 J	0.20 J	3.9 J
MW-8[A]	W-R2330009-111213-ACN-005	11/12/2013																						98 J	0.12 J	3.7 J
MW-8	W-R2330009-111213-ACN-005	11/12/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.4 J	0.13 J	3.6 J
MW-8[A]	W-R2330012-112614-JCH-014	11/26/2014																						1,200	0.11 J	4.7 J
MW-8	W-R2330012-112614-JCH-014	11/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	<2.0	3.3 J
MW-8[A]	W-R2330017-032015-JCH-029	3/20/2015																						440	<2.0	2.0 J
MW-8	W-R2330017-032015-JCH-029	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	13 J	0.18 J	1.3 J
MW-8[A]	W-R2330017-111615-AEP-004	11/16/2015																						540	NS	NS
MW-8	W-R2330017-111615-AEP-004	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15 J	NS	NS
MW-9	W-R2330009-050113-MJF-007	5/1/2013	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	0.91 J	0.92 J	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.6 J	0.2 J	44
MW-9[A]	W-R2330009-080813-ZTR-013	8/8/2013																						13 J	0.13 J	52
MW-9	W-R2330009-080813-ZTR-013	8/8/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.7 J	0.21 J	52
MW-9[A]	W-R2330009-111413-ACN-012	11/14/2013																						43 J	0.16 J	59
MW-9	W-R2330009-111413-ACN-012	11/14/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.7 J	0.17 J	60
MW-9[A]	W-R2330012-12214-JCH-024	12/2/2014																						42 J	0.18 J	59
MW-9	W-R2330012-12214-JCH-024	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.9 J	0.25 J	62
MW-9[A]	W-R2330012-032614-ACN-003	3/26/2014																						190	0.19 J	51
MW-9	W-R2330012-032614-ACN-003	3/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.8 J	0.15 J	47
MW-9[A]	W-R2330017-031915-JCH-017	3/19/2015																						260	0.19 J	49
MW-9	W-R2330012-031915-JCH-017	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.0 J	0.34 J	46
MW-9[A]	W-R2330017-112015-AFB-030	11/20/2015																						510	NS	NS
MW-9	W-R2330017-112015-AFB-030	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.9 J	NS	NS
MW-10	W-R2330009-050113-MJF-003	5/1/2013	<10	<10	0.86 J	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	1.0 J	<5.0	1.7 J	<1.0	1.1 J	<5.0	<2.0	<5.0	<5.0	6.1 J	0.19 J	7.4
MW-10[A]	W-R2330009-080813-ZTR-010	8/8/2013																						26 J	0.27 J	6.5
MW-10	W-R2330009-080813-ZTR-010	8/8/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.1 J	0.31 J	6.7

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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-7	W-R2330009-080613-ZTR-001	8/6/2013	520	<1.0	0.21 J	1.2 J	4.3 J	3.1 J	<0.005	7,700	0.096 J	<50	880	<0.2	14 J	<5.0	<0.20	<2.0	1.2 J	39 J
MW-7[A]	W-R2330009-111313-ACN-006	11/13/2013	370	<1.0	1.2 J	1.3 J	3.6 J	2.4 J		5,700	0.31 J	<50	490	<0.2	14 J	<5.0	<0.20	<2.0	2.2 J	22 J
MW-7	W-R2330009-111313-ACN-006	11/13/2013	380	<1.0	0.92 J	1.3 J	4.1 J	1.5 J	0.0037 J	5,600	<3.0	<50	480	<0.2	14 J	<5.0	<0.20	<2.0	2.3 J	6.6 J
MW-7[A]	W-R2330012-032614-ACN-001	3/26/2014	330	<1.0	0.54 J	0.72 J	3.8 J	7.9		8,900	0.39 J	<50	560	<0.2	18 J	0.84 J	<0.20	0.22 J	1.2 J	15 J
MW-7	W-R2330012-032614-ACN-001	3/26/2014	370	<1.0	<1.0	<2.0	3.2 J	4.4	<0.005	9,600	<3.0	<50	530	<0.2	16 J	<5.0	<0.20	<2.0	1.0 J	8.2 J
MW-7[A]	W-R2330012-112614-JCH-015	11/26/2014	420	<1.0	0.16 J	0.98 J	2.9 J	0.69 J		10,000	<3.0	<50	690	<0.2	8.4 J	<5.0	0.022 J	<2.0	2.1 J	6.3 J
MW-7	W-R2330012-112614-JCH-015	11/26/2014	420	<1.0	<1.0	0.81 J	2.5 J	<4.0	<5.0	9,400	<3.0	<50	670	<0.2	7.6 J	<5.0	<0.20	<2.0	1.6 J	<50
MW-7[A]	W-R2330017-031715-JCH-013	3/17/2015	320	<1.0	0.39 J	1.1 J	3.1 J	2.9 J		8,500	0.42 J	<50	440	<0.2	12 J	<5.0	<0.20	<2.0	1.4 J	19 J
MW-7	W-R2330017-031715-JCH-013	3/17/2015	330	<1.0	<1.0	0.87 J	3.2 J	1.6 J	<5.0	8,600	<3.0	<50	450	<0.2	12 J	<5.0	<0.20	<2.0	1.2 J	4.4 J
MW-7[A]	W-R2330017-111615-AEP-005	11/16/2015	NS	NS	NS	NS	NS	NS		7,500	NS	150,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330017-111615-AEP-005	11/16/2015	NS	NS	NS	NS	NS	NS	NS	7,600	NS	150,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330009-050313-MJF-013	5/3/2013	380	<1.0	<1.0	0.56 J	1.5 J	<4.0	<0.005	6,200	<3.0	<50	180	<0.2	4.4 J	<5.0	<0.20	<2.0	0.89 J	2.0 J
MW-8[A]	W-R2330009-080713-ZTR-008	8/7/2013	470	<1.0	0.12 J	1.2 J	1.5 J	3.8 J		8,200	0.80 J	<50	200	<0.2	6.8 J	<5.0	<0.20	<2.0	1.3 J	4.0 J
MW-8	W-R2330009-080713-ZTR-008	8/7/2013	460	<1.0	0.098 J	0.94 J	2.3 J	1.6 J	<0.005	8,100	0.074 J	<50	200	<0.2	6.6 J	<5.0	<0.20	<2.0	0.91 J	3.0 J
MW-8[A]	W-R2330009-111213-ACN-005	11/12/2013	420	<1.0	0.50 J	1.3 J	1.6 J	1.6 J		7,700	0.34 J	<50	200	<0.2	7.6 J	<5.0	<0.20	<2.0	1.5 J	3.2 J
MW-8	W-R2330009-111213-ACN-005	11/12/2013	440	<1.0	0.49 J	2.0 J	1.8 J	1.5 J	0.0015 J	7,500	<3.0	<50	210	<0.2	7.9 J	<5.0	<0.20	<2.0	0.89 J	2.4 J
MW-8[A]	W-R2330012-112614-JCH-014	11/26/2014	370	<1.0	2.1	2.7 J	2.4 J	4.7		8,000	4.7	<50	400	<0.2	19 J	<5.0	<0.20	<2.0	5.2	18 J
MW-8	W-R2330012-112614-JCH-014	11/26/2014	350	<1.0	<1.0	0.34 J	1.3 J	0.50 J	<5.0	4,900	<3.0	<50	330	<0.2	10 J	<5.0	<0.20	<2.0	0.85 J	5.8 J
MW-8[A]	W-R2330017-032015-JCH-029	3/20/2015	330	<1.0	0.73 J	3.2 J	1.2 J	2.7 J		7,100	1.9 J	<50	210	<0.2	6.7 J	<5.0	<0.20	<2.0	2.0 J	11 J
MW-8	W-R2330017-032015-JCH-029	3/20/2015	330	<1.0	<1.0	0.47 J	1.3 J	1.5 J	<5.0	5,900	<3.0	<50	200	<0.2	5.6 J	<5.0	<0.20	<2.0	0.74 J	<50
MW-8[A]	W-R2330017-111615-AEP-004	11/16/2015	NS	NS	NS	NS	NS	NS		3,300	NS	92,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330017-111615-AEP-004	11/16/2015	NS	NS	NS	NS	NS	NS	NS	2,300	NS	91,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330009-050113-MJF-007	5/1/2013	1,700	<1.0	<1.0	1.9 J	2.4 J	0.71 J	<0.005	28,000	0.053 J	<50	760	<0.2	6.3 J	<5.0	<0.20	<2.0	1.2 J	7.5 J
MW-9[A]	W-R2330009-080813-ZTR-013	8/8/2013	1,300	<1.0	0.22 J	1.0 J	1.4 J	2.1 J		31,000	0.17 J	<50	440	<0.2	5.2 J	<5.0	<0.20	<2.0	1.5 J	4.6 J
MW-9	W-R2330009-080813-ZTR-013	8/8/2013	1,300	<1.0	0.24 J	0.91 J	2.2 J	1.7 J	<0.005	30,000	0.068 J	<50	430	<0.2	5.2 J	<5.0	<0.20	<2.0	1.4 J	2.9 J
MW-9[A]	W-R2330009-111413-ACN-012	11/14/2013	2,100	<1.0	<1.0	2.0 J	1.7 J	<4.0		30,000	0.30 J	<50	400	<0.2	6.9 J	<5.0	<0.20	0.14 J	1.5 J	3.7 J
MW-9	W-R2330009-111413-ACN-012	11/14/2013	2,200	<1.0	<1.0	1.0 J	1.7 J	<4.0	<0.005	29,000	0.083 J	<50	340	<0.2	6.3 J	<5.0	<0.20	<2.0	1.5 J	2.5 J
MW-9[A]	W-R2330012-12214-JCH-024	12/2/2014	1,800	<1.0	0.050 J	1.0 J	1.2 J	<4.0		31,000	<3.0	<50	330	<0.2	3.2 J	<5.0	0.024 J	<2.0	1.9 J	3.7 J
MW-9	W-R2330012-12214-JCH-024	12/2/2014	1,900	<1.0	<1.0	1.0 J	1.4 J	<4.0	<5.0	30,000	<3.0	<50	300	<0.2	3.5 J	<5.0	<0.20	<2.0	1.6 J	<50
MW-9[A]	W-R2330012-032614-ACN-003	3/26/2014	1,700	<1.0	<1.0	1.0 J	2.2 J	2.6 J		34,000	0.99 J	<50	600	<0.2	8.0 J	<5.0	<0.20	<2.0	1.9 J	5.3 J
MW-9	W-R2330012-032614-ACN-003	3/26/2014	1,900	<1.0	<1.0	0.70 J	2.2 J	1.4 J	2.1 J	34,000	0.21 J	<50	570	<0.2	7.9 J	<5.0	<0.20	<2.0	1.3 J	2.1 J
MW-9[A]	W-R2330017-031915-JCH-017	3/19/2015	1,700	<1.0	0.094 J	1.4 J	2.0 J	3.9 J		34,000	1.1 J	<50	390	<0.2	7.0 J	<5.0	<0.20	<2.0	2.1 J	11 J
MW-9	W-R2330012-031915-JCH-017	3/19/2015	1,800	<1.0	<1.0	0.83 J	1.9 J	1.4 J	<5.0	33,000	<3.0	<50	370	<0.2	6.3 J	<5.0	<0.20	<2.0	1.2 J	3.9 J
MW-9[A]	W-R2330017-112015-AFB-030	11/20/2015	NS	NS	NS	NS	NS	NS		33,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330017-112015-AFB-030	11/20/2015	NS	NS	NS	NS	NS	NS	NS	32,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330009-050113-MJF-003	5/1/2013	1,800	<1.0	<1.0	1.8 J	2.6 J	<4.0	<0.005	17,000	0.054 J	<50	350	<0.2	4.9 J	0.66 J	<0.20	<2.0	2.3 J	2.4 J
MW-10[A]	W-R2330009-080813-ZTR-010	8/8/2013	1,700	<1.0	0.29 J	2.2 J	3.1 J	3.4 J		17,000	7.3	<50	600	<0.2	7.5 J	<5.0	<0.20	<2.0	2.4 J	9.6 J
MW-10	W-R2330009-080813-ZTR-010	8/8/2013	1,800	<1.0	0.22 J	2.0 J	3.5 J	2.7 J	<0.005	17,000	2.4 J	<50	600	<0.2	7.6 J	<5.0	<0.20	<2.0	2.3 J	5.2 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}inf}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-10[A] (DUP)	W-R2330009-080813-ZTR-011	8/8/2013																						
MW-10 (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	<25	<1.0	<1.0	<50	<50	8.2	<1.0	<5.0	23	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A]	W-R2330009-111313-ACN-008	11/13/2013																						
MW-10	W-R2330009-111313-ACN-008	11/13/2013	<25	<1.0	<1.0	<50	16 J	13	<1.0	<5.0	36	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A] (DUP)	W-R2330009-111313-ACN-009	11/13/2013																						
MW-10 (DUP)	W-R2330009-111313-ACN-009	11/13/2013	<25	<1.0	<1.0	<50	16 J	12	<1.0	<5.0	35	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A]	W-R2330012-032814-ACN-010	3/28/2014																						
MW-10	W-R2330012-032814-ACN-010	3/28/2014	<25	<1.0	<1.0	<50	<50	8.2	<1.0	<5.0	24	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A] (DUP)	W-R2330012-032814-ACN-011	3/28/2014																						
MW-10 (DUP)	W-R2330012-032814-ACN-011	3/28/2014	<25	<1.0	<1.0	<50	<50	8.2	<1.0	<5.0	25	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A]	W-R2330012-12214-JCH-028	12/2/2014																						
MW-10	W-R2330012-12214-JCH-028	12/2/2014	<25	<1.0	<1.0	<50	<50	7.8	<1.0	<5.0	38	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A]	W-R2330017-031915-ACN-019	3/19/2015																						
MW-10	W-R2330017-031915-ACN-019	3/19/2015	<25	<1.0	<1.0	<50	<50	10	<1.0	<5.0	28	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A] (DUP)	W-R2330017-031915-ACN-020	3/19/2015																						
MW-10 (DUP)	W-R2330012-031915-ACN-020	3/19/2015	<25	<1.0	<1.0	<50	<50	10	<1.0	<5.0	27	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-10[A]	W-R2330017-111915-AEP-022	11/19/2015																						
MW-10	W-R2330017-111915-AEP-022	11/19/2015	<25	<1.0	0.48 J	<50	<50	12	<1.0	<5.0	44	<5.0	<1.0	<10	<5.0	<5.0	<1.0	0.29 J	<1.0	<1.0	<3.0	NS	NS	NS
MW-11	W-R2330009-043013-MJF-001	4/30/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	0.56 J	<10	<5.0
MW-11[A]	W-R2330009-080713-ZTR-006	8/7/2013																						
MW-11	W-R2330009-080713-ZTR-006	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-11[A]	W-R2330009-111213-ACN-001	11/12/2013																						
MW-11	W-R2330009-111213-ACN-001	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-11[A]	W-R2330012-032614-ACN-002	3/26/2014																						
MW-11	W-R2330012-032614-ACN-002	3/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-11[A]	W-R2330012-091514-ACN-003	9/15/2014																						
MW-11	W-R2330012-091514-ACN-003	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS	NS	NS	NS
MW-11[A]	W-R2330012-12114-JCH-017	12/1/2014																						
MW-11	W-R2330012-12114-JCH-017	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-11[A]	W-R2330017-031715-ACN-009	3/17/2015																						
MW-11	W-R2330017-031715-ACN-009	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-11[A]	W-R2330017-111915-AEP-019	11/19/2015																						
MW-11	W-R2330017-111915-AEP-019	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330009-050213-MJF-011	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-12[A]	W-R2330009-080713-ZTR-003	8/7/2013																						
MW-12	W-R2330009-080713-ZTR-003	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-12[A]	W-R2330009-111313-ACN-007	11/13/2013																						
MW-12	W-R2330009-111313-ACN-007	11/13/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0

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			Semivolatile Organic Compounds (SVOCs)																				Aluminum	Antimony	Arsenic
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol			
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-10[A] (DUP)	W-R2330009-080813-ZTR-011	8/8/2013																						25 J	0.26 J	6.7
MW-10 (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.4 J	0.25 J	6.4
MW-10[A]	W-R2330009-111313-ACN-008	11/13/2013																						26 J	0.24 J	10
MW-10	W-R2330009-111313-ACN-008	11/13/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	0.28 J	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	12 J	0.23 J	9.7 J
MW-10[A] (DUP)	W-R2330009-111313-ACN-009	11/13/2013																						26 J	0.23 J	10
MW-10 (DUP)	W-R2330009-111313-ACN-009	11/13/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.8 J	0.20 J	9.2 J
MW-10[A]	W-R2330012-032814-ACN-010	3/28/2014																						32 J	0.20 J	6.6 J
MW-10	W-R2330012-032814-ACN-010	3/28/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	2.0 J	0.22 J	6.5 J
MW-10[A] (DUP)	W-R2330012-032814-ACN-011	3/28/2014																						45 J	0.23 J	7.1 J
MW-10 (DUP)	W-R2330012-032814-ACN-011	3/28/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.7 J	0.21 J	6.8 J
MW-10[A]	W-R2330012-12214-JCH-028	12/2/2014																						21 J	0.23 J	7.1
MW-10	W-R2330012-12214-JCH-028	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.1 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.2 J	0.22 J	8.4
MW-10[A]	W-R2330017-031915-ACN-019	3/19/2015																						24 J	0.29 J	7.3
MW-10	W-R2330017-031915-ACN-019	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.8 J	0.26 J	7.0
MW-10[A] (DUP)	W-R2330017-031915-ACN-020	3/19/2015																						26 J	0.21 J	6.6
MW-10 (DUP)	W-R2330012-031915-ACN-020	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.8 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	0.24 J	7.2
MW-10[A]	W-R2330017-111915-AEP-022	11/19/2015																						31 J	NS	NS
MW-10	W-R2330017-111915-AEP-022	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.7 J	NS	NS
MW-11	W-R2330009-043013-MJF-001	4/30/2013	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	0.92 J	<5.0	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.6 J	0.13 J	<5.0
MW-11[A]	W-R2330009-080713-ZTR-006	8/7/2013																						22 J	0.079 J	<5.0
MW-11	W-R2330009-080713-ZTR-006	8/7/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.0 J	0.12 J	<5.0
MW-11[A]	W-R2330009-111213-ACN-001	11/12/2013																						730	0.66 J	1.0 J
MW-11	W-R2330009-111213-ACN-001	11/12/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	22 J	0.30 J	0.65 J
MW-11[A]	W-R2330012-032614-ACN-002	3/26/2014																						180	0.12 J	<5.0
MW-11	W-R2330012-032614-ACN-002	3/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.4 J	0.096 J	<5.0
MW-11[A]	W-R2330012-091514-ACN-003	9/15/2014																						26 J	0.10 J	1.2 J
MW-11	W-R2330012-091514-ACN-003	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.7 J	0.15 J	1.1 J
MW-11[A]	W-R2330012-12114-JCH-017	12/1/2014																						47 J	<2.0	<5.0
MW-11	W-R2330012-12114-JCH-017	12/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.7 J	<2.0	0.65 J
MW-11[A]	W-R2330017-031715-ACN-009	3/17/2015																						65	<2.0	<5.0
MW-11	W-R2330017-031715-ACN-009	3/17/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	0.17 J	<5.0
MW-11[A]	W-R2330017-111915-AEP-019	11/19/2015																						17 J	NS	NS
MW-11	W-R2330017-111915-AEP-019	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.7 J	NS	NS
MW-12	W-R2330009-050213-MJF-011	5/2/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	1.2 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	14 J	0.22 J	1.4 J
MW-12[A]	W-R2330009-080713-ZTR-003	8/7/2013																						170	0.15 J	1.2 J
MW-12	W-R2330009-080713-ZTR-003	8/7/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.9 J	0.26 J	0.93 J
MW-12[A]	W-R2330009-111313-ACN-007	11/13/2013																						89	0.16 J	0.79 J
MW-12	W-R2330009-111313-ACN-007	11/13/2013	<10	<10	<5.0	0.24 J	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.9 J	0.16 J	0.85 J

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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-10[A] (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	1,700	<1.0	0.40 J	2.0 J	3.1 J	3.4 J		17,000	7.2	<50	580	<0.2	7.4 J	0.75 J	<0.20	<2.0	2.2 J	8.5 J
MW-10 (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	1,700	<1.0	0.27 J	2.0 J	3.1 J	2.4 J	<0.005	17,000	2.7 J	<50	600	<0.2	7.4 J	0.79 J	<0.20	<2.0	2.2 J	4.9 J
MW-10[A]	W-R2330009-111313-ACN-008	11/13/2013	1,900	<1.0	1.7 J	3.7 J	3.3 J	1.8 J		2,300	2.8 J	<50	460	<0.2	8.1 J	<5.0	<0.20	<2.0	3.0 J	7.0 J
MW-10	W-R2330009-111313-ACN-008	11/13/2013	1,900	<1.0	1.4 J	2.7 J	3.8 J	1.1 J	0.0019 J	2,100	0.16 J	<50	480	<0.2	8.1 J	<5.0	<0.20	<2.0	2.1 J	3.4 J
MW-10[A] (DUP)	W-R2330009-111313-ACN-009	11/13/2013	1,900	<1.0	1.7 J	2.9 J	3.4 J	1.4 J		2,300	2.8 J	<50	450	<0.2	8.0 J	<5.0	<0.20	<2.0	3.0 J	3.8 J
MW-10 (DUP)	W-R2330009-111313-ACN-009	11/13/2013	1,900	<1.0	1.7 J	2.6 J	3.4 J	1.1 J	0.0023 J	2,100	0.18 J	<50	470	<0.2	8.2 J	<5.0	<0.20	<2.0	2.3 J	5.0 J
MW-10[A]	W-R2330012-032814-ACN-010	3/28/2014	1,700	<1.0	<1.0	1.6 J	3.0 J	1.9 J		24,000	1.6 J	<50	550	<0.2	8.1 J	<5.0	<0.20	<2.0	2.1 J	2.1 J
MW-10	W-R2330012-032814-ACN-010	3/28/2014	1,700	<1.0	<1.0	0.79 J	2.5 J	3.3 J	2.4 J	24,000	0.14 J	<50	540	<0.2	9.8 J	<5.0	<0.20	0.24 J	1.8 J	3.0 J
MW-10[A] (DUP)	W-R2330012-032814-ACN-011	3/28/2014	1,800	<1.0	<1.0	1.6 J	2.9 J	1.5 J		25,000	1.7 J	<50	550	<0.2	7.9 J	0.84 J	<0.20	<2.0	2.3 J	2.1 J
MW-10 (DUP)	W-R2330012-032814-ACN-011	3/28/2014	1,700	<1.0	<1.0	<10	3.0 J	1.1 J	4.1 J	23,000	0.14 J	<50	530	<0.2	8.0 J	0.83 J	<0.20	<2.0	1.9 J	<50
MW-10[A]	W-R2330012-12214-JCH-028	12/2/2014	2,100	<1.0	0.034 J	2.3 J	2.2 J	<4.0		22,000	2.2 J	<50	420	<0.2	2.8 J	<5.0	<0.20	<2.0	3.2 J	3.7 J
MW-10	W-R2330012-12214-JCH-028	12/2/2014	2,100	<1.0	<1.0	2.3 J	2.4 J	<4.0	<5.0	23,000	<3.0	<50	430	<0.2	2.8 J	<5.0	<0.20	<2.0	3.2 J	<50
MW-10[A]	W-R2330017-031915-ACN-019	3/19/2015	2,500	<1.0	0.028 J	2.5 J	2.3 J	0.51 J		23,000	2.5 J	<50	450	<0.2	3.9 J	<5.0	<0.20	<2.0	2.8 J	3.4 J
MW-10	W-R2330017-031915-ACN-019	3/19/2015	2,300	<1.0	<1.0	2.2 J	2.3 J	0.40 J	<5.0	22,000	<3.0	<50	420	<0.2	3.7 J	<5.0	<0.20	<2.0	2.3 J	<50
MW-10[A] (DUP)	W-R2330017-031915-ACN-020	3/19/2015	2,300	<1.0	<1.0	2.2 J	2.3 J	0.65 J		21,000	2.1 J	<50	420	<0.2	3.8 J	<5.0	<0.20	<2.0	2.1 J	3.8 J
MW-10 (DUP)	W-R2330012-031915-ACN-020	3/19/2015	2,400	<1.0	<1.0	2.6 J	2.7 J	0.27 J	<5.0	23,000	0.36 J	<50	430	<0.2	3.7 J	<5.0	0.021 J	<2.0	2.7 J	3.3 J
MW-10[A]	W-R2330017-111915-AEP-022	11/19/2015	NS	NS	NS	NS	NS	NS	NS	22,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330017-111915-AEP-022	11/19/2015	NS	NS	NS	NS	NS	NS	NS	22,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	W-R2330009-043013-MJF-001	4/30/2013	26	<1.0	<1.0	0.69 J	0.41 J	0.76 J	<0.005	13 J	0.0079 J	<50	7.4 J	<0.2	1.2 J	1.7 J	<0.20	<2.0	<4.0	2.0 J
MW-11[A]	W-R2330009-080713-ZTR-006	8/7/2013	57 J	<1.0	<1.0	0.49 J	0.51 J	2.7 J		270	<3.0	<50	58	<0.2	2.2 J	0.74 J	<0.20	<2.0	0.24 J	2.5 J
MW-11	W-R2330009-080713-ZTR-006	8/7/2013	61 J	<1.0	<1.0	0.53 J	0.93 J	2.0 J	<0.005	270	<3.0	<50	61	<0.2	2.2 J	1.1 J	<0.20	<2.0	0.23 J	2.2 J
MW-11[A]	W-R2330009-111213-ACN-001	11/12/2013	38 J	<1.0	<1.0	3.1 J	1.2 J	3.0 J		1,600	1.3 J	<50	75	<0.2	4.8 J	1.1 J	<0.20	0.24 J	2.1 J	8.6 J
MW-11	W-R2330009-111213-ACN-001	11/12/2013	47 J	<1.0	<1.0	0.40 J	0.91 J	0.82 J	<0.005	150 J	<3.0	<50	60	<0.2	3.2 J	0.83 J	<0.20	<2.0	<4.0	3.1 J
MW-11[A]	W-R2330012-032614-ACN-002	3/26/2014	38 J	<1.0	<1.0	0.55 J	0.74 J	1.5 J		380	0.37 J	<50	52	<0.2	3.4 J	1.3 J	<0.20	<2.0	0.34 J	0.91 J
MW-11	W-R2330012-032614-ACN-002	3/26/2014	47 J	<1.0	<1.0	<10	0.80 J	0.96 J	<0.005	110 J	<3.0	<50	54	<0.2	3.3 J	0.83 J	<0.20	0.098 J	0.28 J	<50.0
MW-11[A]	W-R2330012-091514-ACN-003	9/15/2014	72 J	<1.0	0.047 J	<10	0.57 J	0.76 J		500	<3.0	<50	68	0.062 J	2.5 J	<5.0	<0.20	<2.0	0.28 J	2.8 J
MW-11	W-R2330012-091514-ACN-003	9/15/2014	75 J	<1.0	<1.0	<10	1.1 J	1.4 J	NS	500	<3.0	<50	68	0.064 J	2.6 J	<5.0	<0.20	<2.0	0.20 J	3.2 J
MW-11[A]	W-R2330012-12114-JCH-017	12/1/2014	58 J	<1.0	0.087 J	0.23 J	0.67 J	4.3		220	<3.0	<50	110	<0.2	3.3 J	<5.0	<0.20	<2.0	0.48 J	7.3 J
MW-11	W-R2330012-12114-JCH-017	12/1/2014	69 J	<1.0	0.052 J	<10	0.67 J	1.1 J	<5.0	320	<3.0	<50	96	<0.2	2.9 J	0.93 J	<0.20	<2.0	<4.0	3.5 J
MW-11[A]	W-R2330017-031715-ACN-009	3/17/2015	20 J	<1.0	0.39 J	2.5 J	0.30 J	1.2 J		110 J	<3.0	<50	130	<0.2	3.5 J	0.92 J	<0.20	<2.0	<4.0	<50
MW-11	W-R2330017-031715-ACN-009	3/17/2015	20 J	<1.0	0.29 J	0.16 J	0.47 J	0.78 J	<5.0	<200	<3.0	<50	4.8 J	<0.2	1.7 J	1.0 J	<0.20	<2.0	<4.0	<50
MW-11[A]	W-R2330017-111915-AEP-019	11/19/2015	NS	NS	NS	NS	NS	NS		480	NS	29,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	W-R2330017-111915-AEP-019	11/19/2015	NS	NS	NS	NS	NS	NS	NS	470	NS	29,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330009-050213-MJF-011	5/2/2013	1,100	<1.0	<1.0	1.9 J	4.0 J	<4.0	<0.005	15,000	0.17 J	<50	1,500	<0.2	3.3 J	<5.0	<0.20	<2.0	0.99 J	8.8 J
MW-12[A]	W-R2330009-080713-ZTR-003	8/7/2013	1,400	<1.0	0.27 J	1.2 J	1.4 J	6.1		18,000	0.36 J	<50	470	<0.2	4.3 J	<5.0	<0.20	<2.0	1.7 J	4.5 J
MW-12	W-R2330009-080713-ZTR-003	8/7/2013	1,500	<1.0	0.30 J	0.73 J	2.4 J	3.6 J	<0.005	17,000	0.062 J	<50	420	<0.2	4.2 J	<5.0	<0.20	<2.0	1.2 J	2.7 J
MW-12[A]	W-R2330009-111313-ACN-007	11/13/2013	1,600	0.13 J	0.33 J	1.0 J	1.5 J	1.5 J		12,000	0.26 J	<50	210	<0.2	4.5 J	<5.0	<0.20	0.12 J	1.3 J	3.4 J
MW-12	W-R2330009-111313-ACN-007	11/13/2013	1,500	<1.0	0.68 J	0.99 J	1.9 J	1.3 J	<0.005	12,000	<3.0	<50	190	<0.2	4.7 J	<5.0	<0.20	<2.0	0.97 J	2.2 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-12[A]	W-R2330012-032714-ACN-005	3/27/2014																						
MW-12	W-R2330012-032714-ACN-005	3/27/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-12[A]	W-R2330012-12114-JCH-021	12/1/2014																						
MW-12	W-R2330012-12114-JCH-021	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-12[A]	W-R2330017-031715-ACN-011	3/17/2015																						
MW-12	W-R2330017-031715-ACN-011	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-12[A]	W-R2330017-112015-AFB-032	11/20/2015																						
MW-12	W-R2330017-112015-AFB-032	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12[A]	W-R2330017-112015-AFB-DUP2	11/20/2015																						
MW-12	W-R2330017-112015-AFB-DUP2	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-052014-ACN-029	5/20/2014																						
MW-17	W-R2330012-052014-ACN-029	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-17[A]	W-R2330012-091514-ACN-004	9/15/2014																						
MW-17	W-R2330012-091514-ACN-004	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A] (DUP)	W-R2330012-091514-ACN-005	9/15/2014																						
MW-17 (DUP)	W-R2330012-091514-ACN-005	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-112414-MCW-004	11/24/2014																						
MW-17	W-R2330012-112414-MCW-004	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-17[A]	W-R2330017-031615-ACN-007	3/16/2015																						
MW-17	W-R2330017-031615-ACN-007	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-17[A]	W-R2330017-111715-AFB-009	11/17/2015																						
MW-17	W-R2330017-111715-AFB-009	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18[A]	W-R2330012-052014-ACN-026	5/20/2014																						
MW-18	W-R2330012-052014-ACN-026	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-18[A]	W-R2330012-112414-ACN-001	11/24/2014																						
MW-18	W-R2330012-112414-ACN-001	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-18[A]	W-R2330017-031615-JCH-003	3/16/2015																						
MW-18	W-R2330017-031615-JCH-003	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.42 J	<3.0	<10	<10	<5.0
MW-18[A]	W-R2330017-111715-JPM-007	11/17/2015																						
MW-18	W-R2330017-111715-JPM-007	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-19[A]	W-R2330012-052014-ACN-027	5/20/2014																						
MW-19	W-R2330012-052014-ACN-027	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-19[A]	W-R2330012-112414-ACN-002	11/24/2014																						
MW-19	W-R2330012-112414-ACN-002	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-19[A]	W-R2330017-031615-JCH-004	3/16/2015																						
MW-19	W-R2330017-031615-JCH-004	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-19[A]	W-R2330017-111715-AFB-008	11/17/2015																						
MW-19	W-R2330017-111715-AFB-008	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	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)																					
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-12[A]	W-R2330012-032714-ACN-005	3/27/2014																						61	0.18 J	0.82 J
MW-12	W-R2330012-032714-ACN-005	3/27/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.9 J	0.19 J	<5.0
MW-12[A]	W-R2330012-12114-JCH-021	12/1/2014																						1,200	0.31 J	2.7 J
MW-12	W-R2330012-12114-JCH-021	12/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	15 J	0.22 J	<5.0
MW-12[A]	W-R2330017-031715-ACN-011	3/17/2015																						1,000	0.31 J	1.4 J
MW-12	W-R2330017-031715-ACN-011	3/17/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.1 J	0.58 J	<5.0
MW-12[A]	W-R2330017-112015-AFB-032	11/20/2015																						340	NS	NS
MW-12	W-R2330017-112015-AFB-032	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.2 J	NS	NS
MW-12[A]	W-R2330017-112015-AFB-DUP2	11/20/2015																						380	NS	NS
MW-12	W-R2330017-112015-AFB-DUP2	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.2 J	NS	NS
MW-17[A]	W-R2330012-052014-ACN-029	5/20/2014																						1,400	0.11 J	5.6
MW-17	W-R2330012-052014-ACN-029	5/20/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	51	0.063 J	4.5 J
MW-17[A]	W-R2330012-091514-ACN-004	9/15/2014																						980	0.063 J	5.8
MW-17	W-R2330012-091514-ACN-004	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	21 J	0.093 J	5.1
MW-17[A] (DUP)	W-R2330012-091514-ACN-005	9/15/2014																						1,200	0.071 J	6.0
MW-17 (DUP)	W-R2330012-091514-ACN-005	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	19 J	0.042 J	5.3
MW-17[A]	W-R2330012-112414-MCW-004	11/24/2014																						700	<2.0	6.3
MW-17	W-R2330012-112414-MCW-004	11/24/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	18 J	<2.0	5.8
MW-17[A]	W-R2330017-031615-ACN-007	3/16/2015																						2,000	<2.0	5.1
MW-17	W-R2330017-031615-ACN-007	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	9.8 J	<2.0	2.7 J
MW-17[A]	W-R2330017-111715-AFB-009	11/17/2015																						990	NS	NS
MW-17	W-R2330017-111715-AFB-009	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.6 J	NS	NS
MW-18[A]	W-R2330012-052014-ACN-026	5/20/2014																						5,400	0.35 J	10
MW-18	W-R2330012-052014-ACN-026	5/20/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	56	0.24 J	5.1
MW-18[A]	W-R2330012-112414-ACN-001	11/24/2014																						25,000	1.0 J	46
MW-18	W-R2330012-112414-ACN-001	11/24/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	45 J	0.18 J	11
MW-18[A]	W-R2330017-031615-JCH-003	3/16/2015																						28,000	1.3 J	51
MW-18	W-R2330017-031615-JCH-003	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	23 J	0.16 J	6.7
MW-18[A]	W-R2330017-111715-JPM-007	11/17/2015																						2,200	NS	NS
MW-18	W-R2330017-111715-JPM-007	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22 J	NS	NS
MW-19[A]	W-R2330012-052014-ACN-027	5/20/2014																						1,900	0.089 J	6.2
MW-19	W-R2330012-052014-ACN-027	5/20/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	120	0.12 J	4.5 J
MW-19[A]	W-R2330012-112414-ACN-002	11/24/2014																						7,900	0.49 J	14
MW-19	W-R2330012-112414-ACN-002	11/24/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	74	0.15 J	6.3
MW-19[A]	W-R2330017-031615-JCH-004	3/16/2015																						1,600	0.12 J	11
MW-19	W-R2330017-031615-JCH-004	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.78 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	18 J	0.14 J	5 J
MW-19[A]	W-R2330017-111715-AFB-008	11/17/2015																						4,100	NS	NS
MW-19	W-R2330017-111715-AFB-008	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	370	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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-12[A]	W-R2330012-032714-ACN-005	3/27/2014	1,200	<1.0	<1.0	0.53 J	1.9 J	3.6 J		8,800	0.24 J	<50	750	<0.2	7.0 J	<5.0	<0.20	<2.0	1.1 J	4.1 J
MW-12	W-R2330012-032714-ACN-005	3/27/2014	1,300	<1.0	<1.0	0.43 J	1.5 J	4.6	2.2 J	9,100	0.22 J	<50	660	<0.2	8.4 J	<5.0	<0.20	<2.0	1.1 J	5.8 J
MW-12[A]	W-R2330012-12114-JCH-021	12/1/2014	1,600	<1.0	0.090 J	2.6 J	1.3 J	3.9 J		14,000	1.3 J	<50	310	<0.2	3.5 J	<5.0	0.040 J	<2.0	4.5	8.1 J
MW-12	W-R2330012-12114-JCH-021	12/1/2014	1,600	<1.0	<1.0	0.55 J	0.86 J	<4.0	<5.0	12,000	<3.0	<50	340	<0.2	1.7 J	<5.0	0.064 J	<2.0	1.0 J	<50
MW-12[A]	W-R2330017-031715-ACN-011	3/17/2015	1,800	<1.0	<1.0	2.2 J	1.9 J	7.6		14,000	2.2 J	<50	170	<0.2	6.5 J	<5.0	<0.20	<2.0	2.9 J	13 J
MW-12	W-R2330017-031715-ACN-011	3/17/2015	1,500	<1.0	<1.0	0.58 J	1.4 J	1.3 J	<5.0	12,000	<3.0	<50	140	<0.2	4.4 J	<5.0	<0.20	<2.0	0.93 J	4.5 J
MW-12[A]	W-R2330017-112015-AFB-032	11/20/2015	NS	NS	NS	NS	NS	NS		12,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330017-112015-AFB-032	11/20/2015	NS	NS	NS	NS	NS	NS	NS	11,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12[A]	W-R2330017-112015-AFB-DUP2	11/20/2015	NS	NS	NS	NS	NS	NS		12,000	NS	140,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330017-112015-AFB-DUP2	11/20/2015	NS	NS	NS	NS	NS	NS	NS	11,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-052014-ACN-029	5/20/2014	160	<1.0	<1.0	2.4 J	0.98 J	2.8 J		4,200	2.2 J	<50	210	<0.2	3.6 J	<5.0	<0.20	<2.0	4.3	7.9 J
MW-17	W-R2330012-052014-ACN-029	5/20/2014	150	<1.0	<1.0	<10	0.23 J	<4.0	<0.005	2,100	0.052 J	<50	180	<0.2	1.2 J	<5.0	<0.20	<2.0	0.65 J	1.7 J
MW-17[A]	W-R2330012-091514-ACN-004	9/15/2014	150	<1.0	0.056 J	1.5 J	0.80 J	2.2 J		3,600	1.8 J	<50	240	0.064 J	4.4 J	<5.0	<0.20	<2.0	2.8 J	7.9 J
MW-17	W-R2330012-091514-ACN-004	9/15/2014	150	<1.0	<1.0	<10	0.65 J	0.96 J	NS	2,500	<3.0	<50	220	0.064 J	3.0 J	<5.0	<0.20	<2.0	0.36 J	3.1 J
MW-17[A] (DUP)	W-R2330012-091514-ACN-005	9/15/2014	150	<1.0	<1.0	2.2 J	0.85 J	3.2 J		3,800	1.8 J	<50	240	0.063 J	4.7 J	<5.0	<0.20	<2.0	2.9 J	7.7 J
MW-17 (DUP)	W-R2330012-091514-ACN-005	9/15/2014	140	<1.0	<1.0	0.50 J	0.50 J	0.94 J	NS	2,500	<3.0	<50	230	0.058 J	3.0 J	<5.0	<0.20	<2.0	0.32 J	2.9 J
MW-17[A]	W-R2330012-112414-MCW-004	11/24/2014	190	<1.0	0.075 J	1.6 J	0.61 J	1.7 J		4,100	1.5 J	<50	300	<0.2	2.2 J	<5.0	<0.20	<2.0	2.4 J	9.6 J
MW-17	W-R2330012-112414-MCW-004	11/24/2014	190	<1.0	<1.0	<10	0.25 J	0.23 J	<5.0	3,000	<3.0	<50	280	<0.2	0.74 J	<5.0	<0.20	<2.0	<4.0	3.4 J
MW-17[A]	W-R2330017-031615-ACN-007	3/16/2015	260	<1.0	0.45 J	2.9 J	1.4 J	4.2		5,300	3.4	<50	330	<0.2	6.4 J	<5.0	<0.20	<2.0	3.7 J	11 J
MW-17	W-R2330017-031615-ACN-007	3/16/2015	240	<1.0	0.050 J	0.14 J	0.62 J	1.0 J	<5.0	2,300	<3.0	<50	320	<0.2	3.5 J	<5.0	<0.20	<2.0	<4.0	3.2 J
MW-17[A]	W-R2330017-111715-AFB-009	11/17/2015	NS	NS	NS	NS	NS	NS		4,600	NS	22,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-17	W-R2330017-111715-AFB-009	11/17/2015	NS	NS	NS	NS	NS	NS	NS	2,600	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-18[A]	W-R2330012-052014-ACN-026	5/20/2014	400	0.23 J	0.28 J	8.8 J	5.6 J	11		13,000	6.9	<50	600	<0.2	15 J	1.6 J	0.047 J	0.18 J	16	27 J
MW-18	W-R2330012-052014-ACN-026	5/20/2014	370	0.097 J	0.16 J	0.30 J	1.3 J	<4.0	<0.005	2,000	0.20 J	<50	250	<0.2	3.1 J	<5.0	<0.20	0.21 J	0.61 J	2.9 J
MW-18[A]	W-R2330012-112414-ACN-001	11/24/2014	730	1.2	1.4	48	34	74		72,000	52	<50	3,800	0.030 J	79	8.0	0.17 J	1.3 J	90	200
MW-18	W-R2330012-112414-ACN-001	11/24/2014	550	<1.0	0.088 J	<10	0.59 J	0.21 J	<5.0	3,600	<3.0	<50	210	<0.2	1.9 J	<5.0	<0.20	<2.0	<4.0	3.6 J
MW-18[A]	W-R2330017-031615-JCH-003	3/16/2015	740	0.77 J	1.4	35	25	60		60,000	45	<50	2700	<0.2	71	2.5 J	0.16 J	0.91 J	67	170
MW-18	W-R2330017-031615-JCH-003	3/16/2015	450	<1.0	0.041 J	0.15 J	0.97 J	1.5 J	<5.0	2,800	<3.0	<50	180	<0.2	5.3 J	<5.0	<0.20	<2.0	<4.0	4.6 J
MW-18[A]	W-R2330017-111715-JPM-007	11/17/2015	NS	NS	NS	NS	NS	NS		7,200	NS	30,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-18	W-R2330017-111715-JPM-007	11/17/2015	NS	NS	NS	NS	NS	NS	NS	2,900	NS	25,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-19[A]	W-R2330012-052014-ACN-027	5/20/2014	350	<1.0	0.062 J	3.5 J	1.5 J	3.4 J		5,300	1.6 J	<50	350	<0.2	5.3 J	<5.0	<0.20	<2.0	6.3	9.2 J
MW-19	W-R2330012-052014-ACN-027	5/20/2014	320	<1.0	<1.0	0.53 J	1.1 J	0.87 J	1.2 J	2,400	0.088 J	<50	300	<0.2	1.9 J	<5.0	<0.20	<2.0	1.3 J	2.5 J
MW-19[A]	W-R2330012-112414-ACN-002	11/24/2014	380	0.34 J	0.27 J	16	6.7 J	17		16,000	9.7	<50	560	<0.2	21	1.7 J	0.080 J	<2.0	24	53
MW-19	W-R2330012-112414-ACN-002	11/24/2014	330	<1.0	0.054 J	0.30 J	0.93 J	0.18 J	<5.0	2,000	<3.0	<50	350	<0.2	1.8 J	<5.0	<0.20	<2.0	0.48 J	3.9 J
MW-19[A]	W-R2330017-031615-JCH-004	3/16/2015	510	<1.0	<1.0	2.8 J	1.9 J	4.1		6,600	1.7 J	<50	520	<0.2	9.4 J	0.82 J	<0.20	<2.0	4.2	11 J
MW-19	W-R2330017-031615-JCH-004	3/16/2015	540	<1.0	<1.0	0.3 J	0.91 J	1.8 J	<5.0	3,500	<3.0	<50	460	<0.2	5.6 J	<5.0	<0.20	<2.0	0.53 J	3.7 J
MW-19[A]	W-R2330017-111715-AFB-008	11/17/2015	NS	NS	NS	NS	NS	NS		11,000	NS	38,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-19	W-R2330017-111715-AFB-008	11/17/2015	NS	NS	NS	NS	NS	NS	NS	4,400	NS	34,000	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			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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-20[A]	W-R2330012-052014-ACN-028	5/20/2014																						
MW-20	W-R2330012-052014-ACN-028	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-20[A]	W-R2330012-112414-ACN-003	11/24/2014																						
MW-20	W-R2330012-112414-ACN-003	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-20[A]	W-R2330017-031615-ACN-005	3/16/2015																						
MW-20	W-R2330017-031615-ACN-005	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-20[A] (DUP)	W-R2330017-031615-ACN-006	3/16/2015																						
MW-20 (DUP)	W-R2330017-031615-ACN-006	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-20[A]	W-R2330017-111715-JPM-010	11/17/2015																						
MW-20	W-R2330017-111715-JPM-010	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A]	W-R2330012-051914-ACN-021	5/19/2014																						
MW-21	W-R2330012-051914-ACN-021	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-21[A]	W-R2330012-112514-ACN-006	11/25/2014																						
MW-21	W-R2330012-112514-ACN-006	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-21[A]	W-R2330017-032015-JCH-023	3/20/2015																						
MW-21	W-R2330017-032015-JCH-023	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-21[A]	W-R2330012-111815-JPM-013	11/18/2015																						
MW-21	W-R2330012-111815-JPM-013	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A] (DUP)	DUP 1	11/18/2015																						
MW-21 (DUP)	DUP 1	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-22[A]	W-R2330012-051914-ACN-022	5/19/2014																						
MW-22	W-R2330012-051914-ACN-022	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-22[A]	W-R2330012-112514-ACN-007	11/25/2014																						
MW-22	W-R2330012-112514-ACN-007	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-22[A] (DUP)	W-R2330012-112514-ACN-008	11/25/2014																						
MW-22 (DUP)	W-R2330012-112514-ACN-008	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-22[A]	W-R2330017-032015-JCH-027	3/20/2015																						
MW-22	W-R2330017-032015-JCH-027	3/20/2015	<25	<1.0	<1.0	<50	12 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-22[A]	W-R2330017-111815-JPM-014	11/18/2015																						
MW-22	W-R2330017-111815-JPM-014	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-23[A]	W-R2330012-051914-ACN-023	5/19/2014																						
MW-23	W-R2330012-051914-ACN-023	5/19/2014	<25	<1.0	<1.0	<50	<50	3.7	<1.0	<5.0	40	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-23[A] (DUP)	W-R2330012-051914-ACN-024	5/19/2014																						
MW-23 (DUP)	W-R2330012-051914-ACN-024	5/19/2014	<25	<1.0	<1.0	<50	<50	4.2	<1.0	<5.0	45	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-23[A]	W-R2330012-112514-ACN-009	11/25/2014																						
MW-23	W-R2330012-112514-ACN-009	11/25/2014	<25	<1.0	<1.0	<50	<50	5.4	<1.0	<5.0	89	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-23[A]	W-R2330017-032015-ACN-028	3/20/2015																						
MW-23	W-R2330017-032015-ACN-028	3/20/2015	<25	<1.0	<1.0	<50	<50	2.7	<1.0	<5.0	45	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0

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			Semivolatile Organic Compounds (SVOCs)																						
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-20[A]	W-R2330012-052014-ACN-028	5/20/2014																						1,800	0.15 J	9.5
MW-20	W-R2330012-052014-ACN-028	5/20/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	15 J	0.065 J	5.6
MW-20[A]	W-R2330012-112414-ACN-003	11/24/2014																						330	<2.0	8.8
MW-20	W-R2330012-112414-ACN-003	11/24/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	100	<2.0	7.7
MW-20[A]	W-R2330017-031615-ACN-005	3/16/2015																						1,600	0.14 J	7.5
MW-20	W-R2330017-031615-ACN-005	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	64	0.13 J	5.8
MW-20[A] (DUP)	W-R2330017-031615-ACN-006	3/16/2015																						1,600	0.13 J	7.6
MW-20 (DUP)	W-R2330017-031615-ACN-006	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	43 J	<2.0	6.1
MW-20[A]	W-R2330017-111715-JPM-010	11/17/2015																						2,600	NS	NS
MW-20	W-R2330017-111715-JPM-010	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	93	NS	NS
MW-21[A]	W-R2330012-051914-ACN-021	5/19/2014																						1,400	0.16 J	1.9 J
MW-21	W-R2330012-051914-ACN-021	5/19/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.87 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	48 J	0.16 J	<5.0
MW-21[A]	W-R2330012-112514-ACN-006	11/25/2014																						480	0.15 J	1.1 J
MW-21	W-R2330012-112514-ACN-006	11/25/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	23 J	0.24 J	0.70 J
MW-21[A]	W-R2330017-032015-JCH-023	3/20/2015																						3,000	0.23 J	2.2 J
MW-21	W-R2330017-032015-JCH-023	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	23 J	0.19 J	<5.0
MW-21[A]	W-R2330012-111815-JPM-013	11/18/2015																						34 J	NS	NS
MW-21	W-R2330012-111815-JPM-013	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2 J	NS	NS
MW-21[A] (DUP)	DUP 1	11/18/2015																						27 J	NS	NS
MW-21 (DUP)	DUP 1	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7 J	NS	NS
MW-22[A]	W-R2330012-051914-ACN-022	5/19/2014																						8,100	0.78 J	14
MW-22	W-R2330012-051914-ACN-022	5/19/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	1.5 J	<10	<4.0	<5.0	1.2 J	<5.0	0.88 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	23 J	0.24 J	4.3 J
MW-22[A]	W-R2330012-112514-ACN-007	11/25/2014																						200	0.18 J	16
MW-22	W-R2330012-112514-ACN-007	11/25/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.7 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	12 J	0.22 J	15
MW-22[A] (DUP)	W-R2330012-112514-ACN-008	11/25/2014																						160	<2.0	16
MW-22 (DUP)	W-R2330012-112514-ACN-008	11/25/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.7 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	14 J	0.11 J	16
MW-22[A]	W-R2330017-032015-JCH-027	3/20/2015																						340	0.17 J	14
MW-22	W-R2330017-032015-JCH-027	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.0 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.1 J	0.23 J	13
MW-22[A]	W-R2330017-111815-JPM-014	11/18/2015																						95	NS	NS
MW-22	W-R2330017-111815-JPM-014	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.0 J	NS	NS
MW-23[A]	W-R2330012-051914-ACN-023	5/19/2014																						560	0.15 J	13
MW-23	W-R2330012-051914-ACN-023	5/19/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.85 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	7.7 J	0.089 J	12
MW-23[A] (DUP)	W-R2330012-051914-ACN-024	5/19/2014																						590	0.11 J	12
MW-23 (DUP)	W-R2330012-051914-ACN-024	5/19/2014	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.91 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.5 J	0.076 J	12
MW-23[A]	W-R2330012-112514-ACN-009	11/25/2014																						6,700	1.1 J	46
MW-23	W-R2330012-112514-ACN-009	11/25/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	21 J	0.20 J	26
MW-23[A]	W-R2330017-032015-ACN-028	3/20/2015																						650	0.20 J	17
MW-23	W-R2330017-032015-ACN-028	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.0	<5.0	1.6 J	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.7 J	0.21 J	16

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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-20[A]	W-R2330012-052014-ACN-028	5/20/2014	340	<1.0	0.061 J	3.8 J	1.6 J	5.1		9,600	2.7 J	<50	280	<0.2	5.5 J	<5.0	<0.20	<2.0	6.4	11 J
MW-20	W-R2330012-052014-ACN-028	5/20/2014	330	<1.0	<1.0	0.39 J	0.71 J	1.1 J	<0.005	4,900	<3.0	<50	200	<0.2	1.9 J	<5.0	<0.20	<2.0	0.57 J	1.1 J
MW-20[A]	W-R2330012-112414-ACN-003	11/24/2014	290	<1.0	<1.0	0.90 J	0.49 J	1.2 J		4,200	0.69 J	<50	160	<0.2	1.9 J	<5.0	<0.20	<2.0	1.9 J	5.3 J
MW-20	W-R2330012-112414-ACN-003	11/24/2014	300	<1.0	<1.0	0.39 J	0.66 J	0.32 J	<5.0	3,600	<3.0	<50	150	<0.2	1.4 J	<5.0	<0.20	<2.0	0.68 J	4.5 J
MW-20[A]	W-R2330017-031615-ACN-005	3/16/2015	250	<1.0	<1.0	2.8 J	1.5 J	4.9		7,000	2.8 J	<50	210	<0.2	6.7 J	<5.0	<0.20	<2.0	4.0 J	12 J
MW-20	W-R2330017-031615-ACN-005	3/16/2015	260	<1.0	<1.0	0.36 J	0.73 J	0.98 J	<5.0	4,200	<3.0	<50	170	<0.2	3.7 J	<5.0	<0.20	<2.0	0.52 J	<50
MW-20[A] (DUP)	W-R2330017-031615-ACN-006	3/16/2015	250	<1.0	<1.0	2.8 J	1.5 J	4.7		7,100	2.8 J	<50	210	<0.2	6.7 J	<5.0	<0.20	<2.0	3.9 J	12 J
MW-20 (DUP)	W-R2330017-031615-ACN-006	3/16/2015	250	<1.0	<1.0	0.28 J	0.61 J	0.93 J	<5.0	4,900	<3.0	<50	170	<0.2	3.7 J	<5.0	<0.20	<2.0	0.55 J	<50
MW-20[A]	W-R2330017-111715-JPM-010	11/17/2015	NS	NS	NS	NS	NS	NS		10,000	NS	56,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-20	W-R2330017-111715-JPM-010	11/17/2015	NS	NS	NS	NS	NS	NS	NS	4,200	NS	55,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A]	W-R2330012-051914-ACN-021	5/19/2014	38 J	<1.0	<1.0	2.4 J	1.7 J	4.1		2,400	1.4 J	<50	60	<0.2	5.5 J	0.68 J	<0.20	<2.0	3.8 J	9.9 J
MW-21	W-R2330012-051914-ACN-021	5/19/2014	31 J	<1.0	<1.0	<10	0.91 J	1.2 J	<0.005	56 J	<3.0	<50	9.1 J	<0.2	1.9 J	<5.0	<0.20	<2.0	0.32 J	1.9 J
MW-21[A]	W-R2330012-112514-ACN-006	11/25/2014	81 J	<1.0	0.076 J	1.1 J	0.89 J	2.0 J		850	0.72 J	<50	52	<0.2	3.0 J	<5.0	<0.20	<2.0	1.8 J	8.2 J
MW-21	W-R2330012-112514-ACN-006	11/25/2014	72 J	<1.0	0.061 J	0.22 J	0.70 J	0.98 J	<5.0	42 J	<3.0	<50	37 J	<0.2	2.0 J	<5.0	<0.20	<2.0	<4.0	4.5 J
MW-21[A]	W-R2330017-032015-JCH-023	3/20/2015	73 J	<1.0	0.21 J	5.1 J	2.5 J	6.2		4,100	2.9 J	<50	100	<0.2	7.7 J	<5.0	0.038 J	<2.0	8.5	18 J
MW-21	W-R2330017-032015-JCH-023	3/20/2015	62 J	<1.0	0.078 J	0.14 J	0.89 J	0.41 J	<5.0	20 J	<3.0	<50	25 J	<0.2	2.0 J	<5.0	<0.20	<2.0	<4.0	<50
MW-21[A]	W-R2330012-111815-JPM-013	11/18/2015	NS	NS	NS	NS	NS	NS		59 J	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21	W-R2330012-111815-JPM-013	11/18/2015	NS	NS	NS	NS	NS	NS	NS	11 J	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A] (DUP)	DUP 1	11/18/2015	NS	NS	NS	NS	NS	NS		47 J	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21 (DUP)	DUP 1	11/18/2015	NS	NS	NS	NS	NS	NS	NS	10 J	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-22[A]	W-R2330012-051914-ACN-022	5/19/2014	540	<1.0	0.56 J	14	9.5 J	31		21,000	19	<50	730	<0.2	23	2.7 J	<0.20	<2.0	24	81
MW-22	W-R2330012-051914-ACN-022	5/19/2014	440	<1.0	<1.0	<10	2.2 J	0.64 J	1.3 J	3,100	0.079 J	<50	360	<0.2	3.2 J	<5.0	<0.20	<2.0	0.64 J	2.2 J
MW-22[A]	W-R2330012-112514-ACN-007	11/25/2014	1,300	<1.0	0.11 J	1.1 J	1.9 J	1.3 J		11,000	0.62 J	<50	250	<0.2	4.4 J	<5.0	<0.20	<2.0	1.1 J	6.8 J
MW-22	W-R2330012-112514-ACN-007	11/25/2014	1,300	<1.0	<1.0	0.70 J	1.7 J	<4.0	<5.0	11,000	<3.0	<50	240	<0.2	3.7 J	<5.0	<0.20	<2.0	<4.0	23 J
MW-22[A] (DUP)	W-R2330012-112514-ACN-008	11/25/2014	1,300	<1.0	0.095 J	0.80 J	1.7 J	1.1 J		11,000	<3.0	<50	270	<0.2	4.4 J	<5.0	<0.20	<2.0	0.75 J	5.6 J
MW-22 (DUP)	W-R2330012-112514-ACN-008	11/25/2014	1,300	<1.0	<1.0	0.61 J	1.7 J	0.37 J	17	11,000	<3.0	<50	260	<0.2	3.8 J	<5.0	<0.20	<2.0	<4.0	4.6 J
MW-22[A]	W-R2330017-032015-JCH-027	3/20/2015	1,300	<1.0	<1.0	1.3 J	2.2 J	4.0		13,000	2.3 J	<50	270	<0.2	6.5 J	<5.0	<0.20	<2.0	1.5 J	8.6 J
MW-22	W-R2330017-032015-JCH-027	3/20/2015	1,400	<1.0	<1.0	0.54 J	2.1 J	1.8 J	6.0	12,000	<3.0	<50	250	<0.2	5.9 J	<5.0	<0.20	<2.0	0.71 J	5.9 J
MW-22[A]	W-R2330017-111815-JPM-014	11/18/2015	NS	NS	NS	NS	NS	NS		7,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-22	W-R2330017-111815-JPM-014	11/18/2015	NS	NS	NS	NS	NS	NS	NS	5,400	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-23[A]	W-R2330012-051914-ACN-023	5/19/2014	610	<1.0	<1.0	1.7 J	2.2 J	2.1 J		13,000	1.2 J	<50	180	<0.2	4.4 J	0.92 J	<0.20	<2.0	2.5 J	7.2 J
MW-23	W-R2330012-051914-ACN-023	5/19/2014	560	<1.0	<1.0	0.76 J	1.9 J	<4.0	<0.005	12,000	0.067 J	<50	160	<0.2	3.3 J	<5.0	<0.20	<2.0	1.1 J	2.2 J
MW-23[A] (DUP)	W-R2330012-051914-ACN-024	5/19/2014	580	<1.0	<1.0	1.7 J	2.1 J	2.2 J		13,000	1.3 J	<50	180	<0.2	4.4 J	0.72 J	<0.20	<2.0	2.6 J	7.3 J
MW-23 (DUP)	W-R2330012-051914-ACN-024	5/19/2014	550	<1.0	<1.0	0.70 J	1.8 J	<4.0	<0.005	11,000	<3.0	<50	150	<0.2	3.1 J	<5.0	<0.20	<2.0	0.84 J	1.9 J
MW-23[A]	W-R2330012-112514-ACN-009	11/25/2014	1,300	0.31 J	0.68 J	18	9.3 J	37		35,000	30	<50	310	<0.2	25	2.8 J	0.059 J	<2.0	29	100
MW-23	W-R2330012-112514-ACN-009	11/25/2014	1,100	<1.0	0.037 J	1.3 J	2.4 J	0.18 J	<5.0	18,000	<3.0	<50	78	<0.2	3.8 J	<5.0	<0.20	<2.0	1.5 J	4.5 J
MW-23[A]	W-R2330017-032015-ACN-028	3/20/2015	940	<1.0	<1.0	2.2 J	3.1 J	3.7 J		17,000	2.6 J	<50	120	<0.2	7.4 J	0.76 J	0.023 J	<2.0	3.3 J	9.2 J
MW-23	W-R2330017-032015-ACN-028	3/20/2015	860	<1.0	<1.0	0.96 J	2.8 J	2.3 J	<5.0	16,000	0.82 J	<50	99	<0.2	6.3 J	<5.0	0.020 J	<2.0	1.2 J	4.1 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-23[A]	W-R2330017-111815-JPM-016	11/18/2015																						
MW-23	W-R2330017-111815-JPM-016	11/18/2015	<25	<1.0	<1.0	<50	<50	4.1	<1.0	<5.0	72	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	NS	NS	NS
MW-24[A]	W-R2330012-052014-ACN-030	5/20/2014																						
MW-24	W-R2330012-052014-ACN-030	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-24[A]	W-R2330012-112614-JCH-013	11/26/2014																						
MW-24	W-R2330012-112614-JCH-013	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-24[A]	W-R2330017-032015-ACN-026	3/20/2015																						
MW-24	W-R2330017-032015-ACN-026	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-24[A]	W-R2330017-111815-AFB-015	11/18/2015																						
MW-24	W-R2330017-111815-AFB-015	11/18/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	NS	NS	NS
MW-25[A]	W-R2330012-051914-ACN-025	5/19/2014																						
MW-25	W-R2330012-051914-ACN-025	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-25[A]	W-R2330012-112614-JCH-012	11/26/2014																						
MW-25	W-R2330012-112614-JCH-012	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-25[A]	W-R2330017-032015-JCH-025	3/20/2015																						
MW-25	W-R2330017-032015-JCH-025	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	0.40 J
MW-25[A]	W-R2330017-111815-AFB-011	11/18/2015																						
MW-25	W-R2330017-111815-AFB-011	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-26[A]	W-R2330012-051914-ACN-020	5/19/2014																						
MW-26	W-R2330012-051914-ACN-020	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-26[A]	W-R2330012-112614-JCH-011	11/26/2014																						
MW-26	W-R2330012-112614-JCH-011	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-26[A]	W-R2330017-032015-ACN-024	3/20/2015																						
MW-26	W-R2330017-032015-ACN-024	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-26[A]	W-R2330017-111815-AFB-012	11/18/2015																						
MW-26	W-R2330017-111815-AFB-012	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-091514-ACN-002	9/15/2014																						
MW-27	W-R2330012-091514-ACN-002	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-12114-JCH-018	12/1/2014																						
MW-27	W-R2330012-12114-JCH-018	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-27[A]	W-R2330017-031915-JCH-016	3/19/2015																						
MW-27	W-R2330017-031915-JCH-016	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-27[A]	W-R2330017-111915-JPM-020	11/19/2015																						
MW-27	W-R2330017-111915-JPM-020	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29[A]	W-R2330012-020515-ACN-001	2/5/2015																						
MW-29	W-R2330012-020515-ACN-001	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<11	<11	<5.3
MW-29[A] (DUP)	W-R2330012-020515-ACN-002	2/5/2015																						
MW-29 (DUP)	W-R2330012-020515-ACN-002	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<11	<11	<5.3

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)																					
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-23[A]	W-R2330017-111815-JPM-016	11/18/2015																						180	NS	NS
MW-23	W-R2330017-111815-JPM-016	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.0 J	NS	NS
MW-24[A]	W-R2330012-052014-ACN-030	5/20/2014																						310	<2.0	5.7
MW-24	W-R2330012-052014-ACN-030	5/20/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	4.8 J	0.074 J	5.2
MW-24[A]	W-R2330012-112614-JCH-013	11/26/2014																						12 J	<2.0	4.6 J
MW-24	W-R2330012-112614-JCH-013	11/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<50	<2.0	4.9 J
MW-24[A]	W-R2330017-032015-ACN-026	3/20/2015																						84	<2.0	7.4
MW-24	W-R2330017-032015-ACN-026	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.8 J	0.19 J	3.2 J
MW-24[A]	W-R2330017-111815-AFB-015	11/18/2015																						260	NS	NS
MW-24	W-R2330017-111815-AFB-015	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.6 J	NS	NS
MW-25[A]	W-R2330012-051914-ACN-025	5/19/2014																						2,600	0.24 J	1.9 J
MW-25	W-R2330012-051914-ACN-025	5/19/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.80 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	51	0.21 J	0.63 J
MW-25[A]	W-R2330012-112614-JCH-012	11/26/2014																						400	0.18 J	0.85 J
MW-25	W-R2330012-112614-JCH-012	11/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.9 J	0.15 J	<5.0
MW-25[A]	W-R2330017-032015-JCH-025	3/20/2015																						450	0.22 J	0.88 J
MW-25	W-R2330017-032015-JCH-025	3/20/2015	<10	<10	<5.0	<10	<5.0	0.30 J	<5.0	<10	<5.0	<10	<10	0.38 J	<5.0	<5.0	<5.0	<1.0	0.13 J	0.71 J	<2.0	<5.0	<5.0	12 J	0.28 J	<5.0
MW-25[A]	W-R2330017-111815-AFB-011	11/18/2015																						6,000	NS	NS
MW-25	W-R2330017-111815-AFB-011	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	46 J	NS	NS
MW-26[A]	W-R2330012-051914-ACN-020	5/19/2014																						900	0.37 J	2.7 J
MW-26	W-R2330012-051914-ACN-020	5/19/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	36 J	0.39 J	1.5 J
MW-26[A]	W-R2330012-112614-JCH-011	11/26/2014																						210	0.22 J	<5.0
MW-26	W-R2330012-112614-JCH-011	11/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	8.4 J	0.16 J	<5.0
MW-26[A]	W-R2330017-032015-ACN-024	3/20/2015																						2,200	0.33 J	3.5 J
MW-26	W-R2330017-032015-ACN-024	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	82	0.27 J	<5.0
MW-26[A]	W-R2330017-111815-AFB-012	11/18/2015																						910	NS	NS
MW-26	W-R2330017-111815-AFB-012	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.6 J	NS	NS
MW-27[A]	W-R2330012-091514-ACN-002	9/15/2014																						190	0.61 J	4.7 J
MW-27	W-R2330012-091514-ACN-002	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.8 J	0.58 J	4.5 J
MW-27[A]	W-R2330012-12114-JCH-018	12/1/2014																						460	0.25 J	2.7 J
MW-27	W-R2330012-12114-JCH-018	12/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	32 J	0.18 J	2.2 J
MW-27[A]	W-R2330017-031915-JCH-016	3/19/2015																						270	0.43 J	0.97 J
MW-27	W-R2330017-031915-JCH-016	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.8 J	0.67 J	0.75 J
MW-27[A]	W-R2330017-111915-JPM-020	11/19/2015																						54	NS	NS
MW-27	W-R2330017-111915-JPM-020	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.2 J	NS	NS
MW-29[A]	W-R2330012-020515-ACN-001	2/5/2015																						530	<2.0	2.5 J
MW-29	W-R2330012-020515-ACN-001	2/5/2015	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<11	<4.2	<5.0	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3	8.8 J	<2.0	2.3 J
MW-29[A] (DUP)	W-R2330012-020515-ACN-002	2/5/2015																						370	<2.0	2.1 J
MW-29 (DUP)	W-R2330012-020515-ACN-002	2/5/2015	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<11	<4.2	<5.0	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3	11 J	<2.0	2.4

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																
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-23[A]	W-R2330017-111815-JPM-016	11/18/2015	NS	NS	NS	NS	NS	NS		14,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-23	W-R2330017-111815-JPM-016	11/18/2015	NS	NS	NS	NS	NS	NS	NS	14,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-24[A]	W-R2330012-052014-ACN-030	5/20/2014	170	<1.0	<1.0	0.57 J	0.50 J	1.6 J		5,300	0.38 J	<50	640	<0.2	3.8 J	0.69 J	<0.20	<2.0	0.69 J	4.9 J
MW-24	W-R2330012-052014-ACN-030	5/20/2014	160	<1.0	<1.0	<10	0.76 J	0.75 J	<0.005	4,700	<3.0	<50	620	<0.2	2.9 J	<5.0	<0.20	<2.0	<4.0	1.7 J
MW-24[A]	W-R2330012-112614-JCH-013	11/26/2014	130	<1.0	0.051 J	0.13 J	0.25 J	<4.0		2,500	<3.0	<50	690	<0.2	1.7 J	<5.0	<0.20	<2.0	<4.0	4.7 J
MW-24	W-R2330012-112614-JCH-013	11/26/2014	130	<1.0	<1.0	<10	0.19 J	<4.0	<5.0	2,100	<3.0	<50	670	<0.2	0.93 J	<5.0	<0.20	<2.0	<4.0	5.4 J
MW-24[A]	W-R2330017-032015-ACN-026	3/20/2015	140	<1.0	0.24 J	0.68 J	0.56 J	1.8 J		5,900	0.47 J	<50	740	<0.2	3.1 J	<5.0	<0.20	<2.0	<4.0	4.6 J
MW-24	W-R2330017-032015-ACN-026	3/20/2015	130	<1.0	0.066 J	<10	0.57 J	1.3 J	<5.0	2,600	0.36 J	<50	700	<0.2	2.8 J	<5.0	<0.20	<2.0	<4.0	<50
MW-24[A]	W-R2330017-111815-AFB-015	11/18/2015	NS	NS	NS	NS	NS	NS		5,900	NS	48,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	W-R2330017-111815-AFB-015	11/18/2015	NS	NS	NS	NS	NS	NS	NS	2,700	NS	47,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-25[A]	W-R2330012-051914-ACN-025	5/19/2014	83 J	<1.0	<1.0	3.8 J	1.5 J	7.4		3,800	2.5 J	<50	190	<0.2	6.3 J	2.4 J	<0.20	<2.0	6.8	12 J
MW-25	W-R2330012-051914-ACN-025	5/19/2014	68 J	<1.0	<1.0	<10	0.59 J	3.7 J	<0.005	110 J	0.25 J	<50	150	<0.2	2.3 J	1.7 J	<0.20	<2.0	0.35 J	2.2 J
MW-25[A]	W-R2330012-112614-JCH-012	11/26/2014	72 J	<1.0	0.11 J	1.3 J	0.53 J	3.2 J		570	0.59 J	<50	340	<0.2	6.5 J	1.1 J	<0.20	<2.0	1.4 J	6.1 J
MW-25	W-R2330012-112614-JCH-012	11/26/2014	66 J	<1.0	0.071 J	<10	0.33 J	2.9 J	<5.0	16 J	<3.0	<50	250	<0.2	4.4 J	<5.0	<0.20	<2.0	<4.0	4.4 J
MW-25[A]	W-R2330017-032015-JCH-025	3/20/2015	72 J	<1.0	0.060 J	0.84 J	0.77 J	4.2		620	0.57 J	<50	310	<0.2	4.9 J	1.2 J	<0.20	<2.0	1.5 J	6.3 J
MW-25	W-R2330017-032015-JCH-025	3/20/2015	67 J	<1.0	0.061 J	<10	0.63 J	6.2	<5.0	28 J	0.37 J	<50	110	<0.2	4.8 J	1.1 J	<0.20	<2.0	<4.0	8.4 J
MW-25[A]	W-R2330017-111815-AFB-011	11/18/2015	NS	NS	NS	NS	NS	NS		14,000	NS	30,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-25	W-R2330017-111815-AFB-011	11/18/2015	NS	NS	NS	NS	NS	NS	NS	63 J	NS	16,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-26[A]	W-R2330012-051914-ACN-020	5/19/2014	37 J	<1.0	<1.0	1.8 J	1.2 J	4.6		1,900	1.1 J	<50	110	<0.2	4.3 J	0.9 J	<0.20	<2.0	3.1 J	7.3 J
MW-26	W-R2330012-051914-ACN-020	5/19/2014	34 J	<1.0	<1.0	<10	1.1 J	1.0 J	<0.005	55 J	<3.0	<50	86	<0.2	0.23 J	<5.0	<0.20	<2.0	0.41 J	1.6 J
MW-26[A]	W-R2330012-112614-JCH-011	11/26/2014	25 J	<1.0	0.13 J	0.52 J	0.65 J	2.0 J		360	<3.0	<50	69	<0.2	2.7 J	0.86 J	<0.20	<2.0	0.98 J	4.5 J
MW-26	W-R2330012-112614-JCH-011	11/26/2014	24 J	<1.0	0.079 J	<10	0.54 J	1.0 J	<5.0	<200	<3.0	<50	65	<0.2	2.4 J	<5.0	<0.20	<2.0	<4.0	3.0 J
MW-26[A]	W-R2330017-032015-ACN-024	3/20/2015	34 J	<1.0	0.16 J	4.5 J	2.1 J	7.8		4,300	3.4	<50	100	<0.2	7.5 J	<5.0	<0.20	<2.0	7.0	16 J
MW-26	W-R2330017-032015-ACN-024	3/20/2015	21 J	<1.0	0.070 J	0.29 J	0.80 J	2.2 J	<5.0	130 J	<3.0	<50	25 J	<0.2	2.9 J	<5.0	<0.20	<2.0	<4.0	<50
MW-26[A]	W-R2330017-111815-AFB-012	11/18/2015	NS	NS	NS	NS	NS	NS		2,300	NS	21000	NS	NS	NS	NS	NS	NS	NS	NS
MW-26	W-R2330017-111815-AFB-012	11/18/2015	NS	NS	NS	NS	NS	NS	NS	19 J	NS	20000	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-091514-ACN-002	9/15/2014	240	<1.0	0.097 J	0.69 J	2.4 J	3.7 J		1,700	0.70 J	<50	160	0.064 J	9.1 J	<5.0	<0.20	<2.0	1.1 J	7.0 J
MW-27	W-R2330012-091514-ACN-002	9/15/2014	240	<1.0	<1.0	<10	2.9 J	1.9 J	NS	1,500	0.076 J	<50	160	0.062 J	8.8 J	<5.0	<0.20	<2.0	0.55 J	5.0 J
MW-27[A]	W-R2330012-12114-JCH-018	12/1/2014	200	<1.0	0.063 J	1.2 J	2.5 J	4.2		1,900	1.2 J	<50	140	<0.2	9.3 J	1.1 J	<0.20	<2.0	1.9 J	11 J
MW-27	W-R2330012-12114-JCH-018	12/1/2014	290	<1.0	<1.0	0.22 J	2.1 J	1.4 J	<5.0	2,600	<3.0	<50	110	<0.2	7.5 J	0.79 J	<0.20	<2.0	0.66 J	4.2 J
MW-27[A]	W-R2330017-031915-JCH-016	3/19/2015	210	<1.0	0.13 J	0.76 J	1.9 J	2.3 J		2,200	0.62 J	<50	72	<0.2	5.7 J	<5.0	<0.20	<2.0	1.5 J	4.0 J
MW-27	W-R2330017-031915-JCH-016	3/19/2015	260	<1.0	0.23 J	0.35 J	2.4 J	1.3 J	<5.0	1,900	<3.0	<50	80	<0.2	6.8 J	0.97 J	0.095 J	<2.0	<4.0	3.1 J
MW-27[A]	W-R2330017-111915-JPM-020	11/19/2015	NS	NS	NS	NS	NS	NS		2,400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27	W-R2330017-111915-JPM-020	11/19/2015	NS	NS	NS	NS	NS	NS	NS	2,400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29[A]	W-R2330012-020515-ACN-001	2/5/2015	200	<1.0	0.046 J	1.3 J	1.4 J	1.6 J		3,200	2.0 J	<50	410	<0.2	4.4 J	<5.0	<0.20	<2.0	1.2 J	6.8 J
MW-29	W-R2330012-020515-ACN-001	2/5/2015	200	<1.0	<1.0	<10	1.1	0.35 J	<5.0	2,400	<3.0	<50	380	<0.2	3.3 J	<5.0	<0.20	<2.0	<4.0	3.6 J
MW-29[A] (DUP)	W-R2330012-020515-ACN-002	2/5/2015	200	<1.0	0.065 J	1.3 J	1.3 J	0.88 J		2,900	0.60 J	<50	400	<0.2	4.3 J	<5.0	<0.20	<2.0	0.99 J	6.4 J
MW-29 (DUP)	W-R2330012-020515-ACN-002	2/5/2015	200	<1.0	<1.0	<10	1.3 J	<4.0	<5.0	2,500	<3.0	<50	400	<0.2	3.5 J	<5.0	<0.20	<2.0	<4.0	3.4 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion (GW_{VI-inf}) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
MW-29[A]	W-R2330017-031615-JCH-001	3/16/2015																						
MW-29	W-R2330017-031615-JCH-001	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-29[A]	W-R2330017-112015-AFB-028	11/20/2015																						
MW-29	W-R2330017-112015-AFB-028	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-30[A]	W-R2330012-020515-ACN-003	2/5/2015																						
MW-30	W-R2330012-020515-ACN-003	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<11	<11	<5.3
MW-30[A]	W-R2330017-031615-ACN-002	3/16/2015																						
MW-30	W-R2330017-031615-ACN-002	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-30[A]	W-R2330017-112015-JPM-029	11/20/2015																						
MW-30	W-R2330017-112015-JPM-029	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-060515-ACN-001	6/5/2015																						
MW-31	W-R2330017-060515-ACN-001	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-111615-AEP-001	11/16/2015																						
MW-31	W-R2330017-111615-AEP-001	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-060515-ACN-002	6/5/2015																						
MW-32	W-R2330017-060515-ACN-002	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-111615-AEP-002	11/16/2015																						
MW-32	W-R2330017-111615-AEP-002	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-060515-ACN-003	6/5/2015																						
MW-33	W-R2330017-060515-ACN-003	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-111615-AEP-003	11/16/2015																						
MW-33	W-R2330017-111615-AEP-003	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-34[A]	W-R2330017-060515-ACN-004	6/5/2015																						
MW-34	W-R2330017-060515-ACN-004	6/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
MW-34[A]	W-R2330017-111815-JPM-017	11/18/2015																						
MW-34	W-R2330017-111815-JPM-017	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M[A]	W-R2330017-032015-ACN-030	3/20/2015																						
CRA-266M	W-R2330017-032015-ACN-030	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
CRA-266M[A]	W-R2330017-111715-JPM-006	11/17/2015																						
CRA-266M	W-R2330017-111715-JPM-006	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-13[A]	W-R2330009-121013-AJL-008	12/10/2013																						
SB-13	W-R2330009-121013-AJL-008	12/10/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.37 J	<3.0	<10	<10	<5.0
SB-14[A]	W-R2330009-121013-AJL-007	12/10/2013																						
SB-14	W-R2330009-121013-AJL-007	12/10/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-15[A]	W-R2330009-120913-AJL-006	12/9/2013																						
SB-15	W-R2330009-120913-AJL-006	12/9/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.31 J	<3.0	<10	<10	<5.0
SB-21[A]	W-R2330009-120513-RD-001	12/5/2013																						
SB-21	W-R2330009-120513-RD-001	12/5/2013	<25	<1.0	<1.0	<50	<50	6.7	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	1.4	2.5 J	<1.0	0.44 J	4.2	<10	<10	0.19 J

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)																				Aluminum	Antimony	Arsenic
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol			
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
MW-29[A]	W-R2330017-031615-JCH-001	3/16/2015																						1,400	0.11 J	6.2
MW-29	W-R2330017-031615-JCH-001	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<50	<2.0	3.1 J
MW-29[A]	W-R2330017-112015-AFB-028	11/20/2015																						420	NS	NS
MW-29	W-R2330017-112015-AFB-028	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.3 J	NS	NS
MW-30[A]	W-R2330012-020515-ACN-003	2/5/2015																						580	0.30 J	4.3 J
MW-30	W-R2330012-020515-ACN-003	2/5/2015	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<11	<4.2	<5.0	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3	11 J	0.39 J	3.2 J
MW-30[A]	W-R2330017-031615-ACN-002	3/16/2015																						110	0.28 J	1.6 J
MW-30	W-R2330017-031615-ACN-002	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	5.8 J	0.44 J	2.3 J
MW-30[A]	W-R2330017-112015-JPM-029	11/20/2015																						54	NS	NS
MW-30	W-R2330017-112015-JPM-029	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10 J	NS	NS
MW-31[A]	W-R2330017-060515-ACN-001	6/5/2015																						330	NS	NS
MW-31	W-R2330017-060515-ACN-001	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10 J	NS	NS
MW-31[A]	W-R2330017-111615-AEP-001	11/16/2015																						3,400	NS	NS
MW-31	W-R2330017-111615-AEP-001	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	NS	NS
MW-32[A]	W-R2330017-060515-ACN-002	6/5/2015																						1,400	NS	NS
MW-32	W-R2330017-060515-ACN-002	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.1 J	NS	NS
MW-32[A]	W-R2330017-111615-AEP-002	11/16/2015																						920	NS	NS
MW-32	W-R2330017-111615-AEP-002	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	120	NS	NS
MW-33[A]	W-R2330017-060515-ACN-003	6/5/2015																						1,000	NS	NS
MW-33	W-R2330017-060515-ACN-003	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	18 J	NS	NS
MW-33[A]	W-R2330017-111615-AEP-003	11/16/2015																						860	NS	NS
MW-33	W-R2330017-111615-AEP-003	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15 J	NS	NS
MW-34[A]	W-R2330017-060515-ACN-004	6/5/2015																						1,700	0.24 J	4.2 J
MW-34	W-R2330017-060515-ACN-004	6/5/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	20 J	0.23 J	3.0 J
MW-34[A]	W-R2330017-111815-JPM-017	11/18/2015																						28 J	NS	NS
MW-34	W-R2330017-111815-JPM-017	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.9 J	NS	NS
CRA-266M[A]	W-R2330017-032015-ACN-030	3/20/2015																						150	0.15 J	9.1
CRA-266M	W-R2330017-032015-ACN-030	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	0.13 J	<5.0	<5.0	<2.0	<5.0	<5.0	<50	0.15 J	2.8 J
CRA-266M[A]	W-R2330017-111715-JPM-006	11/17/2015																						8.6 J	NS	NS
CRA-266M	W-R2330017-111715-JPM-006	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS
SB-13[A]	W-R2330009-121013-AJL-008	12/10/2013																						120,000	2.8 J	300
SB-13	W-R2330009-121013-AJL-008	12/10/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	0.28 J	<10	<4.0	<5.0	<5.0	<5.0	0.21 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	23 J	0.37 J	<2.0
SB-14[A]	W-R2330009-121013-AJL-007	12/10/2013																						2,100	0.54 J	2.1 J
SB-14	W-R2330009-121013-AJL-007	12/10/2013	<10	<10	<5.0	<10	0.77 J	<5.0	<5.0	<10	0.34 J	<10	<4.0	<5.0	<5.0	<5.0	0.25 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	14 J	0.37 J	<2.0
SB-15[A]	W-R2330009-120913-AJL-006	12/9/2013																						790	0.32 J	2.0 J
SB-15	W-R2330009-120913-AJL-006	12/9/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	0.56 J	<10	<4.0	<5.0	<5.0	<5.0	0.23 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.9 J	0.43 J	0.77 J
SB-21[A]	W-R2330009-120513-RD-001	12/5/2013																						38,000 J	13 J	37 J
SB-21	W-R2330009-120513-RD-001	12/5/2013	<10	0.41 J	<5.0	<10	1.6 J	0.54 J	0.22 J	0.79 J	<5.0	<10	0.41 J	<5.0	0.35 J	<5.0	<5.0	<1.0	0.94 J	<5.0	<2.0	<5.0	0.44 J	24 J	0.97 J	2.3 J

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																
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
MW-29[A]	W-R2330017-031615-JCH-001	3/16/2015	220	<1.0	0.11 J	3.3 J	2.0 J	5.6		5,400	2.8 J	<50	400	<0.2	8.0 J	<5.0	<0.20	<2.0	3.4 J	17 J
MW-29	W-R2330017-031615-JCH-001	3/16/2015	220	<1.0	0.048 J	<10	1.0 J	1.3 J	<5.0	2,800	<3.0	<50	400	<0.2	3.9 J	<5.0	<0.20	<2.0	<4.0	5.4 J
MW-29[A]	W-R2330017-112015-AFB-028	11/20/2015	NS	NS	NS	NS	NS	NS		4,100	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-29	W-R2330017-112015-AFB-028	11/20/2015	NS	NS	NS	NS	NS	NS	NS	3,300	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-30[A]	W-R2330012-020515-ACN-003	2/5/2015	120	<1.0	0.53 J	1.7 J	0.30 J	3.9 J		500	1.3 J	<50	72	<0.2	3.0 J	<5.0	<0.20	<2.0	1.6 J	8.0 J
MW-30	W-R2330012-020515-ACN-003	2/5/2015	110	<1.0	0.45 J	<10	0.28 J	1.1 J	5.0	18 J	<3.0	<50	67	<0.2	1.6 J	<5.0	<0.20	<2.0	0.68 J	3.8 J
MW-30[A]	W-R2330017-031615-ACN-002	3/16/2015	95 J	<1.0	0.54 J	0.34 J	0.19 J	2.2 J		100 J	<3.0	<50	47 J	<0.2	2.0 J	<5.0	<0.20	<2.0	0.96 J	4.6 J
MW-30	W-R2330017-031615-ACN-002	3/16/2015	110	<1.0	0.22 J	<10	0.62 J	1.6 J	<5.0	180 J	<3.0	<50	110	<0.2	1.7 J	<5.0	<0.20	<2.0	0.91 J	5.3 J
MW-30[A]	W-R2330017-112015-JPM-029	11/20/2015	NS	NS	NS	NS	NS	NS		310	NS	14,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-30	W-R2330017-112015-JPM-029	11/20/2015	NS	NS	NS	NS	NS	NS	NS	740	NS	13,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-060515-ACN-001	6/5/2015	NS	NS	NS	NS	NS	NS		490	NS	<50	240	NS	NS	NS	NS	NS	NS	NS
MW-31	W-R2330017-060515-ACN-001	6/5/2015	NS	NS	NS	NS	NS	NS	NS	55 J	NS	<50	240	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-111615-AEP-001	11/16/2015	NS	NS	NS	NS	NS	NS		5,900	NS	27,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-31	W-R2330017-111615-AEP-001	11/16/2015	NS	NS	NS	NS	NS	NS	NS	130	NS	17,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-060515-ACN-002	6/5/2015	NS	NS	NS	NS	NS	NS		4,700	NS	<50	95	NS	NS	NS	NS	NS	NS	NS
MW-32	W-R2330017-060515-ACN-002	6/5/2015	NS	NS	NS	NS	NS	NS	NS	2,000	NS	<50	62	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-111615-AEP-002	11/16/2015	NS	NS	NS	NS	NS	NS		6,300	NS	66,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-32	W-R2330017-111615-AEP-002	11/16/2015	NS	NS	NS	NS	NS	NS	NS	4,700	NS	66,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-060515-ACN-003	6/5/2015	NS	NS	NS	NS	NS	NS		4,500	NS	<50	120	NS	NS	NS	NS	NS	NS	NS
MW-33	W-R2330017-060515-ACN-003	6/5/2015	NS	NS	NS	NS	NS	NS	NS	3,200	NS	<50	80	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-111615-AEP-003	11/16/2015	NS	NS	NS	NS	NS	NS		3,400	NS	84,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-33	W-R2330017-111615-AEP-003	11/16/2015	NS	NS	NS	NS	NS	NS	NS	2,700	NS	85,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-34[A]	W-R2330017-060515-ACN-004	6/5/2015	120	<1.0	<1.0	2.6 J	2.2 J	5.0		2,800	2.4 J	<50	320	<0.2	7.4 J	<5.0	<0.20	<2.0	3.3 J	13 J
MW-34	W-R2330017-060515-ACN-004	6/5/2015	110	<1.0	<1.0	1.3 J	1.0 J	0.75 J	<0.005	120 J	<3.0	<50	270	<0.2	3.6 J	<5.0	<0.20	<2.0	<4.0	<50
MW-34[A]	W-R2330017-111815-JPM-017	11/18/2015	NS	NS	NS	NS	NS	NS		1,000	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-34	W-R2330017-111815-JPM-017	11/18/2015	NS	NS	NS	NS	NS	NS	NS	930	NS	19,000	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M[A]	W-R2330017-032015-ACN-030	3/20/2015	24 J	<1.0	0.18 J	0.41 J	0.86 J	1.6 J		750	1.3 J	<50	210	<0.2	3.7 J	<5.0	<0.20	<2.0	0.76 J	7.8 J
CRA-266M	W-R2330017-032015-ACN-030	3/20/2015	21 J	<1.0	0.23 J	0.16 J	0.60 J	1.1 J	<5.0	43 J	<3.0	<50	72	<0.2	2.4 J	<5.0	<0.20	<2.0	<4.0	<50
CRA-266M[A]	W-R2330017-111715-JPM-006	11/17/2015	NS	NS	NS	NS	NS	NS		480	NS	12,000	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M	W-R2330017-111715-JPM-006	11/17/2015	NS	NS	NS	NS	NS	NS	NS	31	NS	12,000	NS	NS	NS	NS	NS	NS	NS	NS
SB-13[A]	W-R2330009-121013-AJL-008	12/10/2013	730 J	5.9 J	4.0 J	240	140 J	510		310,000	250	<50	5,300	0.98	410	13 J	0.78 J	7.6 J	380	1,500
SB-13	W-R2330009-121013-AJL-008	12/10/2013	59 J	<1.0	0.071 J	<10	8.0 J	2.3 J	<0.005	71 J	0.072 J	<50	610	<0.2	14 J	<5.0	<0.20	<2.0	0.20 J	4.0 J
SB-14[A]	W-R2330009-121013-AJL-007	12/10/2013	65 J	0.12 J	0.20 J	4.6 J	9.6 J	7.4		3,500	4.0	<50	800	<0.2	22	0.68 J	<0.20	0.35 J	7.3	22 J
SB-14	W-R2330009-121013-AJL-007	12/10/2013	49 J	<1.0	0.064 J	<10	5.4 J	1.9 J	<0.005	150 J	0.11 J	<50	470	<0.2	12 J	0.68 J	<0.20	<2.0	0.19 J	4.8 J
SB-15[A]	W-R2330009-120913-AJL-006	12/9/2013	33 J	<1.0	0.052 J	5.2 J	1.5 J	2.9 J		1,600	0.79 J	<50	53	<0.2	10 J	0.77 J	<0.20	<2.0	2.4 J	8.1 J
SB-15	W-R2330009-120913-AJL-006	12/9/2013	34 J	<1.0	<1.0	<10	2.2 J	2.0 J	2.3 J	770	<3.0	<50	53	<0.2	8.5 J	0.84 J	<0.20	<2.0	0.17 J	3.0 J
SB-21[A]	W-R2330009-120513-RD-001	12/5/2013	2,900	1.7 J	11	75 J	38 J	320		73,000	1,700	<50	1,800	0.39	86 J	<5.0	2.7	<2.0	86	2,200
SB-21	W-R2330009-120513-RD-001	12/5/2013	2,000	<1.0	<1.0	1.7 J	5.5 J	2.3 J	6.9	13,000	0.49 J	<50	530	<0.2	10 J	<5.0	<0.20	1.1 J	1.3 J	26 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion (GW_{VI-int}) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
SB-22[A]	W-R2330009-120513-RD-002	12/5/2013																						
SB-22	W-R2330009-120513-RD-002	12/5/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	0.72 J	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-23[A]	W-R2330009-120513-RD-003	12/5/2013																						
SB-23	W-R2330009-120513-RD-003	12/5/2013	<25	<1.0	<1.0	<50	<50	2.4	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-24[A]	W-R2330009-120613-RD-004	12/6/2013																						
SB-24	W-R2330009-120613-RD-004	12/6/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.29 J	<3.0	<10	<10	<5.0
SB-25[A]	W-R2330009-120613-RD-005	12/6/2013																						
SB-25	W-R2330009-120613-RD-005	12/6/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.48 J	<3.0	<10	<10	<5.0
SB-26[A]	W-R2330009-121013-AJL-009	12/10/2013																						
SB-26	W-R2330009-121013-AJL-009	12/10/2013	<25	<1.0	<1.0	<50	3.2 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.28 J	<3.0	<10	<10	<5.0
SB-27[A]	W-R2330009-121113-AJL-010	12/11/2013																						
SB-27	W-R2330009-121113-AJL-010	12/11/2013	<25	<1.0	<1.0	<50	6.1 J	<1.0	<1.0	0.53 J	<1.0	2.9 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-27[A] (DUP)	W-R2330009-121113-AJL-011	12/11/2013																						
SB-27 (DUP)	W-R2330009-121113-AJL-011	12/11/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	4.3 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-28[A]	W-R2330009-121113-AJL-012	12/11/2013																						
SB-28	W-R2330009-121113-AJL-012	12/11/2013	<25	<1.0	<1.0	<50	3.6 J	<1.0	<1.0	0.53 J	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-29[A]	W-R2330009-121213-AJL-014	12/12/2013																						
SB-29	W-R2330009-121213-AJL-014	12/12/2013	<25	1.3	2.6	<50	4.7 J	12.0	<1.0	<5.0	<1.0	<5.0	<1.0	0.84 J	<5.0	<5.0	14.0	6.0	<1.0	39	74.0	<10	0.67 J	1.6 J
SB-30[A]	W-R2330009-121213-AJL-016	12/12/2013																						
SB-30	W-R2330009-121213-AJL-016	12/12/2013	<25	<1.0	0.98 J	<50	<50	21.0	<1.0	<5.0	<1.0	<5.0	<1.0	5.5 J	<5.0	<5.0	0.29 J	2.0 J	<1.0	0.33 J	1.0 J	<10	3.1 J	2.9 J
SB-31[A]	W-R2330009-121213-AJL-018	12/12/2013																						
SB-31	W-R2330009-121213-AJL-018	12/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	0.44 J	<3.0	<10	<10	<5.0
SB-32[A]	W-R2330009-121213-AJL-015	12/12/2013																						
SB-32	W-R2330009-121213-AJL-015	12/12/2013	<25	<1.0	<1.0	<50	<50	1.1	<1.0	<5.0	1.4	<5.0	<1.0	<10	<5.0	<5.0	<1.0	1.3 J	<1.0	0.27 J	1.0 J	<10	<10	1.2 J
SB-33[A]	W-R2330009-121213-AJL-017	12/12/2013																						
SB-33	W-R2330009-121213-AJL-017	12/12/2013	<25	<1.0	<1.0	<50	3.9 J	0.71 J	<1.0	0.44 J	1.2	<5.0	<1.0	<10	<5.0	<5.0	<1.0	0.62 J	<1.0	0.29 J	1.3 J	<10	<10	0.29 J
SB-34[A]	W-R2330009-121313-AJL-018	12/13/2013																						
SB-34	W-R2330009-121313-AJL-018	12/13/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.44 J	<3.0	<10	<10	<5.0
SB-34[A] (DUP)	W-R2330009-121313-AJL-019	12/13/2013																						
SB-34 (DUP)	W-R2330009-121313-AJL-019	12/13/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.38 J	<3.0	<10	<10	<5.0
SB-16	W-R2330012-033114-ACN-001	3/31/2014	<25	<1.0	<1.0	<50	14 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-17	W-R2330012-033114-ACN-002	3/31/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	6.2	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-18	W-R2330012-033114-ACN-003	3/31/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-19	W-2330012-040114-ACN-004	4/1/2014	<25	<1.0	<1.0	<50	3.3 J	0.36 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	1.1	0.62 J	1.0 J	<10	<10	<5.0
SB-20	W-2330012-040114-ACN-005	4/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.25 J	<3.0	<10	<10	<5.0
SB-35	W-2330012-040114-ACN-006	4/1/2014	<25	<1.0	1.5	<50	3.3 J	6.1	<1.0	<5.0	2.0	<5.0	<1.0	1.5	<5.0	<5.0	0.18 J	1.4 J	1.1	0.25 J	1.9 J	<10	<10	2.4 J
SB-36	W-R2330012-040314-ACN-007	4/3/2014	<25	<1.0	<1.0	<50	7.1 J	2.5	<1.0	<5.0	1.2	<5.0	<1.0	<10	<5.0	<5.0	0.84 J	1.9 J	<1.0	0.54 J	2.8 J	<10	<10	<5.0
SB-36 (DUP)	W-R2330012-040314-ACN-008	4/3/2014	<25	<1.0	<1.0	<50	7.8 J	2.7	<1.0	<5.0	1.4	<5.0	<1.0	1.4 J	<5.0	<5.0	0.86 J	2.0 J	<1.0	0.52 J	2.8 J	<10	<10	<5.0

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			Semivolatile Organic Compounds (SVOCs)																				Aluminum	Antimony	Arsenic
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol			
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
SB-22[A]	W-R2330009-120513-RD-002	12/5/2013																						1,900	2.2 J	<5.0
SB-22	W-R2330009-120513-RD-002	12/5/2013	<10	<10	<5.0	<10	<5.0	0.12 J	<5.0	0.51 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.14 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	10 J	0.99 J	2.0 J
SB-23[A]	W-R2330009-120513-RD-003	12/5/2013																						3,200	2.8 J	72
SB-23	W-R2330009-120513-RD-003	12/5/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	17 J	0.39 J	23
SB-24[A]	W-R2330009-120613-RD-004	12/6/2013																						6,700	2.6 J	130
SB-24	W-R2330009-120613-RD-004	12/6/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	52 J	0.60 J	6.7
SB-25[A]	W-R2330009-120613-RD-005	12/6/2013																						250,000	2.6 J	470
SB-25	W-R2330009-120613-RD-005	12/6/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	930	4.3	11
SB-26[A]	W-R2330009-121013-AJL-009	12/10/2013																						15,000	5.0 J	610
SB-26	W-R2330009-121013-AJL-009	12/10/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.16 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	60	22	8.6
SB-27[A]	W-R2330009-121113-AJL-010	12/11/2013																						62,000	2.5 J	86
SB-27	W-R2330009-121113-AJL-010	12/11/2013	<10	<10	<5.0	<10	0.26 J	<5.0	<5.0	<10	0.28 J	<10	<4.0	<5.0	<5.0	<5.0	0.22 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	22 J	0.56 J	2.1 J
SB-27[A] (DUP)	W-R2330009-121113-AJL-011	12/11/2013																						17,000	1.1 J	18 J
SB-27 (DUP)	W-R2330009-121113-AJL-011	12/11/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	0.29 J	<10	<4.0	<5.0	<5.0	<5.0	0.19 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	11 J	0.48 J	2.0 J
SB-28[A]	W-R2330009-121113-AJL-012	12/11/2013																						95,000	3.2 J	210
SB-28	W-R2330009-121113-AJL-012	12/11/2013	<10	<10	<5.0	<10	0.46 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.18 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	31 J	1.8 J	10
SB-29[A]	W-R2330009-121213-AJL-014	12/12/2013																						7,600	4.1 J	10 J
SB-29	W-R2330009-121213-AJL-014	12/12/2013	0.46 J	2.0 J	<5.0	<10	<5.0	6.0 J	1.0 J	1.2 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.26 J	<1.0	0.57 J	1.3 J	<2.0	<5.0	0.36 J	25 J	0.83 J	<5.0
SB-30[A]	W-R2330009-121213-AJL-016	12/12/2013																						7,300	3.1 J	6.8 J
SB-30	W-R2330009-121213-AJL-016	12/12/2013	<10	<10	<5.0	<10	<5.0	1.2 J	<5.0	0.92 J	<5.0	<10	0.64 J	<5.0	<5.0	<5.0	0.21 J	<1.0	1.1 J	2.2 J	<2.0	<5.0	0.40 J	18 J	0.43 J	<5.0
SB-31[A]	W-R2330009-121213-AJL-018	12/12/2013																						2,000	0.34 J	5.7 J
SB-31	W-R2330009-121213-AJL-018	12/12/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.65 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	60 J	0.46 J	23 J
SB-32[A]	W-R2330009-121213-AJL-015	12/12/2013																						1,600	1.7 J	<5.0
SB-32	W-R2330009-121213-AJL-015	12/12/2013	<10	<10	<5.0	<10	0.46 J	<5.0	<5.0	0.85 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	0.37 J	<1.0	0.17 J	1.0 J	<2.0	<5.0	<5.0	21 J	0.53 J	<5.0
SB-33[A]	W-R2330009-121213-AJL-017	12/12/2013																						45,000	95	66
SB-33	W-R2330009-121213-AJL-017	12/12/2013	<10	0.40 J	<5.0	<10	0.59 J	0.39 J	<5.0	0.73 J	<5.0	<10	<4.0	<5.0	0.37 J	<5.0	0.26 J	<1.0	<5.0	0.20 J	<2.0	<5.0	<5.0	30 J	1.6 J	<5.0
SB-34[A]	W-R2330009-121313-AJL-018	12/13/2013																						2,000	0.34 J	5.7
SB-34	W-R2330009-121313-AJL-018	12/13/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.65 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	60 J	0.46 J	23 J
SB-34[A] (DUP)	W-R2330009-121313-AJL-019	12/13/2013																						11,000	0.97 J	12
SB-34 (DUP)	W-R2330009-121313-AJL-019	12/13/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.69 J	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	75 J	0.89 J	9.3 J
SB-16	W-R2330012-033114-ACN-001	3/31/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	35 J	1.2 J	44
SB-17	W-R2330012-033114-ACN-002	3/31/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	38 J	0.16 J	5.7
SB-18	W-R2330012-033114-ACN-003	3/31/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	380	0.33 J	6.2
SB-19	W-2330012-040114-ACN-004	4/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	39 J	0.46 J	5.3
SB-20	W-2330012-040114-ACN-005	4/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	300	0.19 J	<5.0
SB-35	W-2330012-040114-ACN-006	4/1/2014	<10	1.6 J	<5.0	<10	<5.0	1.7 J	<5.0	<10	<5.0	1.9 J	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	1.3 J	1.9 J	1.9 J	<5.0	<5.0	43 J	0.81 J	4.3 J
SB-36	W-R2330012-040314-ACN-007	4/3/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	160 J	0.75 J	4.3 J
SB-36 (DUP)	W-R2330012-040314-ACN-008	4/3/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	130 J	0.43 J	4.4 J

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																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
SB-22[A]	W-R2330009-120513-RD-002	12/5/2013	1000	<1.0	<1.0	8.1 J	4.3 J	40 J		16,000	59	<50	550	<0.2	20 J	<5.0	<0.20	<2.0	4.0 J	210 J
SB-22	W-R2330009-120513-RD-002	12/5/2013	960	<1.0	<1.0	1.1 J	3.9 J	2.8 J	3.6 J	12,000	0.21 J	<50	560	<0.2	16 J	<5.0	<0.20	0.081 J	0.77 J	24 J
SB-23[A]	W-R2330009-120513-RD-003	12/5/2013	880 J	1.8 J	<1.0	130	40 J	150		8,600	86	<50	1,600	0.12 J	130 J	12 J	<0.20	0.96 J	9.3	420 J
SB-23	W-R2330009-120513-RD-003	12/5/2013	690	<1.0	<1.0	2.3 J	3.0 J	1.5 J	31	12,000	0.084 J	<50	70	<0.2	9.1 J	0.76 J	<0.20	<2.0	1.7 J	5.6 J
SB-24[A]	W-R2330009-120613-RD-004	12/6/2013	860 J	3.5 J	2.9 J	130	77 J	220		190,000	150	<50	4,100	0.30	210	9.8 J	0.53 J	2.4 J	86	580
SB-24	W-R2330009-120613-RD-004	12/6/2013	410	<1.0	<1.0	<10	2.5 J	2.5 J	9.2	4,700	<3.0	<50	360	<0.2	14 J	0.73 J	<0.20	<2.0	0.38 J	4.8 J
SB-25[A]	W-R2330009-120613-RD-005	12/6/2013	1300	9.8 J	13	540	270	700		520,000	440	<50	9,200	0.95	1,100	27 J	1.7 J	6.3 J	590	1,700
SB-25	W-R2330009-120613-RD-005	12/6/2013	84 J	<1.0	0.10 J	1.4 J	4.0 J	1.5 J	46.0	1,100	0.63 J	<50	530	<0.2	5.0 J	<5.0	<0.20	0.26 J	3.2 J	4.5 J
SB-26[A]	W-R2330009-121013-AJL-009	12/10/2013	970 J	12	17	1,000	310	1,100		700,000	640	<50	14,000	0.51	1,100	47 J	2.5	13 J	660	2,900
SB-26	W-R2330009-121013-AJL-009	12/10/2013	57 J	<1.0	<1.0	<10	2.8 J	1.4 J	1.0 J	1,900	0.11 J	<50	92	<0.2	14 J	0.75 J	<0.20	<2.0	0.67 J	14 J
SB-27[A]	W-R2330009-121113-AJL-010	12/11/2013	610 J	3.2 J	3.2 J	290	57 J	220		140,000	100	<50	2,800	<0.2	210	9.4 J	<0.20	2.3 J	180	680
SB-27	W-R2330009-121113-AJL-010	12/11/2013	160	<1.0	<1.0	<10	5.3 J	2.8 J	1.5 J	7,400	<3.0	<50	310	<0.2	25	<5.0	<0.20	<2.0	0.46 J	19 J
SB-27[A] (DUP)	W-R2330009-121113-AJL-011	12/11/2013	300 J	<1.0	0.61 J	59 J	13 J	46		38,000	19 J	<50	730	<0.2	53 J	<5.0	<0.20	<2.0	46	140 J
SB-27 (DUP)	W-R2330009-121113-AJL-011	12/11/2013	150	<1.0	<1.0	<10	4.7 J	2.4 J	1.3 J	4,900	<3.0	<50	300	<0.2	24	<5.0	<0.20	<2.0	<4.0	18 J
SB-28[A]	W-R2330009-121113-AJL-012	12/11/2013	550 J	5.2 J	5.2 J	350	85 J	330		230,000	200	<50	4,100	0.23	310	13 J	0.75 J	3.3 J	320	800
SB-28	W-R2330009-121113-AJL-012	12/11/2013	110	<1.0	<1.0	<10	2.8 J	2.1 J	<0.005	1,400	<3.0	<50	180	<0.2	15 J	<5.0	<0.20	<2.0	0.49 J	4.2 J
SB-29[A]	W-R2330009-121213-AJL-014	12/12/2013	2,100	<1.0	2.8 J	71 J	12 J	90		51,000	330	<50	980	0.13	51 J	<5.0	<0.20	<2.0	24 J	470 J
SB-29	W-R2330009-121213-AJL-014	12/12/2013	1,700	<1.0	<1.0	3.1 J	5.2 J	6.2 J	4.2 J	22,000	<3.0	<50	580	<0.2	12 J	<5.0	<0.20	<2.0	1.7 J	18 J
SB-30[A]	W-R2330009-121213-AJL-016	12/12/2013	2,700	<1.0	2.4 J	22 J	7.2 J	58		41,000	940	<50	380 J	0.15	22 J	<5.0	<0.20	<2.0	19 J	950
SB-30	W-R2330009-121213-AJL-016	12/12/2013	2,100	<1.0	<1.0	<10	3.6 J	<4.0	3.9 J	29,000	1.1 J	<50	260 J	<0.2	8.2 J	<5.0	<0.20	<2.0	<4.0	<500
SB-31[A]	W-R2330009-121213-AJL-018	12/12/2013	84 J	0.1 J	<1.0	14	2.5 J	14		8,400	11	<50	130	0.1	9.7 J	<5.0	<2.0	<2.0	6.6	44
SB-31	W-R2330009-121213-AJL-018	12/12/2013	520 J	<10	<10	4.3 J	5.9 J	<40	2.1 J	21,000	<3.0	<50	170 J	<0.2	19 J	<5.0	<2.0	<2.0	<4.0	<27
SB-32[A]	W-R2330009-121213-AJL-015	12/12/2013	1,600	<1.0	2.4 J	12 J	6.2 J	31 J		30,000	120	<50	290 J	<0.2	31 J	<5.0	<0.20	<2.0	2.4 J	210 J
SB-32	W-R2330009-121213-AJL-015	12/12/2013	1,500	<1.0	<1.0	4.7 J	5.4 J	<4.0	3.7 J	26,000	<3.0	<50	270 J	<0.2	19 J	<5.0	<0.20	<2.0	2.4 J	16 J
SB-33[A]	W-R2330009-121213-AJL-017	12/12/2013	3,400	2.0 J	42	320	51 J	1,100		170,000	3,200	<50	2,200	2.2	320	<5.0	16	<2.0	90	9,900
SB-33	W-R2330009-121213-AJL-017	12/12/2013	1,500	<1.0	<1.0	3.5 J	6.8 J	<4.0	60	23,000	<3.0	<50	420 J	<0.2	16 J	<5.0	<0.20	<2.0	2.3 J	61 J
SB-34[A]	W-R2330009-121313-AJL-018	12/13/2013	84 J	0.10 J	<1.0	14	2.5 J	14		8,400	11	<50	130	0.11	9.7 J	<5.0	<2.0	<2.0	6.6	44 J
SB-34	W-R2330009-121313-AJL-018	12/13/2013	520 J	<1.0	<1.0	4.3 J	5.9 J	<4.0	2.1 J	21,000	<3.0	<50	170 J	<0.2	19 J	<5.0	<2.0	<2.0	<4.0	27 J
SB-34[A] (DUP)	W-R2330009-121313-AJL-019	12/13/2013	150	0.49 J	0.26 J	59	11 J	50		31,000	77	<50	610	0.43	40	2.6 J	0.18 J	0.37 J	30	140
SB-34 (DUP)	W-R2330009-121313-AJL-019	12/13/2013	700 J	<1.0	<1.0	<10	4.6 J	<4.0	4.5 J	38,000	<3.0	<50	1,500	<0.2	26 J	<5.0	<2.0	<2.0	1.7 J	34 J
SB-16	W-R2330012-033114-ACN-001	3/31/2014	540	<1.0	0.12 J	0.97 J	4.1 J	0.76 J	<0.005	11,000	<3.0	<50	270	<0.2	31	0.98 J	<0.2	<2.0	0.86 J	360
SB-17	W-R2330012-033114-ACN-002	3/31/2014	370	<1.0	0.046 J	0.65 J	3.9 J	<4.0	<0.005	7,000	<3.0	<50	390	<0.2	7.5 J	1.7 J	<0.2	<2.0	0.69 J	19 J
SB-18	W-R2330012-033114-ACN-003	3/31/2014	58 J	<1.0	0.053 J	1.4 J	3.9 J	1.5 J	<0.005	13,000	0.44 J	<50	660	<0.2	11 J	<5.0	<0.2	<2.0	1.4 J	140
SB-19	W-2330012-040114-ACN-004	4/1/2014	140	<1.0	<1.0	<10	5.8 J	0.54 J	2.1	2,100	0.081 J	<50	930	<0.2	18 J	0.84 J	<0.20	<2.0	0.46 J	62
SB-20	W-2330012-040114-ACN-005	4/1/2014	21 J	<1.0	<1.0	<10	1.8 J	1.2 J	1.3	490	0.13 J	<50	98	<0.2	2.6 J	0.73 J	<0.20	<2.0	1.3 J	2.8 J
SB-35	W-2330012-040114-ACN-006	4/1/2014	1,000	<1.0	<1.0	3.6 J	3.2 J	<4.0	2.4 J	25,000	0.43 J	<50	550	<0.2	10 J	<5.0	<0.20	<2.0	2.2 J	16 J
SB-36	W-R2330012-040314-ACN-007	4/3/2014	2,800	<1.0	<1.0	1.6 J	6.4 J	<4.0	2.5 J	27,000	0.47 J	<50	260	<0.2	9.7 J	<5.0	<0.20	<2.0	3.3 J	2.9 J
SB-36 (DUP)	W-R2330012-040314-ACN-008	4/3/2014	2,600	<1.0	<1.0	1.4 J	6.6 J	<4.0	6.3 J	27,000	0.41 J	<50	250 J	<0.2	9.6 J	<5.0	<0.20	<2.0	3.3 J	2.5 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
SB-37	W-R2330012-040314-ACN-009	4/3/2014	<25	<1.0	<1.0	<50	6.9 J	2.6	<1.0	1.3 J	<1.0	<5.0	<1.0	<10	<5.0	<5.0	0.84 J	<5.0	<1.0	0.82 J	1.7 J	<10	<10	<5.0
SB-38	W-R2330012-040314-ACN-010	4/3/2014	2.2 J	<1.0	0.98 J	<50	16 J	2.8	<1.0	1.4 J	0.96 J	<5.0	<1.0	<10	<5.0	<5.0	<1.0	1.6 J	<1.0	0.38 J	1.5 J	<10	<10	1.5 J
SB-39	W-R2330012-040314-ACN-011	4/3/2014	<25	<1.0	0.91 J	<50	11 J	17	<1.0	1.6 J	90	<5.0	<1.0	2.0 J	<5.0	<5.0	<1.0	2.0 J	<1.0	0.30 J	1.5 J	<10	<10	1.2 J
SB-46	W-R2330012-041114-ACN-015	4/11/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.30 J	<3.0	<10	<10	<5.0
SB-47	W-R2330012-041114-ACN-016	4/11/2014	<25	<1.0	<1.0	<50	<50	0.31 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.49 J	<3.0	<10	<10	<5.0
SB-48	W-R2330012-040314-ACN-013	4/9/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.35 J	<3.0	<10	<10	<5.0
SB-49	W-R2330012-040314-ACN-014	4/9/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SB-50	W-R2330012-040314-ACN-012	4/9/2014	<25	<1.0	<1.0	<50	<50	0.29 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.39 J	<3.0	<10	<10	<5.0
SW-1	W-R2330009-050313-MJF-015	5/3/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SW-1	W-R2330012-041514-ACN-017	4/15/2014	<25	<1.0	<1.0	1.4 J	7.5 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SW-2	W-R2330009-050313-MJF-014	5/3/2013	<25	<1.0	<1.0	<50	4.0 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SW-2	W-R2330012-041514-ACN-019	4/15/2014	<25	<1.0	<1.0	<50	3.6 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
SW-3	W-R2330009-051013-MJF-016	5/10/2013	<120	<1.0	<1.0	<50	<50	<5.0	<1.0	<5.0	<5.0	<25	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<80	<10	<5.0
SW-3	W-R2330012-041514-ACN-018	4/15/2014	<120	<1.0	<1.0	<50	3.4 J	<5.0	<1.0	<5.0	<5.0	<25	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank	W-R2330004-090512-MJF-05	9/5/2012	<25	<1.0	<1.0	<50	120	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank	W-R2330009-050113-MJF-006	5/1/2013	6.2 J	<1.0	<1.0	<50	4.4 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	0.56 J	<10	<5.0
Equipment Blank[A]	W-R2330009-080813-ZTR-012	8/8/2013																						
Equipment Blank	W-R2330009-080813-ZTR-012	8/8/2013	2.8 J	<1.0	<1.0	<50	0.79 J	<1.0	<1.0	<5.0	<1.0	<5.0	1.3	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330009-121113-AJL-013	12/11/2013																						
Equipment Blank	W-R2330009-121113-AJL-013	12/11/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-032814-ACN-012	3/28/2014																						
Equipment Blank	W-R2330012-032814-ACN-012	3/28/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-052014-ACN-031	5/20/2014																						
Equipment Blank	W-R2330012-052014-ACN-031	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.4 J	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-112414-ACN-005	11/24/2014																						
Equipment Blank	W-R2330012-112414-ACN-005	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-112514-ACN-010	11/25/2014																						
Equipment Blank	W-R2330012-112514-ACN-010	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-112614-JCH-016	11/26/2014																						
Equipment Blank	W-R2330012-112614-JCH-016	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-12114-JCH-022	12/1/2014																						
Equipment Blank	W-R2330012-12114-JCH-022	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	7.2	<5.0	<1.0	<5.0	15	<10	3.4 J	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-12214-JCH-029	12/2/2014																						
Equipment Blank	W-R2330012-12214-JCH-029	12/2/2014	<25	<1.0	<1.0	<50	<50	<1.0	2.2	<5.0	<1.0	<5.0	5.7	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330012-020515-ACN-004	2/5/2015																						
Equipment Blank	W-R2330012-020515-ACN-004	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<11	<11	<5.3
Equipment Blank[A]	W-R2330017-031615-ACN-008	3/16/2015																						
Equipment Blank	W-R2330017-031615-ACN-008	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0

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			Semivolatile Organic Compounds (SVOCs)																					
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}nr}$) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
SB-37	W-R2330012-040314-ACN-009	4/3/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	66 J	1.5 J	24 J
SB-38	W-R2330012-040314-ACN-010	4/3/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	13 J	2.5 J	14 J
SB-39	W-R2330012-040314-ACN-011	4/3/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	0.80 J	<2.0	<5.0	<5.0	75	0.61 J	2.3 J
SB-46	W-R2330012-041114-ACN-015	4/11/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	38 J	0.40 J	6.4 J
SB-47	W-R2330012-041114-ACN-016	4/11/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	39 J	0.43 J	2.8 J
SB-48	W-R2330012-040314-ACN-013	4/9/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	170 J	1.4 J	<5.0
SB-49	W-R2330012-040314-ACN-014	4/9/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	21 J	<2.0	<5.0
SB-50	W-R2330012-040314-ACN-012	4/9/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	74 J	0.43 J	<5.0
SW-1	W-R2330009-050313-MJF-015	5/3/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	25 J	0.40 J	<5.0
SW-1	W-R2330012-041514-ACN-017	4/15/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	1.6 H	<5.0	<5.0	<2.0	0.69 H	<5.0	16 J	1.3 J	<5.0
SW-2	W-R2330009-050313-MJF-014	5/3/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	1.3 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.4 J	1.1 J	0.93 J
SW-2	W-R2330012-041514-ACN-019	4/15/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	1.3 H	<5.0	<5.0	<2.0	<5.0	<5.0	<250	1.4 J	<25
SW-3	W-R2330009-051013-MJF-016	5/10/2013	<10	<10	<80	<80	<40	<5.0	<5.0	<10	<5.0	<80	<4.0	<5.0	<40	<40	<40	<1.0	<40	<5.0	<2.0	<5.0	<5.0	26 J	0.43 J	4.6 J
SW-3	W-R2330012-041514-ACN-018	4/15/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	1.3 H	<5.0	<5.0	<2.0	<5.0	<5.0	11 J	0.52 J	<5.0
Equipment Blank	W-R2330004-090512-MJF-05	9/5/2012	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<0.84	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	2.9 J	<2.0	<5.0
Equipment Blank	W-R2330009-050113-MJF-006	5/1/2013	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	0.89 J	0.88 J	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	2.4 J	0.11 J	<5.0
Equipment Blank[A]	W-R2330009-080813-ZTR-012	8/8/2013																						3.4 J	<2.0	<5.0
Equipment Blank	W-R2330009-080813-ZTR-012	8/8/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	1.7 J	0.080 J	<5.0
Equipment Blank[A]	W-R2330009-121113-AJL-013	12/11/2013																						7.0 J	<2.0	<5.0
Equipment Blank	W-R2330009-121113-AJL-013	12/11/2013	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	0.16 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	2.7 J	<2.0	<5.0
Equipment Blank[A]	W-R2330012-032814-ACN-012	3/28/2014																						51	0.094 J	<5.0
Equipment Blank	W-R2330012-032814-ACN-012	3/28/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	150	0.48 J	<5.0
Equipment Blank[A]	W-R2330012-052014-ACN-031	5/20/2014																						5.0 J	<2.0	<5.0
Equipment Blank	W-R2330012-052014-ACN-031	5/20/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	9.4 J	<2.0	<5.0
Equipment Blank[A]	W-R2330012-112414-ACN-005	11/24/2014																						3.3 J	<2.0	<5.0
Equipment Blank	W-R2330012-112414-ACN-005	11/24/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.3 J	<2.0	<5.0
Equipment Blank[A]	W-R2330012-112514-ACN-010	11/25/2014																						3.6 J	<2.0	<5.0
Equipment Blank	W-R2330012-112514-ACN-010	11/25/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	3.2 J	<2.0	<5.0
Equipment Blank[A]	W-R2330012-112614-JCH-016	11/26/2014																						3.8 J	<2.0	<5.0
Equipment Blank	W-R2330012-112614-JCH-016	11/26/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	6.2 J	<2.0	<5.0
Equipment Blank[A]	W-R2330012-12114-JCH-022	12/1/2014																						23 J	0.15 J	<5.0
Equipment Blank	W-R2330012-12114-JCH-022	12/1/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	23 J	0.16 J	<5.0
Equipment Blank[A]	W-R2330012-12214-JCH-029	12/2/2014																						<50	<2.0	<5.0
Equipment Blank	W-R2330012-12214-JCH-029	12/2/2014	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<50	<2.0	<5.0
Equipment Blank[A]	W-R2330012-020515-ACN-004	2/5/2015																						12 J	<2.0	<5.0
Equipment Blank	W-R2330012-020515-ACN-004	2/5/2015	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<11	<4.2	<5.0	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3	<50	<2.0	<5.0
Equipment Blank[A]	W-R2330017-031615-ACN-008	3/16/2015																						<50	<2.0	<5.0
Equipment Blank	W-R2330017-031615-ACN-008	3/16/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<50	<2.0	<5.0

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			Metals																	
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
SB-37	W-R2330012-040314-ACN-009	4/3/2014	640	<1.0	<1.0	3.5 J	8.8 J	<4.0	9.5 J	16,000	3.1 J	<50	530	<0.2	31 J	<5.0	<0.20	<2.0	1.1 J	340
SB-38	W-R2330012-040314-ACN-010	4/3/2014	380	<1.0	<1.0	<10	6.2 J	<4.0	5.2 J	2,200	0.47 J	<50	430	<0.2	15 J	<5.0	<0.20	<2.0	<4.0	21 J
SB-39	W-R2330012-040314-ACN-011	4/3/2014	2,100	<1.0	<1.0	4.4 J	4.6 J	2.3 J	6.6 J	25,000	1.5 J	<50	300	<0.2	11 J	1.1 J	<0.20	1.5 J	1.1 J	6.9 J
SB-46	W-R2330012-041114-ACN-015	4/11/2014	100 J	<1.0	<1.0	1.8 J	3.1 J	2.7 J	<0.005	5,100	1.2 J	<50	960	<0.2	9.6 J	<5.0	<0.20	<2.0	<4.0	7.8 J
SB-47	W-R2330012-041114-ACN-016	4/11/2014	160	<1.0	<1.0	0.95 J	6.7 J	2.4 J	<0.005	3,200	0.18 J	<50	1,200	<0.2	17 J	7.2	<0.2	<2.0	0.59 J	9.0 J
SB-48	W-R2330012-040314-ACN-013	4/9/2014	69 J	<1.0	<1.0	<10	7.7 J	6.1 J	<0.005	280 J	<3.0	<50	410	<0.2	20 J	5.4 J	<0.20	<2.0	2.4 J	21J
SB-49	W-R2330012-040314-ACN-014	4/9/2014	9.3 J	<1.0	<1.0	<10	0.17 J	0.65 J	2.3 J	31 J	0.62 J	<50	59	<0.2	1.4 J	<5.0	<0.20	<2.0	<4.0	1.3 J
SB-50	W-R2330012-040314-ACN-012	4/9/2014	44 J	<1.0	0.58 J	<10	2.6 J	<4.0	2.6 J	200 J	14 J	<50	110 J	<0.2	4.3 J	<5.0	<0.20	<2.0	<4.0	8.0 J
SW-1	W-R2330009-050313-MJF-015	5/3/2013	27 J	<1.0	<1.0	1.1 J	1.5 J	4.0	<0.005	50 J	0.069 J	<50	22 J	<0.2	6.4 J	<5.0	<0.20	<2.0	<4.0	1.9 J
SW-1	W-R2330012-041514-ACN-017	4/15/2014	34 J	<1.0	0.4 J	4.3 J	1.7 J	36 J	110	33 J	2.3 J	<50	51 J	<0.2	4.0 J	<5.0	<0.20	<2.0	1.2 J	38 J
SW-2	W-R2330009-050313-MJF-014	5/3/2013	93 J	<1.0	0.063 J	0.44 J	0.55 J	5.2 J	0.0012 J	170 J	0.25 J	<50	69	<0.2	4.8 J	<5.0	<0.20	<2.0	0.28 J	10 J
SW-2	W-R2330012-041514-ACN-019	4/15/2014	78 J	<1.0	0.23 J	<10	1.3 J	5.9 J	<0.005	250 J	0.77 J	<50	460 J	<0.2	5.2 J	<5.0	<0.20	<2.0	<4.0	80 J
SW-3	W-R2330009-051013-MJF-016	5/10/2013	340	<1.0	0.046 J	1.2 J	3.4 J	13 J	<0.005	4,100	1.7 J	<50	880	<0.2	13 J	<50	<0.20	0.093 J	1.1 J	51
SW-3	W-R2330012-041514-ACN-018	4/15/2014	150 J	<1.0	<1.0	<10	0.93 J	5.7 J	<0.005	<100	2.6 J	<50	6.2 J	<0.2	4.2 J	<5.0	<0.20	<2.0	<4.0	8.8 J
Equipment Blank	W-R2330004-090512-MJF-05	9/5/2012	0.59 J	<1.0	<1.0	0.14 J	0.26 J	0.70 J	<0.005	24 J	0.27 J	<50	1.5 J	<0.2	0.42 J	0.48 J	<0.025	<2.0	<0.30	15 J
Equipment Blank	W-R2330009-050113-MJF-006	5/1/2013	3.1 J	<1.0	<1.0	0.59 J	0.79 J	0.57 J	<0.005	23 J	0.0053 J	<50	2.3 J	<0.2	0.6 J	<5.0	<0.20	<2.0	<4.0	1.8 J
Equipment Blank[A]	W-R2330009-080813-ZTR-012	8/8/2013	2.7 J	<1.0	0.049 J	0.28 J	<20	1.5 J		26 J	0.053 J	<50	0.38 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	4.1 J
Equipment Blank	W-R2330009-080813-ZTR-012	8/8/2013	2.2 J	<1.0	<1.0	<10	0.46 J	1.1 J	<0.005	21 J	<3.0	<50	1.0 J	<0.2	0.46 J	<5.0	<0.20	<2.0	<4.0	3.1 J
Equipment Blank[A]	W-R2330009-121113-AJL-013	12/11/2013	0.085 J	<1.0	<1.0	<10	<20	0.72 J		12 J	<3.0	<50	0.13 J	<0.2	<20	<5.0	<0.20	<2.0	0.3 J	2.2 J
Equipment Blank	W-R2330009-121113-AJL-013	12/11/2013	0.11 J	<1.0	<1.0	<10	0.14 J	<4.0	<0.005	10 J	<3.0	<50	0.31 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	1.7 J
Equipment Blank[A]	W-R2330012-032814-ACN-012	3/28/2014	14 J	0.15 J	<1.0	<1.0	0.17 J	65 J		17 J	0.16 J	<50	0.17 J	<0.2	1.3 J	<5.0	<0.20	<2.0	<4.0	5.3 J
Equipment Blank	W-R2330012-032814-ACN-012	3/28/2014	7.5 J	91 J	<1.0	<1.0	0.076 J	53 J	1.4 J	29 J	0.037 J	<50	1.2 J	<0.2	0.57 J	<5.0	<0.20	<2.0	<4.0	2.1 J
Equipment Blank[A]	W-R2330012-052014-ACN-031	5/20/2014	0.28 J	<1.0	<1.0	<1.0	<20	0.56 J		8.4 J	0.054 J	<50	0.25 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	0.57 J
Equipment Blank	W-R2330012-052014-ACN-031	5/20/2014	0.35 J	<1.0	<1.0	<1.0	<20	<4.0	<0.005	13 J	<3.0	<50	0.39 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	0.87 J
Equipment Blank[A]	W-R2330012-112414-ACN-005	11/24/2014	<100	<1.0	<1.0	<1.0	<20	6.3		<200	<3.0	<50	0.53 J	<0.2	0.63 J	<5.0	<0.20	<2.0	<4.0	3.7 J
Equipment Blank	W-R2330012-112414-ACN-005	11/24/2014	<100	<1.0	0.027 J	<10	<20	6.3	<5.0	<200	<3.0	<50	0.22 J	<0.2	0.67 J	<5.0	<0.20	<2.0	<4.0	3.4 J
Equipment Blank[A]	W-R2330012-112514-ACN-010	11/25/2014	0.67 J	<1.0	<1.0	<10	<20	2.3 J		17 J	<3.0	<50	0.28 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	3.4 J
Equipment Blank	W-R2330012-112514-ACN-010	11/25/2014	0.58 J	<1.0	<1.0	<10	<20	2.2 J	<5.0	<200	<3.0	<50	0.23 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	3.4 J
Equipment Blank[A]	W-R2330012-112614-JCH-016	11/26/2014	<100	<1.0	0.091 J	<10	<20	6.2		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330012-112614-JCH-016	11/26/2014	<100	<1.0	0.27 J	0.37 J	<20	5.9	<5.0	21 J	<3.0	<50	0.24 J	<0.2	0.68 J	<5.0	0.026 J	<2.0	<4.0	3.5 J
Equipment Blank[A]	W-R2330012-12114-JCH-022	12/1/2014	16 J	<1.0	0.032 J	0.30 J	<20	170		33 J	<3.0	<50	3.5 J	<0.2	1.1 J	<5.0	0.043 J	<2.0	<4.0	14 J
Equipment Blank	W-R2330012-12114-JCH-022	12/1/2014	15 J	<1.0	0.034 J	<10	<20	160	<5.0	27 J	<3.0	<50	3.2 J	<0.2	1.0 J	<5.0	0.022 J	<2.0	0.54 J	14 J
Equipment Blank[A]	W-R2330012-12214-JCH-029	12/2/2014	1.4 J	<1.0	<1.0	<10	<20	<4.0		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330012-12214-JCH-029	12/2/2014	0.45 J	<1.0	<1.0	0.13 J	<20	<4.0	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330012-020515-ACN-004	2/5/2015	6.8 J	<1.0	<1.0	<10	0.21 J	83		<200	<3.0	<50	8.1 J	<0.2	1.4 J	<5.0	<0.20	<2.0	<4.0	8.6 J
Equipment Blank	W-R2330012-020515-ACN-004	2/5/2015	<100	<1.0	<1.0	<10	<20	2.0 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-031615-ACN-008	3/16/2015	<100	<1.0	<1.0	0.21 J	<20	1.1 J		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-031615-ACN-008	3/16/2015	<100	<1.0	<1.0	0.19 J	<20	1.1 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes	1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene
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	80 (A,W)	NA	80 (A,W)	4,800	74 (E)	2,300	NA	790 (E)	280 (E)	ID	130	750
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000	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)	350	NA	ID	ID	18	28	NA	270	41	ID	18	19
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730	ID	NA	340
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)	1.8E+05	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)
Groundwater Concentration for Vapor Intrusion (GW_{VI-inf}) (a)			18,000	32,000	380	4,400,000	34,000,000	1.4E+02	NA	9,900	4,600	180,000	7.2E+02	8,100	NA	NA	2.6E+03	53	NA	150,000	10,000 (d)	ID	NA	3,900
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	7.92E+06	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
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																						
Equipment Blank[A]	W-R2330017-031715-ACN-014	3/17/2015																						
Equipment Blank	W-R2330017-031715-ACN-014	3/17/2015	<25	<1.0	<1.0	<50	5.1 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330017-031915-ACN-022	3/19/2015																						
Equipment Blank	W-R2330017-031915-ACN-022	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330017-032015-ACN-031	3/20/2015																						
Equipment Blank	W-R2330017-032015-ACN-031	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0	<10	<10	<5.0
Equipment Blank[A]	W-R2330017-111615-AEP-024	11/16/2015																						
Equipment Blank	W-R2330017-111615-AEP-024	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111715-JPM-025	11/17/2015																						
Equipment Blank	W-R2330017-111715-JPM-025	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111815-AFB-026	11/18/2015																						
Equipment Blank	W-R2330017-111815-AFB-026	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111915-AEP-027	11/19/2015																						
Equipment Blank	W-R2330017-111915-AEP-027	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
Bold indicates concentration above method detection limits.
Roman numerals indicate DEQ criterion number.
A = Total Metals sample collected for comparison to dissolved metals analytical results.
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

Notes in parentheses and standard abbreviations from MDEQ Operational Memorandum 1, Attachment 1, dated September 28, 2012 or MDEQ Guidance Document for the Vapor Intrusion Pathway, dated May 2013.

Notes:
Bold indicates concentration above metho
Roman numerals indicate DEQ criterion nu
A = Total Metals sample collected for comp
E = Criterion is the aesthetic drinking water
G = Calculated value based on a hardness
H = Analyzed outside of holding time.
J = Analyte detected below quantitation lim
NS = Not Sampled or Not Analyzed.
Exceeds Generic Drinking Water Cleanup
Exceeds Generic Drinking Water Cleanup
Exceeds Generic Ground Water Surface W
Exceeds Two or More DW (II), GSI (III) and
Exceeds GSI Final Acute Value (FAV), also
Notes in parentheses and standard abbrev
Document for the Vapor Intrusion Pathway

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)																					
			2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Carbazole	Dibenzofuran	Dichlorodifluoromethane	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol	Aluminum	Antimony	Arsenic
Non-residential Drinking Water Criteria (II)			1,000	1,000	1,000	NA	6.0 (A)	3,800	4,400	NA	2,700 (S)	350	ID	4,800	16,000	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)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,100	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67 (X)	10 (M); 4.0	4.0	ID	110	NA	9.7	1.6	12	11	2.0 (M); 1.4	ID	450	NA	130	10
GSI Final Acute Value (FAV)			NA	1,400	2,700	ID	285	200	NA	NA	NA	72	NA	ID	2,000	NA	75	220	200	200	11	ID	6,800	NA	2,300	680
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	10,000 (S)	3.0E+05	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nr}) (a)			NA	NA	NA	NA	NA	2.30E+05	NA	NA	NA	NLV	NA	NA	NA	NA	NA	NA	300,000	1,200	4.8E+2	1.7E+06	NA	NLV	NLV	NLV
Water Solubility (VII)			2.80E+07	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	4.19E+06	11,200	206	1,980	31,000	1,000	135	8.28E+7	NA	NA	NA
Flammability & Explosivity Screening Level (VIII)			NA	NA	ID	NA	NA	ID	ID	NA	ID	ID	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																								
Equipment Blank[A]	W-R2330017-031715-ACN-014	3/17/2015																						<50	<2.0	<5.0
Equipment Blank	W-R2330017-031715-ACN-014	3/17/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<4.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<50	<2.0	<5.0
Equipment Blank[A]	W-R2330017-031915-ACN-022	3/19/2015																						21 J	<2.0	<5.0
Equipment Blank	W-R2330017-031915-ACN-022	3/19/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	18 J	<2.0	<5.0
Equipment Blank[A]	W-R2330017-032015-ACN-031	3/20/2015																						<50	<2.0	<5.0
Equipment Blank	W-R2330017-032015-ACN-031	3/20/2015	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0	<50	<2.0	<5.0
Equipment Blank[A]	W-R2330017-111615-AEP-024	11/16/2015																						<50	NS	NS
Equipment Blank	W-R2330017-111615-AEP-024	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	NS
Equipment Blank[A]	W-R2330017-111715-JPM-025	11/17/2015																						2.7 J	NS	NS
Equipment Blank	W-R2330017-111715-JPM-025	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS
Equipment Blank[A]	W-R2330017-111815-AFB-026	11/18/2015																						1.8 J	NS	NS
Equipment Blank	W-R2330017-111815-AFB-026	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	NS	NS
Equipment Blank[A]	W-R2330017-111915-AEP-027	11/19/2015																						1.4 J	NS	NS
Equipment Blank	W-R2330017-111915-AEP-027	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<50	NS	NS

d detection limits.
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parison to dissolved metals analytical results.
r value, as required by Section 20120a(5) of NREPA.
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Criteria (II)
Criteria (II) and the Generic Health-Based Drinking Water Value (E)
Water Interface Criteria (III)
d/or Generic Health-Based Drinking Water Value (E)
o exceeds others

viations from MDEQ Operational Memorandum 1, Attachment 1, dated September 28, 2012 or MDEQ Guidance
, dated May 2013.

Notes:
Bold indicates concentration above methoc
Roman numerals indicate DEQ criterion nur
A = Total Metals sample collected for compa
E = Criterion is the aesthetic drinking water
G = Calculated value based on a hardness
H = Analyzed outside of holding time.
J = Analyte detected below quantitation limi
NS = Not Sampled or Not Analyzed.
Exceeds Generic Drinking Water Cleanup C
Exceeds Generic Drinking Water Cleanup C
Exceeds Generic Ground Water Surface W
Exceeds Two or More DW (II), GSI (III) and
Exceeds GSI Final Acute Value (FAV), also
Per the approval from the EPA, ground wate
Notes in parentheses and standard abbrevi
Document for the Vapor Intrusion Pathway,

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																
			Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (B)	Cyanide (P,R)	Iron (B)	Lead (B)	Magnesium (B)	Manganese (B)	Mercury	Nickel	Selenium (B)	Silver	Thallium	Vanadium	Zinc
Non-residential Drinking Water Criteria (II)			2,000 (A)	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)	50 (A)	98	2.0 (A)	62	5,000 (E)
Non-residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	4,000	NA	5,600	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			670 (G)	6.7 (G)	3 (G)	11	100	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)			3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-nrf}) (a)			NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																		
Equipment Blank[A]	W-R2330017-031715-ACN-014	3/17/2015	<100	<1.0	0.027 J	0.17 J	<20	1.0 J		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-031715-ACN-014	3/17/2015	<100	<1.0	<1.0	0.19 J	<20	1.1 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-031915-ACN-022	3/19/2015	3.3 J	<1.0	<1.0	<10	<20	1.4 J		22 J	<3.0	<50	0.26 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-031915-ACN-022	3/19/2015	1.5 J	<1.0	<1.0	<10	<20	1.3 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-032015-ACN-031	3/20/2015	<100	<1.0	<1.0	0.21 J	<20	1.4 J		43 J	<3.0	<50	0.20 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-032015-ACN-031	3/20/2015	<100	<1.0	<1.0	0.21 J	<20	1.1 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-111615-AEP-024	11/16/2015	NS	NS	NS	NS	NS	NS		33 J	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111615-AEP-024	11/16/2015	NS	NS	NS	NS	NS	NS	NS	<200	NS	66 J	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111715-JPM-025	11/17/2015	NS	NS	NS	NS	NS	NS		100 J	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111715-JPM-025	11/17/2015	NS	NS	NS	NS	NS	NS	NS	<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111815-AFB-026	11/18/2015	NS	NS	NS	NS	NS	NS		<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111815-AFB-026	11/18/2015	NS	NS	NS	NS	NS	NS	NS	<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111915-AEP-027	11/19/2015	NS	NS	NS	NS	NS	NS		<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111915-AEP-027	11/19/2015	NS	NS	NS	NS	NS	NS	NS	<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS

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value, as required by Section 20120a(5) of NREPA.
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riteria (II)
riteria (II) and the Generic Health-Based Drinking Water Value (E)
ater Interface Criteria (III)
or Generic Health-Based Drinking Water Value (E)
exceeds others
r analytical suite was modified prior to the November 2015 monitoring event.
ations from MDEQ Operational Memorandum 1, Attachment 1, dated September 28, 2012 or MDEQ Guidance
dated May 2013.

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-1	W-R2330009-043013-MJF-002	4/30/2013	<25	<1.0	<1.0	<50	<50	0.66 J	<1.0	<5.0	<1.0	7.3	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A]	W-R2330009-080713-ZTR-007	8/7/2013																			
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	<25	<1.0	<1.0	<50	<50	0.78 J	<1.0	<5.0	<1.0	6.9	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A]	W-R2330009-111413-ACN-013	11/14/2013																			
MW-1	W-R2330009-111413-ACN-013	11/14/2013	<25	<1.0	<1.0	<50	6.9 J	0.81 J	<1.0	<5.0	<1.0	9.9	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A]	W-R2330012-032814-ACN-009	3/28/2014																			
MW-1	W-R2330012-032814-ACN-009	3/28/2014	<25	<1.0	<1.0	<50	<50	0.57 J	<1.0	<5.0	<1.0	5.1	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A]	W-R2330012-12214-JCH-026	12/2/2014																			
MW-1	W-R2330012-12214-JCH-026	12/2/2014	<25	<1.0	<1.0	<50	<50	0.59 J	<1.0	<5.0	<1.0	3.5 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A] (DUP)	W-R2330012-12214-JCH-027	12/2/2014																			
MW-1 (DUP)	W-R2330012-12214-JCH-027	12/2/2014	<25	<1.0	<1.0	<50	<50	0.60 J	<1.0	<5.0	<1.0	3.2 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A]	W-R2330017-031915-ACN-021	3/19/2015																			
MW-1	W-R2330017-031915-ACN-021	3/19/2015	<25	<1.0	<1.0	<50	<50	0.35 J	<1.0	<5.0	<1.0	4.3 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-1[A]	W-R2330017-111915-AEP-021	11/19/2015																			
MW-1	W-R2330017-111915-AEP-021	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330004-090512-MJF-01	9/5/2012	<25	<1.0	<1.0	<50	<50	0.66 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3	W-R2330009-050213-MJF-009	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3[A]	W-R2330009-080713-ZTR-004	8/7/2013																			
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3[A]	W-R2330009-111213-ACN-002	11/12/2013																			
MW-3	W-R2330009-111213-ACN-002	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3[A]	W-R2330012-032714-ACN-007	3/27/2014																			
MW-3	W-R2330012-032714-ACN-007	3/27/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3[A]	W-R2330012-091514-ACN-001	9/15/2014																			
MW-3	W-R2330012-091514-ACN-001	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0		NS	NS	NS	NS	NS
MW-3[A]	W-R2330012-12114-JCH-019	12/1/2014																			
MW-3	W-R2330012-12114-JCH-019	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3[A]	W-R2330017-031915-JCH-015	3/19/2015																			
MW-3	W-R2330017-031915-JCH-015	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-3[A]	W-R2330017-111915-JPM-018	11/19/2015																			
MW-3	W-R2330017-111915-JPM-018	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330004-090512-MJF-02	9/5/2012	<25	<1.0	<1.0	<50	12 J	0.39 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	<25	<1.0	<1.0	<50	8.5 J	0.43 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4	W-R2330009-050213-MJF-010	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4[A]	W-R2330009-080713-ZTR-005	8/7/2013																			
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4[A]	W-R2330009-111213-ACN-003	11/12/2013																			
MW-4	W-R2330009-111213-ACN-003	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4[A]	W-R2330012-032714-ACN-006	3/27/2014																			

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion (GW_{VI-res}) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-1	W-R2330009-043013-MJF-002	4/30/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	1.0 J	<5.0	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A]	W-R2330009-080713-ZTR-007	8/7/2013																								
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A]	W-R2330009-111413-ACN-013	11/14/2013																								
MW-1	W-R2330009-111413-ACN-013	11/14/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A]	W-R2330012-032814-ACN-009	3/28/2014																								
MW-1	W-R2330012-032814-ACN-009	3/28/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.3 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A]	W-R2330012-12214-JCH-026	12/2/2014																								
MW-1	W-R2330012-12214-JCH-026	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.3 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A] (DUP)	W-R2330012-12214-JCH-027	12/2/2014																								
MW-1 (DUP)	W-R2330012-12214-JCH-027	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.5 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A]	W-R2330017-031915-ACN-021	3/19/2015																								
MW-1	W-R2330017-031915-ACN-021	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-1[A]	W-R2330017-111915-AEP-021	11/19/2015																								
MW-1	W-R2330017-111915-AEP-021	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330004-090512-MJF-01	9/5/2012	<10	<10	<5.0	<10	<10	<5.0	4.2 J	<5.0	<5.0	<5.0	<10	<5.0	<10	0.85 J	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3	W-R2330009-050213-MJF-009	5/2/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	1.4 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3[A]	W-R2330009-080713-ZTR-004	8/7/2013																								
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3[A]	W-R2330009-111213-ACN-002	11/12/2013																								
MW-3	W-R2330009-111213-ACN-002	11/12/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3[A]	W-R2330012-032714-ACN-007	3/27/2014																								
MW-3	W-R2330012-032714-ACN-007	3/27/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3[A]	W-R2330012-091514-ACN-001	9/15/2014																								
MW-3	W-R2330012-091514-ACN-001	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3[A]	W-R2330012-12114-JCH-019	12/1/2014																								
MW-3	W-R2330012-12114-JCH-019	12/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3[A]	W-R2330017-031915-JCH-015	3/19/2015																								
MW-3	W-R2330017-031915-JCH-015	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-3[A]	W-R2330017-111915-JPM-018	11/19/2015																								
MW-3	W-R2330017-111915-JPM-018	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330004-090512-MJF-02	9/5/2012	<10	<10	<5.0	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<0.84	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	<10	<10	<5.0	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<0.84	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4	W-R2330009-050213-MJF-010	5/2/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4[A]	W-R2330009-080713-ZTR-005	8/7/2013																								
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4[A]	W-R2330009-111213-ACN-003	11/12/2013																								
MW-4	W-R2330009-111213-ACN-003	11/12/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4[A]	W-R2330012-032714-ACN-006	3/27/2014																								

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-1	W-R2330009-043013-MJF-002	4/30/2013	6.1 J	0.43 J	15	1,500	<1.0	<1.0	1.1 J	2.8 J	1.3 J	<0.005	17,000	<3.0	<50	130	<0.2	5.3 J	<5.0	<0.20	<2.0	1.4 J	9.1 J
MW-1[A]	W-R2330009-080713-ZTR-007	8/7/2013	67	0.21 J	23	1,700	<1.0	0.17 J	1.5 J	3.4 J	3.3 J		25,000	0.25 J	<50	120	<0.2	8.0 J	<5.0	<0.20	<2.0	2.0 J	6.0 J
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	5.3 J	0.27 J	23	1,900	<1.0	0.10 J	1.3 J	3.7 J	1.2 J	<0.005	25,000	0.076 J	<50	120	<0.2	7.4 J	<5.0	<0.20	<2.0	1.7 J	5.6 J
MW-1[A]	W-R2330009-111413-ACN-013	11/14/2013	33 J	0.19 J	28	2,200	<1.0	<1.0	2.0 J	3.1 J	0.62 J		21,000	0.17 J	<50	86	<0.2	7.7 J	<5.0	<0.20	<2.0	1.7 J	3.4 J
MW-1	W-R2330009-111413-ACN-013	11/14/2013	4.8 J	0.21 J	27	2,200	<1.0	0.12 J	2.5 J	3.7 J	<4.0	0.0044 J	21,000	<3.0	<50	90	<0.2	8.2 J	<5.0	<0.20	<2.0	1.8 J	3.4 J
MW-1[A]	W-R2330012-032814-ACN-009	3/28/2014	14 J	0.18 J	16 J	1,300	0.15 J	<1.0	0.78 J	2.6 J	2.4 J		17,000	0.13 J	<50	69	<0.2	7.5 J	0.71 J	<0.2	<2.0	1.8 J	2.0 J
MW-1	W-R2330012-032814-ACN-009	3/28/2014	<100	0.19 J	16	1,600	0.19 J	0.18 J	2.7 J	3.0 J	2.0 J	6.7 J	18,000	<3.0	<50	65	<0.2	7.5 J	<5.0	<0.2	<2.0	1.6 J	1.4 J
MW-1[A]	W-R2330012-12214-JCH-026	12/2/2014	120	0.23 J	26	1,700	<1.0	0.062 J	1.6 J	1.9 J	0.55 J		18,000	<3.0	<50	83	<0.2	4.0 J	<5.0	<0.20	<2.0	2.1 J	3.6 J
MW-1	W-R2330012-12214-JCH-026	12/2/2014	4.0 J	0.24 J	25	1,700	<1.0	<1.0	1.2 J	2.0 J	<4.0	3.9 J	17,000	<3.0	<50	80	<0.2	3.8 J	<5.0	<0.20	<2.0	1.5 J	<50
MW-1[A] (DUP)	W-R2330012-12214-JCH-027	12/2/2014	74	0.19 J	25	1,800	<1.0	<1.0	1.4 J	2.0 J	0.17 J		18,000	<3.0	<50	81	<0.2	3.5 J	<5.0	<0.20	<2.0	2.1 J	3.2 J
MW-1 (DUP)	W-R2330012-12214-JCH-027	12/2/2014	3.3 J	0.18 J	25	1,700	<1.0	<1.0	1.4 J	1.8 J	<4.0	4.6 J	17,000	<3.0	<50	78	<0.2	3.6 J	<5.0	<0.20	<2.0	1.8 J	<50
MW-1[A]	W-R2330017-031915-ACN-021	3/19/2015	30 J	0.26 J	27	1,900	<1.0	<1.0	1.3 J	2.3 J	1.1 J		21,000	<3.0	<50	81	<0.2	5.1 J	<5.0	<0.20	<2.0	2.1 J	3.3 J
MW-1	W-R2330017-031915-ACN-021	3/19/2015	18 J	0.31 J	27	2,000	<1.0	<1.0	1.3 J	2.2 J	0.50 J	<5.0	21,000	<3.0	<50	81	<0.2	5.0 J	<5.0	<0.20	<2.0	1.6 J	3.5 J
MW-1[A]	W-R2330017-111915-AEP-021	11/19/2015	210	NS	NS	NS	NS	NS	NS	NS	NS		23,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-1	W-R2330017-111915-AEP-021	11/19/2015	5.2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	23,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330004-090512-MJF-01	9/5/2012	6.0 J	0.29 J	14	900	<1.0	<1.0	1.1 J	4.2 J	0.39 J		9,300	0.12 J	<50	86	<0.2	15 J	0.91 J	<0.20	<2.0	0.60 J	3.7 J
MW-3	W-R2330009-050213-MJF-009	5/2/2013	10 J	0.51 J	1.5 J	220	<1.0	0.047 J	0.86 J	1.5 J	3.2 J	<0.005	2,000	0.11 J	<50	67	<0.2	4.9 J	0.98 J	<0.20	0.49 J	0.53 J	2.3 J
MW-3[A]	W-R2330009-080713-ZTR-004	8/7/2013	120	0.28 J	3.9 J	300	<1.0	0.11 J	0.84 J	0.95 J	5.4		4,000	0.24 J	<50	44 J	<0.2	5.6 J	3.6 J	<0.20	<2.0	0.75 J	4.4 J
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	5.2 J	0.40 J	3.8 J	320	<1.0	0.063 J	4.5 J	1.9 J	3.5 J	<0.005	4,000	<3.0	<50	46 J	<0.2	7.2 J	3.6 J	<0.20	<2.0	0.60 J	2.4 J
MW-3[A]	W-R2330009-111213-ACN-002	11/12/2013	190	0.33 J	3.3 J	260	<1.0	<1.0	1.1 J	1.0 J	2.1 J		3,800	0.30 J	<50	38 J	<0.2	6.4 J	5.6	<0.20	<2.0	0.88 J	4.3 J
MW-3	W-R2330009-111213-ACN-002	11/12/2013	4.1 J	0.31 J	3.7 J	300	<1.0	<1.0	0.46 J	1.3 J	1.3 J	<0.005	3,900	<3.0	<50	36 J	<0.2	6.6 J	5.0 J	<0.20	<2.0	0.32 J	2.6 J
MW-3[A]	W-R2330012-032714-ACN-007	3/27/2014	450	0.22 J	0.76 J	130	<1.0	<1.0	0.48 J	0.84 J	2.6 J		2,000	0.79 J	<50	33 J	<0.2	4.8 J	1.2 J	<0.20	<2.0	1.1 J	5.9 J
MW-3	W-R2330012-032714-ACN-007	3/27/2014	89 J	0.24 J	0.62 J	150 J	<1.0	<1.0	<10	1.5 J	2.1 J	<0.005	1,400	0.079 J	<50	23 J	<0.2	4.8 J	1.3 J	<0.20	<2.0	0.41 J	1.9 J
MW-3[A]	W-R2330012-091514-ACN-001	9/15/2014	610	0.27 J	4.1 J	310	0.23 J	<1.0	0.97 J	1.5 J	3.0 J		4,900	0.63 J	<50	130	0.057 J	8.9 J	0.76 J	<0.20	0.22 J	1.6 J	8.0 J
MW-3	W-R2330012-091514-ACN-001	9/15/2014	6.4 J	0.30 J	3.4 J	370	<1.0	<1.0	0.35 J	1.9 J	2.4 J	NS	4,700	<3.0	<50	110	0.058 J	8.0 J	1.4 J	<0.20	<2.0	0.56 J	3.8 J
MW-3[A]	W-R2330012-12114-JCH-019	12/1/2014	820	0.24 J	2.7 J	340	<1.0	<1.0	1.5 J	1.5 J	3.5 J		5,200	0.98 J	<50	74	<0.2	7.8 J	1.5 J	<0.20	<2.0	2.1 J	9.1 J
MW-3	W-R2330012-12114-JCH-019	12/1/2014	10 J	0.21 J	2.2 J	350	<1.0	<1.0	0.32 J	1.3 J	2.2 J	<5.0	4,400	<3.0	<50	66	<0.2	7.0 J	1.6 J	<0.20	<2.0	0.56 J	4.2 J
MW-3[A]	W-R2330017-031915-JCH-015	3/19/2015	260	0.28 J	2.8 J	290	<1.0	0.11 J	0.75 J	0.74 J	2.4 J		4,600	<3.0	<50	37 J	<0.2	4.7 J	1.3 J	0.055 J	<2.0	0.65 J	4.5 J
MW-3	W-R2330017-031915-JCH-015	3/19/2015	8.4 J	0.41 J	1.7 J	370	<1.0	0.11 J	0.48 J	1.3 J	2.1 J	<5.0	5,000	<3.0	<50	39 J	<0.2	5.9 J	2.2 J	0.081 J	<2.0	<4.0	<50
MW-3[A]	W-R2330017-111915-JPM-018	11/19/2015	240	NS	NS	NS	NS	NS	NS	NS	NS		11,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	W-R2330017-111915-JPM-018	11/19/2015	10 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330004-090512-MJF-02	9/5/2012	7.6 J	0.097 J	1.4 J	470	<1.0	<1.0	1.1 J	1.2 J	<4.0	<0.005	14,000	<3.0	<50	56	<0.2	2.4 J	0.46 J	<0.20	<2.0	0.75 J	1.9 J
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	11 J	0.14 J	1.2 J	480	<1.0	<1.0	0.85 J	1.3 J	0.26 J	<0.005	15,000	0.034 J	<50	55	<0.2	2.4 J	<5.0	<0.025	<2.0	0.73 J	2.4 J
MW-4	W-R2330009-050213-MJF-010	5/2/2013	13 J	0.21 J	<5.0	410	<1.0	<1.0	0.84 J	2.7 J	<4.0	<0.005	11,000	<3.0	<50	490	<0.2	2.8 J	<5.0	<0.20	<2.0	0.85 J	1.1 J
MW-4[A]	W-R2330009-080713-ZTR-005	8/7/2013	4.5 J	0.22 J	<5.0	480	<1.0	0.29 J	0.80 J	2.4 J	2.7 J		16,000	<3.0	<50	77	<0.2	4.0 J	<5.0	<0.20	<2.0	1.0 J	2.4 J
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	170	0.12 J	<5.0	490	<1.0	0.29 J	1.4 J	1.5 J	2.6 J	<0.005	16,000	0.30 J	<50	80	<0.2	4.0 J	1.0 J	<0.20	<2.0	1.4 J	3.5 J
MW-4[A]	W-R2330009-111213-ACN-003	11/12/2013	490	0.23 J	1.7 J	460	<1.0	<1.0	2.9 J	2.2 J	1.4 J		16,000	1.2 J	<50	96	<0.2	8.4 J	<5.0	<0.20	<2.0	2.1 J	7.5 J
MW-4	W-R2330009-111213-ACN-003	11/12/2013	10 J	0.19 J	1.1 J	460	<1.0	0.34 J	0.78 J	2.0 J	0.65 J	<0.005	15,000	<3.0	<50	70	<0.2	4.7 J	<5.0	<0.20	<2.0	0.94 J	2.8 J
MW-4[A]	W-R2330012-032714-ACN-006	3/27/2014	2,800	0.40 J	5.1	480	0.095 J	<1.0	4.5 J	5.7 J	9.6 J		20,000	7.5	<50	700	<0.2	16 J	1.4 J	<0.20	0.12 J	8.5	35 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-4	W-R2330012-032714-ACN-006	3/27/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4[A]	W-R2330012-12114-JCH-020	12/1/2014																			
MW-4	W-R2330012-12114-JCH-020	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4[A]	W-R2330017-031715-ACN-010	3/17/2015																			
MW-4	W-R2330017-031715-ACN-010	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-4[A]	W-R2330017-112015-JPM-033	11/20/2015																			
MW-4	W-R2330017-112015-JPM-033	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330009-050113-MJF-004	5/1/2013	<25	<1.0	<1.0	<50	6.9 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5[A]	W-R2330009-080813-ZTR-009	8/8/2013																			
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5[A]	W-R2330009-111213-ACN-004	11/12/2013																			
MW-5	W-R2330009-111213-ACN-004	11/12/2013	<25	<1.0	<1.0	<50	15 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5[A]	W-R2330012-032814-ACN-008	3/28/2014																			
MW-5	W-R2330012-032814-ACN-008	3/28/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5[A]	W-R2330012-12214-JCH-025	12/2/2014																			
MW-5	W-R2330012-12214-JCH-025	12/2/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5[A]	W-R2330017-031915-JCH-018	3/19/2015																			
MW-5	W-R2330012-031915-JCH-018	3/19/2015	<25	<1.0	<1.0	<50	5.1 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-5[A]	W-R2330017-112015-JPM-031	11/20/2015																			
MW-5	W-R2330017-112015-JPM-031	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330004-090512-MJF-04	9/5/2012	<25	<1.0	<1.0	<50	11 J	4.9	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6	W-R2330009-050213-MJF-012	5/2/2013	<25	<1.0	<1.0	<50	<50	2.8	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6[A]	W-R2330009--080713-ZTR-002	8/7/2013																			
MW-6	W-R2330009--080713-ZTR-002	8/7/2013	<25	<1.0	<1.0	<50	<50	4.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6[A]	W-R2330009-111313-ACN-011	11/13/2013																			
MW-6	W-R2330009-111313-ACN-011	11/13/2013	<25	<1.0	<1.0	<50	<50	4.6	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6[A]	W-R2330012-032714-ACN-004	3/27/2014																			
MW-6	W-R2330012-032714-ACN-004	3/27/2014	<25	<1.0	<1.0	<50	<50	2.7	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6[A]	W-R2330012-12214-JCH-023	12/2/2014																			
MW-6	W-R2330012-12214-JCH-023	12/2/2014	<25	<1.0	<1.0	<50	<50	3.2	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	1.3 J	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6[A]	W-R2330017-031715-ACN-012	3/17/2015																			
MW-6	W-R2330017-031715-ACN-012	3/17/2015	<25	<1.0	<1.0	<50	<50	2.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	0.58 J	<1.0	<5.0	<1.0	<1.0	<3.0
MW-6[A]	W-R2330017-111915-JPM-023	11/19/2015																			
MW-6	W-R2330017-111915-JPM-023	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330009-050213-MJF-008	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-7[A]	W-R2330009-080613-ZTR-001	8/6/2013																			
MW-7	W-R2330009-080613-ZTR-001	8/6/2013	<25	<1.0	<1.0	<50	5.5 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-7[A]	W-R2330009-111313-ACN-006	11/13/2013																			

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-4	W-R2330012-032714-ACN-006	3/27/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4[A]	W-R2330012-12114-JCH-020	12/1/2014																								
MW-4	W-R2330012-12114-JCH-020	12/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4[A]	W-R2330017-031715-ACN-010	3/17/2015																								
MW-4	W-R2330017-031715-ACN-010	3/17/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-4[A]	W-R2330017-112015-JPM-033	11/20/2015																								
MW-4	W-R2330017-112015-JPM-033	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330009-050113-MJF-004	5/1/2013	<10	<10	<5.0	<10	<10	<5.0	<10	1.3 J	<5.0	<5.0	<10	<5.0	<10	1.2 J	<4.0	0.99 J	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	<10	<10	<5.0	<10	<10	<5.0	<10	1.3 J	<5.0	<5.0	<10	<5.0	<10	1.2 J	<4.0	0.93 J	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5[A]	W-R2330009-080813-ZTR-009	8/8/2013																								
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5[A]	W-R2330009-111213-ACN-004	11/12/2013																								
MW-5	W-R2330009-111213-ACN-004	11/12/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5[A]	W-R2330012-032814-ACN-008	3/28/2014																								
MW-5	W-R2330012-032814-ACN-008	3/28/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5[A]	W-R2330012-12214-JCH-025	12/2/2014																								
MW-5	W-R2330012-12214-JCH-025	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5[A]	W-R2330017-031915-JCH-018	3/19/2015																								
MW-5	W-R2330012-031915-JCH-018	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.79 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-5[A]	W-R2330017-112015-JPM-031	11/20/2015																								
MW-5	W-R2330017-112015-JPM-031	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330004-090512-MJF-04	9/5/2012	<10	<10	<5.0	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6	W-R2330009-050213-MJF-012	5/2/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	1.4 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6[A]	W-R2330009--080713-ZTR-002	8/7/2013																								
MW-6	W-R2330009--080713-ZTR-002	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6[A]	W-R2330009-111313-ACN-011	11/13/2013																								
MW-6	W-R2330009-111313-ACN-011	11/13/2013	<10	<10	<5.0	<10	<10	<5.0	<10	0.47 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6[A]	W-R2330012-032714-ACN-004	3/27/2014																								
MW-6	W-R2330012-032714-ACN-004	3/27/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6[A]	W-R2330012-12214-JCH-023	12/2/2014																								
MW-6	W-R2330012-12214-JCH-023	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6[A]	W-R2330017-031715-ACN-012	3/17/2015																								
MW-6	W-R2330017-031715-ACN-012	3/17/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-6[A]	W-R2330017-111915-JPM-023	11/19/2015																								
MW-6	W-R2330017-111915-JPM-023	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330009-050213-MJF-008	5/2/2013	<10	<10	<5.0	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	0.95 J	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-7[A]	W-R2330009-080613-ZTR-001	8/6/2013																								
MW-7	W-R2330009-080613-ZTR-001	8/6/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-7[A]	W-R2330009-111313-ACN-006	11/13/2013																								

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (II)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-4	W-R2330012-032714-ACN-006	3/27/2014	6.0 J	0.23 J	2.9 J	450	<1.0	<1.0	0.37 J	2.4 J	2.0 J	3.4 J	15,000	<3.0	<50	410	<0.2	8.4 J	<5.0	<0.20	<2.0	0.74 J	20 J
MW-4[A]	W-R2330012-12114-JCH-020	12/1/2014	500	0.35 J	2.8 J	430	<1.0	<1.0	1.3 J	2.0 J	1.9 J		14,000	0.71 J	<50	110	<0.2	6.2 J	<5.0	<0.20	<2.0	2.2 J	6.5 J
MW-4	W-R2330012-12114-JCH-020	12/1/2014	4.5 J	0.37 J	2.5 J	410	<1.0	<1.0	0.54 J	1.8 J	0.95 J	<5.0	12,000	<3.0	<50	100	<0.2	5.4 J	<5.0	<0.20	<2.0	1.0 J	3.1 J
MW-4[A]	W-R2330017-031715-ACN-010	3/17/2015	3,100	0.33 J	2.3 J	500	<1.0	<1.0	4.7 J	3.4 J	7.8		20,000	4.4	<50	140	<0.2	11 J	<5.0	0.029 J	<2.0	6.6	23 J
MW-4	W-R2330017-031715-ACN-010	3/17/2015	7.1 J	0.23 J	0.97 J	450	<1.0	<1.0	0.55 J	1.7 J	1.1 J	<5.0	16,000	<3.0	<50	69	<0.2	4.4 J	<5.0	<0.20	<2.0	0.71 J	<50
MW-4[A]	W-R2330017-112015-JPM-033	11/20/2015	84	NS	NS	NS	NS	NS	NS	NS	NS		12,000	NS	140,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	W-R2330017-112015-JPM-033	11/20/2015	2.6 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330009-050113-MJF-004	5/1/2013	15 J	0.17 J	31	1,300	<1.0	<1.0	1.5 J	2.3 J	<4.0	<0.005	5,300	0.3 J	<50	56	<0.2	3.5 J	0.69 J	<0.20	<2.0	1.3 J	1.1 J
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	12 J	0.27 J	31	1,300	<1.0	<1.0	1.9 J	2.3 J	<4.0	<0.005	5,400	0.061 J	<50	58	<0.2	3.9 J	0.67 J	<0.20	0.069 J	1.2 J	1.1 J
MW-5[A]	W-R2330009-080813-ZTR-009	8/8/2013	330	2.2 J	34	1,500	<1.0	0.84 J	2.1 J	2.3 J	3.5 J		5,300	2.1 J	<50	56	<0.2	4.9 J	0.75 J	<0.20	<2.0	2.2 J	10 J
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	6.7 J	0.27 J	31	1,400	<1.0	0.16 J	1.6 J	3.1 J	2.1 J	<0.005	4,300	0.069 J	<50	50	<0.2	4.3 J	<5.0	<0.20	<2.0	1.4 J	3.1 J
MW-5[A]	W-R2330009-111213-ACN-004	11/12/2013	420	0.26 J	40	1,400	<1.0	0.98 J	2.6 J	2.6 J	3.5 J		6,500	4.9 J	<50	81 J	<0.2	6.3 J	<5.0	<0.20	<2.0	2.5 J	11 J
MW-5	W-R2330009-111213-ACN-004	11/12/2013	13 J	0.20 J	38	1,300	<1.0	0.57 J	2.9 J	2.6 J	<4.0	0.0016	5,900	<3.0	<50	71 J	<0.2	5.9 J	<5.0	<0.20	<2.0	1.3 J	2.4 J
MW-5[A]	W-R2330012-032814-ACN-008	3/28/2014	1,100	0.50 J	40	1,300	0.25 J	0.49 J	3.3 J	3.1 J	8.0 J		8,100	12 J	<50	93	<0.2	9.2 J	<5.0	0.051 J	<2.0	4.2	26 J
MW-5	W-R2330012-032814-ACN-008	3/28/2014	<2.0	0.25 J	31	1,200	<1.0	<1.0	0.61 J	2.6 J	1.0 J	2.6 J	4,500	0.34	<50	57	<0.2	6.5 J	0.70 J	<0.20	<2.0	1.3 J	0.65 J
MW-5[A]	W-R2330012-12214-JCH-025	12/2/2014	280	0.20 J	33	1,400	<1.0	2.1	1.7 J	2.0 J	0.86 J		5,500	1.4 J	<50	79	<0.2	3.4 J	<5.0	0.029 J	<2.0	2.1 J	6.0 J
MW-5	W-R2330012-12214-JCH-025	12/2/2014	5.4 J	0.19 J	32	1,400	<1.0	0.026 J	1.7 J	1.9 J	<4.0	<5.0	5,000	2.4 J	<50	73	<0.2	3.4 J	<5.0	<0.20	<2.0	1.5 J	<50
MW-5[A]	W-R2330017-031915-JCH-018	3/19/2015	360	0.24 J	34	1,400	<1.0	5.3	2.2 J	2.4 J	3.9 J		6,200	2.3 J	<50	81	<0.2	5.5 J	<5.0	<0.20	<2.0	2.2 J	9.3 J
MW-5	W-R2330012-031915-JCH-018	3/19/2015	4.9 J	0.29 J	30	1,500	<1.0	<1.0	1.3 J	2.6 J	0.98 J	<5.0	5,200	<3.0	<50	73	<0.2	4.8 J	<5.0	<0.20	<2.0	1.5 J	<50
MW-5[A]	W-R2330017-112015-JPM-031	11/20/2015	3,100	NS	NS	NS	NS	NS	NS	NS	NS		13,000	NS	150,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	W-R2330017-112015-JPM-031	11/20/2015	150	NS	NS	NS	NS	NS	NS	NS	NS	NS	6,400	NS	140,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330004-090512-MJF-04	9/5/2012	17 J	0.16 J	9.4	580	<1.0	<1.0	1.0 J	2.4 J	0.31 J	<0.005	26,000	0.057 J	<50	500	<0.2	3.8 J	0.051 J	<0.025	<2.0	1.2 J	1.5 J
MW-6	W-R2330009-050213-MJF-012	5/2/2013	7.5 J	0.15 J	3.7 J	480	<1.0	<1.0	1.6 J	1.5 J	<4.0	<0.005	18,000	0.31 J	<50	640	<0.2	5.0 J	<5.0	<0.20	<2.0	0.99 J	2.1 J
MW-6[A]	W-R2330009--080713-ZTR-002	8/7/2013	47 J	0.11 J	6.0	540	<1.0	0.19 J	0.94 J	1.9 J	4.40		22,000	0.29 J	<50	790	<0.2	7.5 J	<5.0	<0.20	<2.0	1.3 J	3.8 J
MW-6	W-R2330009--080713-ZTR-002	8/7/2013	6.8 J	0.15 J	5.5	550	<1.0	0.25 J	0.75 J	2.4 J	3.5 J	<0.005	21,000	0.063 J	<50	750	<0.2	7.6 J	<5.0	<0.20	<2.0	1.3 J	3.2 J
MW-6[A]	W-R2330009-111313-ACN-011	11/13/2013	200 J	0.16 J	5.4 J	520	<1.0	0.25 J	1.8 J	1.7 J	1.4 J		18,000	0.55 J	<50	430	<0.2	8.5 J	<5.0	<0.20	<2.0	1.6 J	3.7 J
MW-6	W-R2330009-111313-ACN-011	11/13/2013	160	0.14 J	5.5 J	520	<1.0	0.43 J	2.2 J	1.7 J	1.3 J	<0.005	18,000	0.41 J	<50	430	<0.2	8.5 J	<5.0	<0.20	<2.0	1.6 J	3.3 J
MW-6[A]	W-R2330012-032714-ACN-004	3/27/2014	76	0.15 J	3.0 J	460	<1.0	<1.0	0.56 J	2.0 J	2.0 J		11,000	0.31 J	<50	410	<0.2	11 J	<5.0	<0.20	0.084 J	1.2 J	5.0 J
MW-6	W-R2330012-032714-ACN-004	3/27/2014	8.6 J	0.17 J	3.4 J	460	<1.0	<1.0	0.37 J	1.4 J	1.9 J	1.3 J	10,000	<3.0	<50	410	<0.2	12 J	<5.0	<0.20	<2.0	0.99 J	3.0 J
MW-6[A]	W-R2330012-12214-JCH-023	12/2/2014	320	0.17 J	4.5 J	570	<1.0	0.068 J	1.7 J	1.1 J	0.85 J		18,000	<3.0	<50	420	<0.2	4.9 J	<5.0	0.027 J	<2.0	2.2 J	14 J
MW-6	W-R2330012-12214-JCH-023	12/2/2014	5.6 J	0.17 J	4.8 J	540	<1.0	<1.0	0.53 J	1.0 J	<4.0	<5.0	17,000	<3.0	<50	410	<0.2	4.2 J	<5.0	0.020 J	<2.0	1.8 J	<50
MW-6[A]	W-R2330017-031715-ACN-012	3/17/2015	300	0.35 J	3.1 J	430	<1.0	0.098 J	1.5 J	1.7 J	4.1		12,000	1.1 J	<50	500	<0.2	15 J	<5.0	<0.20	<2.0	1.9 J	42 J
MW-6	W-R2330017-031715-ACN-012	3/17/2015	3.3 J	0.41 J	1.9 J	360	<1.0	<1.0	0.42 J	1.5 J	2.0 J	<5.0	11,000	<3.0	<50	470	<0.2	14 J	<5.0	<0.20	<2.0	0.84 J	33 J
MW-6[A]	W-R2330017-111915-JPM-023	11/19/2015	30 J	NS	NS	NS	NS	NS	NS	NS	NS		22,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	W-R2330017-111915-JPM-023	11/19/2015	7.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	22,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330009-050213-MJF-008	5/2/2013	6.4 J	0.84 J	0.87 J	450	<1.0	<1.0	1.4 J	3.4 J	2.1 J	<0.005	3,400	0.074 J	<50	530	<0.2	11 J	<5.0	<0.20	<2.0	1.2 J	40 J
MW-7[A]	W-R2330009-080613-ZTR-001	8/6/2013	39 J	0.39 J	18	520	<1.0	0.43 J	1.4 J	3.8 J	2.2 J		8,100	0.47 J	<50	910	<0.2	14 J	<5.0	<0.20	<2.0	1.4 J	44 J
MW-7	W-R2330009-080613-ZTR-001	8/6/2013	5.3 J	0.48 J	17	520	<1.0	0.21 J	1.2 J	4.3 J	3.1 J	<0.005	7,700	0.096 J	<50	880	<0.2	14 J	<5.0	<0.20	<2.0	1.2 J	39 J
MW-7[A]	W-R2330009-111313-ACN-006	11/13/2013	21 J	0.58 J	7.0 J	370	<1.0	1.2 J	1.3 J	3.6 J	2.4 J		5,700	0.31 J	<50	490	<0.2	14 J	<5.0	<0.20	<2.0	2.2 J	22 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-7	W-R2330009-111313-ACN-006	11/13/2013	<25	<1.0	<1.0	<50	12 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-7[A]	W-R2330012-032614-ACN-001	3/26/2014																			
MW-7	W-R2330012-032614-ACN-001	3/26/2014	<25	<1.0	<1.0	<50	<50.0	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-7[A]	W-R2330012-112614-JCH-015	11/26/2014																			
MW-7	W-R2330012-112614-JCH-015	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-7[A]	W-R2330017-031715-JCH-013	3/17/2015																			
MW-7	W-R2330017-031715-JCH-013	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-7[A]	W-R2330017-111615-AEP-005	11/16/2015																			
MW-7	W-R2330017-111615-AEP-005	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330009-050313-MJF-013	5/3/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-8[A]	W-R2330009-080713-ZTR-008	8/7/2013																			
MW-8	W-R2330009-080713-ZTR-008	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-8[A]	W-R2330009-111213-ACN-005	11/12/2013																			
MW-8	W-R2330009-111213-ACN-005	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-8[A]	W-R2330012-112614-JCH-014	11/26/2014																			
MW-8	W-R2330012-112614-JCH-014	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-8[A]	W-R2330017-032015-JCH-029	3/20/2015																			
MW-8	W-R2330017-032015-JCH-029	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-8[A]	W-R2330017-111615-AEP-004	11/16/2015																			
MW-8	W-R2330017-111615-AEP-004	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330009-050113-MJF-007	5/1/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-9[A]	W-R2330009-080813-ZTR-013	8/8/2013																			
MW-9	W-R2330009-080813-ZTR-013	8/8/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-9[A]	W-R2330009-111413-ACN-012	11/14/2013																			
MW-9	W-R2330009-111413-ACN-012	11/14/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-9[A]	W-R2330012-032614-ACN-003	3/26/2014																			
MW-9	W-R2330012-032614-ACN-003	3/26/2014	<25	<1.0	<1.0	<50	<50	0.36 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-9[A]	W-R2330012-12214-JCH-024	12/2/2014																			
MW-9	W-R2330012-12214-JCH-024	12/2/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-9[A]	W-R2330017-031915-JCH-017	3/19/2015																			
MW-9	W-R2330012-031915-JCH-017	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-9[A]	W-R2330017-112015-AFB-030	11/20/2015																			
MW-9	W-R2330017-112015-AFB-030	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330009-050113-MJF-003	5/1/2013	<25	<1.0	<1.0	<50	4.3 J	8.6	<1.0	<5.0	25	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A]	W-R2330009-080813-ZTR-010	8/8/2013																			
MW-10	W-R2330009-080813-ZTR-010	8/8/2013	<25	<1.0	<1.0	<50	<50	8.5	<1.0	<5.0	24	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A] (DUP)	W-R2330009-080813-ZTR-011	8/8/2013																			
MW-10 (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	<25	<1.0	<1.0	<50	<50	8.2	<1.0	<5.0	23	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A]	W-R2330009-111313-ACN-008	11/13/2013																			

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-7	W-R2330009-111313-ACN-006	11/13/2013	<10	<10	<5.0	<10	<10	<5.0	<10	0.18 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-7[A]	W-R2330012-032614-ACN-001	3/26/2014																								
MW-7	W-R2330012-032614-ACN-001	3/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-7[A]	W-R2330012-112614-JCH-015	11/26/2014																								
MW-7	W-R2330012-112614-JCH-015	11/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-7[A]	W-R2330017-031715-JCH-013	3/17/2015																								
MW-7	W-R2330017-031715-JCH-013	3/17/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-7[A]	W-R2330017-111615-AEP-005	11/16/2015																								
MW-7	W-R2330017-111615-AEP-005	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330009-050313-MJF-013	5/3/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	1.4 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-8[A]	W-R2330009-080713-ZTR-008	8/7/2013																								
MW-8	W-R2330009-080713-ZTR-008	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-8[A]	W-R2330009-111213-ACN-005	11/12/2013																								
MW-8	W-R2330009-111213-ACN-005	11/12/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-8[A]	W-R2330012-112614-JCH-014	11/26/2014																								
MW-8	W-R2330012-112614-JCH-014	11/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-8[A]	W-R2330017-032015-JCH-029	3/20/2015																								
MW-8	W-R2330017-032015-JCH-029	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-8[A]	W-R2330017-111615-AEP-004	11/16/2015																								
MW-8	W-R2330017-111615-AEP-004	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330009-050113-MJF-007	5/1/2013	<10	<10	<5.0	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	0.91 J	0.92 J	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-9[A]	W-R2330009-080813-ZTR-013	8/8/2013																								
MW-9	W-R2330009-080813-ZTR-013	8/8/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-9[A]	W-R2330009-111413-ACN-012	11/14/2013																								
MW-9	W-R2330009-111413-ACN-012	11/14/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-9[A]	W-R2330012-032614-ACN-003	3/26/2014																								
MW-9	W-R2330012-032614-ACN-003	3/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-9[A]	W-R2330012-12214-JCH-024	12/2/2014																								
MW-9	W-R2330012-12214-JCH-024	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-9[A]	W-R2330017-031915-JCH-017	3/19/2015																								
MW-9	W-R2330012-031915-JCH-017	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-9[A]	W-R2330017-112015-AFB-030	11/20/2015																								
MW-9	W-R2330017-112015-AFB-030	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330009-050113-MJF-003	5/1/2013	<10	<10	<5.0	<10	<10	0.86 J	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	1.0 J	<5.0	1.7 J	<1.0	1.1 J	<5.0	<2.0	<5.0	<5.0
MW-10[A]	W-R2330009-080813-ZTR-010	8/8/2013																								
MW-10	W-R2330009-080813-ZTR-010	8/8/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A] (DUP)	W-R2330009-080813-ZTR-011	8/8/2013																								
MW-10 (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A]	W-R2330009-111313-ACN-008	11/13/2013																								

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-7	W-R2330009-111313-ACN-006	11/13/2013	6.9 J	0.57 J	6.4 J	380	<1.0	0.92 J	1.3 J	4.1 J	1.5 J	0.0037 J	5,600	<3.0	<50	480	<0.2	14 J	<5.0	<0.20	<2.0	2.3 J	6.6 J
MW-7[A]	W-R2330012-032614-ACN-001	3/26/2014	11 J	0.18 J	3.5 J	330	<1.0	0.54 J	0.72 J	3.8 J	7.9		8,900	0.39 J	<50	560	<0.2	18 J	0.84J	<0.20	0.22 J	1.2 J	15 J
MW-7	W-R2330012-032614-ACN-001	3/26/2014	3.6 J	0.16 J	3.4 J	370	<1.0	<1.0	<2.0	3.2 J	4.4	<0.005	9,600	<3.0	<50	530	<0.2	16 J	<5.0	<0.20	<2.0	1.0 J	8.2 J
MW-7[A]	W-R2330012-112614-JCH-015	11/26/2014	20 J	0.18 J	4.5 J	420	<1.0	0.16 J	0.98 J	2.9 J	0.69 J		10,000	<3.0	<50	690	<0.2	8.4 J	<5.0	0.022 J	<2.0	2.1 J	6.3 J
MW-7	W-R2330012-112614-JCH-015	11/26/2014	4.4 J	0.18 J	3.2 J	420	<1.0	<1.0	0.81 J	2.5 J	<4.0	<5.0	9,400	<3.0	<50	670	<0.2	7.6 J	<5.0	<0.20	<2.0	1.6 J	<50
MW-7[A]	W-R2330017-031715-JCH-013	3/17/2015	130	0.21 J	2.9 J	320	<1.0	0.39 J	1.1 J	3.1 J	2.9 J		8,500	0.42 J	<50	440	<0.2	12 J	<5.0	<0.20	<2.0	1.4 J	19 J
MW-7	W-R2330017-031715-JCH-013	3/17/2015	3.1 J	0.26 J	2.4 J	330	<1.0	<1.0	0.87 J	3.2 J	1.6 J	<5.0	8,600	<3.0	<50	450	<0.2	12 J	<5.0	<0.20	<2.0	1.2 J	4.4 J
MW-7[A]	W-R2330017-111615-AEP-005	11/16/2015	69	NS	NS	NS	NS	NS	NS	NS	NS		7,500	NS	150,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	W-R2330017-111615-AEP-005	11/16/2015	35 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	7,600	NS	150,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330009-050313-MJF-013	5/3/2013	11 J	0.21 J	1.2 J	380	<1.0	<1.0	0.56 J	1.5 J	<4.0	<0.005	6,200	<3.0	<50	180	<0.2	4.4 J	<5.0	<0.20	<2.0	0.89 J	2.0 J
MW-8[A]	W-R2330009-080713-ZTR-008	8/7/2013	51	0.16 J	4.1 J	470	<1.0	0.12 J	1.2 J	1.5 J	3.8 J		8,200	0.80 J	<50	200	<0.2	6.8 J	<5.0	<0.20	<2.0	1.3 J	4.0 J
MW-8	W-R2330009-080713-ZTR-008	8/7/2013	6.3 J	0.20 J	3.9 J	460	<1.0	0.098 J	0.94 J	2.3 J	1.6 J	<0.005	8,100	0.074 J	<50	200	<0.2	6.6 J	<5.0	<0.20	<2.0	0.91 J	3.0 J
MW-8[A]	W-R2330009-111213-ACN-005	11/12/2013	98 J	0.12 J	3.7 J	420	<1.0	0.50 J	1.3 J	1.6 J	1.6 J		7,700	0.34 J	<50	200	<0.2	7.6 J	<5.0	<0.20	<2.0	1.5 J	3.2 J
MW-8	W-R2330009-111213-ACN-005	11/12/2013	8.4 J	0.13 J	3.6 J	440	<1.0	0.49 J	2.0 J	1.8 J	1.5 J	0.0015 J	7,500	<3.0	<50	210	<0.2	7.9 J	<5.0	<0.20	<2.0	0.89 J	2.4 J
MW-8[A]	W-R2330012-112614-JCH-014	11/26/2014	1,200	0.11 J	4.7 J	370	<1.0	2.1	2.7 J	2.4 J	4.7		8,000	4.7	<50	400	<0.2	19 J	<5.0	<0.20	<2.0	5.2	18 J
MW-8	W-R2330012-112614-JCH-014	11/26/2014	10 J	<2.0	3.3 J	350	<1.0	<1.0	0.34 J	1.3 J	0.50 J	<5.0	4,900	<3.0	<50	330	<0.2	10 J	<5.0	<0.20	<2.0	0.85 J	5.8 J
MW-8[A]	W-R2330017-032015-JCH-029	3/20/2015	440	<2.0	2.0 J	330	<1.0	0.73 J	3.2 J	1.2 J	2.7 J		7,100	1.9 J	<50	210	<0.2	6.7 J	<5.0	<0.20	<2.0	2.0 J	11 J
MW-8	W-R2330017-032015-JCH-029	3/20/2015	13 J	0.18 J	1.3 J	330	<1.0	<1.0	0.47 J	1.3 J	1.5 J	<5.0	5,900	<3.0	<50	200	<0.2	5.6 J	<5.0	<0.20	<2.0	0.74 J	<50
MW-8[A]	W-R2330017-111615-AEP-004	11/16/2015	540	NS	NS	NS	NS	NS	NS	NS	NS		3,300	NS	92,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	W-R2330017-111615-AEP-004	11/16/2015	15 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,300	NS	91,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330009-050113-MJF-007	5/1/2013	6.6 J	0.2 J	44	1,700	<1.0	<1.0	1.9 J	2.4 J	0.71 J	<0.005	28,000	0.053 J	<50	760	<0.2	6.3 J	<5.0	<0.20	<2.0	1.2 J	7.5 J
MW-9[A]	W-R2330009-080813-ZTR-013	8/8/2013	13 J	0.13 J	52	1,300	<1.0	0.22 J	1.0 J	1.4 J	2.1 J		31,000	0.17 J	<50	440	<0.2	5.2 J	<5.0	<0.20	<2.0	1.5 J	4.6 J
MW-9	W-R2330009-080813-ZTR-013	8/8/2013	4.7 J	0.21 J	52	1,300	<1.0	0.24 J	0.91 J	2.2 J	1.7 J	<0.005	30,000	0.068 J	<50	430	<0.2	5.2 J	<5.0	<0.20	<2.0	1.4 J	2.9 J
MW-9[A]	W-R2330009-111413-ACN-012	11/14/2013	43 J	0.16 J	59	2,100	<1.0	<1.0	2.0 J	1.7 J	<4.0		30,000	0.30 J	<50	400	<0.2	6.9 J	<5.0	<0.20	0.14 J	1.5 J	3.7 J
MW-9	W-R2330009-111413-ACN-012	11/14/2013	4.7 J	0.17 J	60	2,200	<1.0	<1.0	1.0 J	1.7 J	<4.0	<0.005	29,000	0.083 J	<50	340	<0.2	6.3 J	<5.0	<0.20	<2.0	1.5 J	2.5 J
MW-9[A]	W-R2330012-032614-ACN-003	3/26/2014	190	0.19 J	51	1,700	<1.0	<1.0	1.0 J	2.2 J	2.6 J		34,000	0.99 J	<50	600	<0.2	8.0 J	<5.0	<0.20	<2.0	1.9 J	5.3 J
MW-9	W-R2330012-032614-ACN-003	3/26/2014	7.8 J	0.15 J	47	1,900	<1.0	<1.0	0.70 J	2.2 J	1.4 J	2.1 J	34,000	0.21 J	<50	570	<0.2	7.9 J	<5.0	<0.20	<2.0	1.3 J	2.1 J
MW-9[A]	W-R2330012-12214-JCH-024	12/2/2014	42 J	0.18 J	59	1,800	<1.0	0.050 J	1.0 J	1.2 J	<4.0		31,000	<3.0	<50	330	<0.2	3.2 J	<5.0	0.024 J	<2.0	1.9 J	3.7 J
MW-9	W-R2330012-12214-JCH-024	12/2/2014	5.9 J	0.25 J	62	1,900	<1.0	<1.0	1.0 J	1.4 J	<4.0	<5.0	30,000	<3.0	<50	300	<0.2	3.5 J	<5.0	<0.20	<2.0	1.6 J	<50
MW-9[A]	W-R2330017-031915-JCH-017	3/19/2015	260	0.19 J	49	1,700	<1.0	0.094 J	1.4 J	2.0 J	3.9 J		34,000	1.1 J	<50	390	<0.2	7.0 J	<5.0	<0.20	<2.0	2.1 J	11 J
MW-9	W-R2330012-031915-JCH-017	3/19/2015	7.0 J	0.34 J	46	1,800	<1.0	<1.0	0.83 J	1.9 J	1.4 J	<5.0	33,000	<3.0	<50	370	<0.2	6.3 J	<5.0	<0.20	<2.0	1.2 J	3.9 J
MW-9[A]	W-R2330017-112015-AFB-030	11/20/2015	510	NS	NS	NS	NS	NS	NS	NS	NS		33,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-9	W-R2330017-112015-AFB-030	11/20/2015	7.9 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	32,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330009-050113-MJF-003	5/1/2013	6.1 J	0.19 J	7.4	1,800	<1.0	<1.0	1.8 J	2.6 J	<4.0	<0.005	17,000	0.054 J	<50	350	<0.2	4.9 J	0.66 J	<0.20	<2.0	2.3 J	2.4 J
MW-10[A]	W-R2330009-080813-ZTR-010	8/8/2013	26 J	0.27 J	6.5	1,700	<1.0	0.29 J	2.2 J	3.1 J	3.4 J		17,000	7.3	<50	600	<0.2	7.5 J	<5.0	<0.20	<2.0	2.4 J	9.6 J
MW-10	W-R2330009-080813-ZTR-010	8/8/2013	8.1 J	0.31 J	6.7	1,800	<1.0	0.22 J	2.0 J	3.5 J	2.7 J	<0.005	17,000	2.4 J	<50	600	<0.2	7.6 J	<5.0	<0.20	<2.0	2.3 J	5.2 J
MW-10[A] (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	25 J	0.26 J	6.7	1,700	<1.0	0.40 J	2.0 J	3.1 J	3.4 J		17,000	7.2	<50	580	<0.2	7.4 J	0.75 J	<0.20	<2.0	2.2 J	8.5 J
MW-10 (DUP)	W-R2330009-080813-ZTR-011	8/8/2013	7.4 J	0.25 J	6.4	1,700	<1.0	0.27 J	2.0 J	3.1 J	2.4 J	<0.005	17,000	2.7 J	<50	600	<0.2	7.4 J	0.79 J	<0.20	<2.0	2.2 J	4.9 J
MW-10[A]	W-R2330009-111313-ACN-008	11/13/2013	26 J	0.24 J	10	1,900	<1.0	1.7 J	3.7 J	3.3 J	1.8 J		2,300	2.8 J	<50	460	<0.2	8.1 J	<5.0	<0.20	<2.0	3.0 J	7.0 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-10	W-R2330009-111313-ACN-008	11/13/2013	<25	<1.0	<1.0	<50	16 J	13	<1.0	<5.0	36	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A] (DUP)	W-R2330009-111313-ACN-009	11/13/2013																			
MW-10 (DUP)	W-R2330009-111313-ACN-009	11/13/2013	<25	<1.0	<1.0	<50	16 J	12	<1.0	<5.0	35	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A]	W-R2330012-032814-ACN-010	3/28/2014																			
MW-10	W-R2330012-032814-ACN-010	3/28/2014	<25	<1.0	<1.0	<50	<50	8.2	<1.0	<5.0	24	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A] (DUP)	W-R2330012-032814-ACN-011	3/28/2014																			
MW-10 (DUP)	W-R2330012-032814-ACN-011	3/28/2014	<25	<1.0	<1.0	<50	<50	8.2	<1.0	<5.0	25	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A]	W-R2330012-12214-JCH-028	12/2/2014																			
MW-10	W-R2330012-12214-JCH-028	12/2/2014	<25	<1.0	<1.0	<50	<50	7.8	<1.0	<5.0	38	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A]	W-R2330017-031915-ACN-019	3/19/2015																			
MW-10	W-R2330017-031915-ACN-019	3/19/2015	<25	<1.0	<1.0	<50	<50	10	<1.0	<5.0	28	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A] (DUP)	W-R2330017-031915-ACN-020	3/19/2015																			
MW-10 (DUP)	W-R2330012-031915-ACN-020	3/19/2015	<25	<1.0	<1.0	<50	<50	10	<1.0	<5.0	27	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-10[A]	W-R2330017-111915-AEP-022	11/19/2015																			
MW-10	W-R2330017-111915-AEP-022	11/19/2015	<25	<1.0	0.48 J	<50	<50	12	<1.0	<5.0	44	<5.0	<1.0	<10	<5.0	<5.0	<1.0	0.29 J	<1.0	<1.0	<3.0
MW-11	W-R2330009-043013-MJF-001	4/30/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-11[A]	W-R2330009-080713-ZTR-006	8/7/2013																			
MW-11	W-R2330009-080713-ZTR-006	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-11[A]	W-R2330009-111213-ACN-001	11/12/2013																			
MW-11	W-R2330009-111213-ACN-001	11/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-11[A]	W-R2330012-032614-ACN-002	3/26/2014																			
MW-11	W-R2330012-032614-ACN-002	3/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-11[A]	W-R2330012-091514-ACN-003	9/15/2014																			
MW-11	W-R2330012-091514-ACN-003	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS
MW-11[A]	W-R2330012-12114-JCH-017	12/1/2014																			
MW-11	W-R2330012-12114-JCH-017	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-11[A]	W-R2330017-031715-ACN-009	3/17/2015																			
MW-11	W-R2330017-031715-ACN-009	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-11[A]	W-R2330017-111915-AEP-019	11/19/2015																			
MW-11	W-R2330017-111915-AEP-019	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330009-050213-MJF-011	5/2/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-12[A]	W-R2330009-080713-ZTR-003	8/7/2013																			
MW-12	W-R2330009-080713-ZTR-003	8/7/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-12[A]	W-R2330009-111313-ACN-007	11/13/2013																			
MW-12	W-R2330009-111313-ACN-007	11/13/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-12[A]	W-R2330012-032714-ACN-005	3/27/2014																			
MW-12	W-R2330012-032714-ACN-005	3/27/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-12[A]	W-R2330012-12114-JCH-021	12/1/2014																			
MW-12	W-R2330012-12114-JCH-021	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-10	W-R2330009-111313-ACN-008	11/13/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	0.28 J	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A] (DUP)	W-R2330009-111313-ACN-009	11/13/2013																								
MW-10 (DUP)	W-R2330009-111313-ACN-009	11/13/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A]	W-R2330012-032814-ACN-010	3/28/2014																								
MW-10	W-R2330012-032814-ACN-010	3/28/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A] (DUP)	W-R2330012-032814-ACN-011	3/28/2014																								
MW-10 (DUP)	W-R2330012-032814-ACN-011	3/28/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A]	W-R2330012-12214-JCH-028	12/2/2014																								
MW-10	W-R2330012-12214-JCH-028	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	2.1 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A]	W-R2330017-031915-ACN-019	3/19/2015																								
MW-10	W-R2330017-031915-ACN-019	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A] (DUP)	W-R2330017-031915-ACN-020	3/19/2015																								
MW-10 (DUP)	W-R2330012-031915-ACN-020	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.8 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-10[A]	W-R2330017-111915-AEP-022	11/19/2015																								
MW-10	W-R2330017-111915-AEP-022	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	W-R2330009-043013-MJF-001	4/30/2013	0.56 J	<10	<5.0	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	0.92 J	<5.0	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-11[A]	W-R2330009-080713-ZTR-006	8/7/2013																								
MW-11	W-R2330009-080713-ZTR-006	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-11[A]	W-R2330009-111213-ACN-001	11/12/2013																								
MW-11	W-R2330009-111213-ACN-001	11/12/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-11[A]	W-R2330012-032614-ACN-002	3/26/2014																								
MW-11	W-R2330012-032614-ACN-002	3/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-11[A]	W-R2330012-091514-ACN-003	9/15/2014																								
MW-11	W-R2330012-091514-ACN-003	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-11[A]	W-R2330012-12114-JCH-017	12/1/2014																								
MW-11	W-R2330012-12114-JCH-017	12/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-11[A]	W-R2330017-031715-ACN-009	3/17/2015																								
MW-11	W-R2330017-031715-ACN-009	3/17/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-11[A]	W-R2330017-111915-AEP-019	11/19/2015																								
MW-11	W-R2330017-111915-AEP-019	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330009-050213-MJF-011	5/2/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	1.2 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-12[A]	W-R2330009-080713-ZTR-003	8/7/2013																								
MW-12	W-R2330009-080713-ZTR-003	8/7/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-12[A]	W-R2330009-111313-ACN-007	11/13/2013																								
MW-12	W-R2330009-111313-ACN-007	11/13/2013	<10	<10	<5.0	<10	<10	<5.0	0.24 J	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-12[A]	W-R2330012-032714-ACN-005	3/27/2014																								
MW-12	W-R2330012-032714-ACN-005	3/27/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-12[A]	W-R2330012-12114-JCH-021	12/1/2014																								
MW-12	W-R2330012-12114-JCH-021	12/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-10	W-R2330009-111313-ACN-008	11/13/2013	12 J	0.23 J	9.7 J	1,900	<1.0	1.4 J	2.7 J	3.8 J	1.1 J	0.0019 J	2,100	0.16 J	<50	480	<0.2	8.1 J	<5.0	<0.20	<2.0	2.1 J	3.4 J
MW-10[A] (DUP)	W-R2330009-111313-ACN-009	11/13/2013	26 J	0.23 J	10	1,900	<1.0	1.7 J	2.9 J	3.4 J	1.4 J		2,300	2.8 J	<50	450	<0.2	8.0 J	<5.0	<0.20	<2.0	3.0 J	3.8 J
MW-10 (DUP)	W-R2330009-111313-ACN-009	11/13/2013	8.8 J	0.20 J	9.2 J	1,900	<1.0	1.7 J	2.6 J	3.4 J	1.1 J	0.0023 J	2,100	0.18 J	<50	470	<0.2	8.2 J	<5.0	<0.20	<2.0	2.3 J	5.0 J
MW-10[A]	W-R2330012-032814-ACN-010	3/28/2014	32 J	0.20 J	6.6 J	1,700	<1.0	<1.0	1.6 J	3.0 J	1.9 J		24,000	1.6 J	<50	550	<0.2	8.1 J	<5.0	<0.20	<2.0	2.1 J	2.1 J
MW-10	W-R2330012-032814-ACN-010	3/28/2014	2.0 J	0.22 J	6.5 J	1,700	<1.0	<1.0	0.79 J	2.5 J	3.3 J	2.4 J	24,000	0.14 J	<50	540	<0.2	9.8 J	<5.0	<0.20	0.24 J	1.8 J	3.0 J
MW-10[A] (DUP)	W-R2330012-032814-ACN-011	3/28/2014	45 J	0.23 J	7.1 J	1,800	<1.0	<1.0	1.6 J	2.9 J	1.5 J		25,000	1.7 J	<50	550	<0.2	7.9 J	0.84 J	<0.20	<2.0	2.3 J	2.1 J
MW-10 (DUP)	W-R2330012-032814-ACN-011	3/28/2014	4.7 J	0.21 J	6.8 J	1,700	<1.0	<1.0	<10	3.0 J	1.1 J	4.1 J	23,000	0.14 J	<50	530	<0.2	8.0 J	0.83 J	<0.20	<2.0	1.9 J	<50
MW-10[A]	W-R2330012-12214-JCH-028	12/2/2014	21 J	0.23 J	7.1	2,100	<1.0	0.034 J	2.3 J	2.2 J	<4.0		22,000	2.2 J	<50	420	<0.2	2.8 J	<5.0	<0.20	<2.0	3.2 J	3.7 J
MW-10	W-R2330012-12214-JCH-028	12/2/2014	8.2 J	0.22 J	8.4	2,100	<1.0	<1.0	2.3 J	2.4 J	<4.0	<5.0	23,000	<3.0	<50	430	<0.2	2.8 J	<5.0	<0.20	<2.0	3.2 J	<50
MW-10[A]	W-R2330017-031915-ACN-019	3/19/2015	24 J	0.29 J	7.3	2,500	<1.0	0.028 J	2.5 J	2.3 J	0.51 J		23,000	2.5 J	<50	450	<0.2	3.9 J	<5.0	<0.20	<2.0	2.8 J	3.4 J
MW-10	W-R2330017-031915-ACN-019	3/19/2015	7.8 J	0.26 J	7.0	2,300	<1.0	<1.0	2.2 J	2.3 J	0.40 J	<5.0	22,000	<3.0	<50	420	<0.2	3.7 J	<5.0	<0.20	<2.0	2.3 J	<50
MW-10[A] (DUP)	W-R2330017-031915-ACN-020	3/19/2015	26 J	0.21 J	6.6	2,300	<1.0	<1.0	2.2 J	2.3 J	0.65 J		21,000	2.1 J	<50	420	<0.2	3.8 J	<5.0	<0.20	<2.0	2.1 J	3.8 J
MW-10 (DUP)	W-R2330012-031915-ACN-020	3/19/2015	10 J	0.24 J	7.2	2,400	<1.0	<1.0	2.6 J	2.7 J	0.27 J	<5.0	23,000	0.36 J	<50	430	<0.2	3.7 J	<5.0	0.021 J	<2.0	2.7 J	3.3 J
MW-10[A]	W-R2330017-111915-AEP-022	11/19/2015	31 J	NS	NS	NS	NS	NS	NS	NS	NS		22,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-10	W-R2330017-111915-AEP-022	11/19/2015	7.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	22,000	NS	160,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	W-R2330009-043013-MJF-001	4/30/2013	4.6 J	0.13 J	<5.0	26	<1.0	<1.0	0.69 J	0.41 J	0.76 J	<0.005	13 J	0.0079 J	<50	7.4 J	<0.2	1.2 J	1.7 J	<0.20	<2.0	<4.0	2.0 J
MW-11[A]	W-R2330009-080713-ZTR-006	8/7/2013	22 J	0.079 J	<5.0	57 J	<1.0	<1.0	0.49 J	0.51 J	2.7 J		270	<3.0	<50	58	<0.2	2.2 J	0.74 J	<0.20	<2.0	0.24 J	2.5 J
MW-11	W-R2330009-080713-ZTR-006	8/7/2013	4.0 J	0.12 J	<5.0	61 J	<1.0	<1.0	0.53 J	0.93 J	2.0 J	<0.005	270	<3.0	<50	61	<0.2	2.2 J	1.1 J	<0.20	<2.0	0.23 J	2.2 J
MW-11[A]	W-R2330009-111213-ACN-001	11/12/2013	730	0.66 J	1.0 J	38 J	<1.0	<1.0	3.1 J	1.2 J	3.0 J		1,600	1.3 J	<50	75	<0.2	4.8 J	1.1 J	<0.20	0.24 J	2.1 J	8.6 J
MW-11	W-R2330009-111213-ACN-001	11/12/2013	22 J	0.30 J	0.65 J	47 J	<1.0	<1.0	0.40 J	0.91 J	0.82 J	<0.005	150 J	<3.0	<50	60	<0.2	3.2 J	0.83 J	<0.20	<2.0	<4.0	3.1 J
MW-11[A]	W-R2330012-032614-ACN-002	3/26/2014	180	0.12 J	<5.0	38 J	<1.0	<1.0	0.55 J	0.74 J	1.5 J		380	0.37 J	<50	52	<0.2	3.4 J	1.3 J	<0.20	<2.0	0.34 J	0.91 J
MW-11	W-R2330012-032614-ACN-002	3/26/2014	7.4 J	0.096 J	<5.0	47 J	<1.0	<1.0	<10	0.80 J	0.96 J	<0.005	110 J	<3.0	<50	54	<0.2	3.3 J	0.83 J	<0.20	0.098 J	0.28 J	<50.0
MW-11[A]	W-R2330012-091514-ACN-003	9/15/2014	26 J	0.10 J	1.2 J	72 J	<1.0	0.047 J	<10	0.57 J	0.76 J		500	<3.0	<50	68	0.062 J	2.5 J	<5.0	<0.20	<2.0	0.28 J	2.8 J
MW-11	W-R2330012-091514-ACN-003	9/15/2014	2.7 J	0.15 J	1.1 J	75 J	<1.0	<1.0	<10	1.1 J	1.4 J	NS	500	<3.0	<50	68	0.064 J	2.6 J	<5.0	<0.20	<2.0	0.20 J	3.2 J
MW-11[A]	W-R2330012-12114-JCH-017	12/1/2014	47 J	<2.0	<5.0	58 J	<1.0	0.087 J	0.23 J	0.67 J	4.3		220	<3.0	<50	110	<0.2	3.3 J	<5.0	<0.20	<2.0	0.48 J	7.3 J
MW-11	W-R2330012-12114-JCH-017	12/1/2014	4.7 J	<2.0	0.65 J	69 J	<1.0	0.052 J	<10	0.67 J	1.1 J	<5.0	320	<3.0	<50	96	<0.2	2.9 J	0.93 J	<0.20	<2.0	<4.0	3.5 J
MW-11[A]	W-R2330017-031715-ACN-009	3/17/2015	65	<2.0	<5.0	20 J	<1.0	0.39 J	2.5 J	0.30 J	1.2 J		110 J	<3.0	<50	130	<0.2	3.5 J	0.92 J	<0.20	<2.0	<4.0	<50
MW-11	W-R2330017-031715-ACN-009	3/17/2015	10 J	0.17 J	<5.0	20 J	<1.0	0.29 J	0.16 J	0.47 J	0.78 J	<5.0	<200	<3.0	<50	4.8 J	<0.2	1.7 J	1.0 J	<0.20	<2.0	<4.0	<50
MW-11[A]	W-R2330017-111915-AEP-019	11/19/2015	17 J	NS	NS	NS	NS	NS	NS	NS	NS		480	NS	29,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	W-R2330017-111915-AEP-019	11/19/2015	2.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	470	NS	29,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330009-050213-MJF-011	5/2/2013	14 J	0.22 J	1.4 J	1,100	<1.0	<1.0	1.9 J	4.0 J	<4.0	<0.005	15,000	0.17 J	<50	1,500	<0.2	3.3 J	<5.0	<0.20	<2.0	0.99 J	8.8 J
MW-12[A]	W-R2330009-080713-ZTR-003	8/7/2013	170	0.15 J	1.2 J	1,400	<1.0	0.27 J	1.2 J	1.4 J	6.1		18,000	0.36 J	<50	470	<0.2	4.3 J	<5.0	<0.20	<2.0	1.7 J	4.5 J
MW-12	W-R2330009-080713-ZTR-003	8/7/2013	6.9 J	0.26 J	0.93 J	1,500	<1.0	0.30 J	0.73 J	2.4 J	3.6 J	<0.005	17,000	0.062 J	<50	420	<0.2	4.2 J	<5.0	<0.20	<2.0	1.2 J	2.7 J
MW-12[A]	W-R2330009-111313-ACN-007	11/13/2013	89	0.16 J	0.79 J	1,600	0.13 J	0.33 J	1.0 J	1.5 J	1.5 J		12,000	0.26 J	<50	210	<0.2	4.5 J	<5.0	<0.20	0.12 J	1.3 J	3.4 J
MW-12	W-R2330009-111313-ACN-007	11/13/2013	6.9 J	0.16 J	0.85 J	1,500	<1.0	0.68 J	0.99 J	1.9 J	1.3 J	<0.005	12,000	<3.0	<50	190	<0.2	4.7 J	<5.0	<0.20	<2.0	0.97 J	2.2 J
MW-12[A]	W-R2330012-032714-ACN-005	3/27/2014	61	0.18 J	0.82 J	1,200	<1.0	<1.0	0.53 J	1.9 J	3.6 J		8,800	0.24 J	<50	750	<0.2	7.0 J	<5.0	<0.20	<2.0	1.1 J	4.1 J
MW-12	W-R2330012-032714-ACN-005	3/27/2014	4.9 J	0.19 J	<5.0	1,300	<1.0	<1.0	0.43 J	1.5 J	4.6	2.2 J	9,100	0.22 J	<50	660	<0.2	8.4 J	<5.0	<0.20	<2.0	1.1 J	5.8 J
MW-12[A]	W-R2330012-12114-JCH-021	12/1/2014	1,200	0.31 J	2.7 J	1,600	<1.0	0.090 J	2.6 J	1.3 J	3.9 J		14,000	1.3 J	<50	310	<0.2	3.5 J	<5.0	0.040 J	<2.0	4.5	8.1 J
MW-12	W-R2330012-12114-JCH-021	12/1/2014	15 J	0.22 J	<5.0	1,600	<1.0	<1.0	0.55 J	0.86 J	<4.0	<5.0	12,000	<3.0	<50	340	<0.2	1.7 J	<5.0	0.064 J	<2.0	1.0 J	<50

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-12[A]	W-R2330017-031715-ACN-011	3/17/2015																			
MW-12	W-R2330017-031715-ACN-011	3/17/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-12[A]	W-R2330017-112015-AFB-032	11/20/2015																			
MW-12	W-R2330017-112015-AFB-032	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12[A]	W-R2330017-112015-AFB-DUP2	11/20/2015																			
MW-12	W-R2330017-112015-AFB-DUP2	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-052014-ACN-029	5/20/2014																			
MW-17	W-R2330012-052014-ACN-029	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-17[A]	W-R2330012-091514-ACN-004	9/15/2014																			
MW-17	W-R2330012-091514-ACN-004	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS
MW-17[A] (DUP)	W-R2330012-091514-ACN-005	9/15/2014																			
MW-17 (DUP)	W-R2330012-091514-ACN-005	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-112414-MCW-004	11/24/2014																			
MW-17	W-R2330012-112414-MCW-004	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-17[A]	W-R2330017-031615-ACN-007	3/16/2015																			
MW-17	W-R2330017-031615-ACN-007	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-17[A]	W-R2330017-111715-AFB-009	11/17/2015																			
MW-17	W-R2330017-111715-AFB-009	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18[A]	W-R2330012-052014-ACN-026	5/20/2014																			
MW-18	W-R2330012-052014-ACN-026	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-18[A]	W-R2330012-112414-ACN-001	11/24/2014																			
MW-18	W-R2330012-112414-ACN-001	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-18[A]	W-R2330017-031615-JCH-003	3/16/2015																			
MW-18	W-R2330017-031615-JCH-003	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.47 J	<3.0
MW-18[A]	W-R2330017-111715-JPM-007	11/17/2015																			
MW-18	W-R2330017-111715-JPM-007	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-19[A]	W-R2330012-052014-ACN-027	5/20/2014																			
MW-19	W-R2330012-052014-ACN-027	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-19[A]	W-R2330012-112414-ACN-002	11/24/2014																			
MW-19	W-R2330012-112414-ACN-002	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-19[A]	W-R2330017-031615-JCH-004	3/16/2015																			
MW-19	W-R2330017-031615-JCH-004	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-19[A]	W-R2330017-111715-AFB-008	11/17/2015																			
MW-19	W-R2330017-111715-AFB-008	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-20[A]	W-R2330012-052014-ACN-028	5/20/2014																			
MW-20	W-R2330012-052014-ACN-028	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-20[A]	W-R2330012-112414-ACN-003	11/24/2014																			
MW-20	W-R2330012-112414-ACN-003	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-20[A]	W-R2330017-031615-ACN-005	3/16/2015																			

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-12[A]	W-R2330017-031715-ACN-011	3/17/2015																								
MW-12	W-R2330017-031715-ACN-011	3/17/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-12[A]	W-R2330017-112015-AFB-032	11/20/2015																								
MW-12	W-R2330017-112015-AFB-032	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-12[A]	W-R2330017-112015-AFB-DUP2	11/20/2015																								
MW-12	W-R2330017-112015-AFB-DUP2	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-052014-ACN-029	5/20/2014																								
MW-17	W-R2330012-052014-ACN-029	5/20/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-17[A]	W-R2330012-091514-ACN-004	9/15/2014																								
MW-17	W-R2330012-091514-ACN-004	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A] (DUP)	W-R2330012-091514-ACN-005	9/15/2014																								
MW-17 (DUP)	W-R2330012-091514-ACN-005	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-112414-MCW-004	11/24/2014																								
MW-17	W-R2330012-112414-MCW-004	11/24/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-17[A]	W-R2330017-031615-ACN-007	3/16/2015																								
MW-17	W-R2330017-031615-ACN-007	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-17[A]	W-R2330017-111715-AFB-009	11/17/2015																								
MW-17	W-R2330017-111715-AFB-009	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18[A]	W-R2330012-052014-ACN-026	5/20/2014																								
MW-18	W-R2330012-052014-ACN-026	5/20/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-18[A]	W-R2330012-112414-ACN-001	11/24/2014																								
MW-18	W-R2330012-112414-ACN-001	11/24/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-18[A]	W-R2330017-031615-JCH-003	3/16/2015																								
MW-18	W-R2330017-031615-JCH-003	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-18[A]	W-R2330017-111715-JPM-007	11/17/2015																								
MW-18	W-R2330017-111715-JPM-007	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-19[A]	W-R2330012-052014-ACN-027	5/20/2014																								
MW-19	W-R2330012-052014-ACN-027	5/20/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-19[A]	W-R2330012-112414-ACN-002	11/24/2014																								
MW-19	W-R2330012-112414-ACN-002	11/24/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-19[A]	W-R2330017-031615-JCH-004	3/16/2015																								
MW-19	W-R2330017-031615-JCH-004	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.78 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-19[A]	W-R2330017-111715-AFB-008	11/17/2015																								
MW-19	W-R2330017-111715-AFB-008	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-20[A]	W-R2330012-052014-ACN-028	5/20/2014																								
MW-20	W-R2330012-052014-ACN-028	5/20/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-20[A]	W-R2330012-112414-ACN-003	11/24/2014																								
MW-20	W-R2330012-112414-ACN-003	11/24/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-20[A]	W-R2330017-031615-ACN-005	3/16/2015																								

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (II)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-12[A]	W-R2330017-031715-ACN-011	3/17/2015	1,000	0.31 J	1.4 J	1,800	<1.0	<1.0	2.2 J	1.9 J	7.6		14,000	2.2 J	<50	170	<0.2	6.5 J	<5.0	<0.20	<2.0	2.9 J	13 J
MW-12	W-R2330017-031715-ACN-011	3/17/2015	5.1 J	0.58 J	<5.0	1,500	<1.0	<1.0	0.58 J	1.4 J	1.3 J	<5.0	12,000	<3.0	<50	140	<0.2	4.4 J	<5.0	<0.20	<2.0	0.93 J	4.5 J
MW-12[A]	W-R2330017-112015-AFB-032	11/20/2015	340	NS	NS	NS	NS	NS	NS	NS	NS		12,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330017-112015-AFB-032	11/20/2015	7.2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12[A]	W-R2330017-112015-AFB-DUP2	11/20/2015	380	NS	NS	NS	NS	NS	NS	NS	NS		12,000	NS	140,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-12	W-R2330017-112015-AFB-DUP2	11/20/2015	7.2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-17[A]	W-R2330012-052014-ACN-029	5/20/2014	1,400	0.11 J	5.6	160	<1.0	<1.0	2.4 J	0.98 J	2.8 J		4,200	2.2 J	<50	210	<0.2	3.6 J	<5.0	<0.20	<2.0	4.3	7.9 J
MW-17	W-R2330012-052014-ACN-029	5/20/2014	51	0.063 J	4.5 J	150	<1.0	<1.0	<10	0.23 J	<4.0	<0.005	2,100	0.052 J	<50	180	<0.2	1.2 J	<5.0	<0.20	<2.0	0.65 J	1.7 J
MW-17[A]	W-R2330012-091514-ACN-004	9/15/2014	980	0.063 J	5.8	150	<1.0	0.056 J	1.5 J	0.80 J	2.2 J		3,600	1.8 J	<50	240	0.064 J	4.4 J	<5.0	<0.20	<2.0	2.8 J	7.9 J
MW-17	W-R2330012-091514-ACN-004	9/15/2014	21 J	0.093 J	5.1	150	<1.0	<1.0	<10	0.65 J	0.96 J	NS	2,500	<3.0	<50	220	0.064 J	3.0 J	<5.0	<0.20	<2.0	0.36 J	3.1 J
MW-17[A] (DUP)	W-R2330012-091514-ACN-005	9/15/2014	1,200	0.071 J	6.0	150	<1.0	<1.0	2.2 J	0.85 J	3.2 J		3,800	1.8 J	<50	240	0.063 J	4.7 J	<5.0	<0.20	<2.0	2.9 J	7.7 J
MW-17 (DUP)	W-R2330012-091514-ACN-005	9/15/2014	19 J	0.042 J	5.3	140	<1.0	<1.0	0.50 J	0.50 J	0.94 J	NS	2,500	<3.0	<50	230	0.058 J	3.0 J	<5.0	<0.20	<2.0	0.32 J	2.9 J
MW-17[A]	W-R2330012-112414-MCW-004	11/24/2014	700	<2.0	6.3	190	<1.0	0.075 J	1.6 J	0.61 J	1.7 J		4,100	1.5 J	<50	300	<0.2	2.2 J	<5.0	<0.20	<2.0	2.4 J	9.6 J
MW-17	W-R2330012-112414-MCW-004	11/24/2014	18 J	<2.0	5.8	190	<1.0	<1.0	<10	0.25 J	0.23 J	<5.0	3,000	<3.0	<50	280	<0.2	0.74 J	<5.0	<0.20	<2.0	<4.0	3.4 J
MW-17[A]	W-R2330017-031615-ACN-007	3/16/2015	2,000	<2.0	5.1	260	<1.0	0.45 J	2.9 J	1.4 J	4.2		5,300	3.4	<50	330	<0.2	6.4 J	<5.0	<0.20	<2.0	3.7 J	11 J
MW-17	W-R2330017-031615-ACN-007	3/16/2015	9.8 J	<2.0	2.7 J	240	<1.0	0.050 J	0.14 J	0.62 J	1.0 J	<5.0	2,300	<3.0	<50	320	<0.2	3.5 J	<5.0	<0.20	<2.0	<4.0	3.2 J
MW-17[A]	W-R2330017-111715-AFB-009	11/17/2015	990	NS	NS	NS	NS	NS	NS	NS	NS		4,600	NS	22,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-17	W-R2330017-111715-AFB-009	11/17/2015	8.6 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,600	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-18[A]	W-R2330012-052014-ACN-026	5/20/2014	5,400	0.35 J	10	400	0.23 J	0.28 J	8.8 J	5.6 J	11		13,000	6.9	<50	600	<0.2	15 J	1.6 J	0.047 J	0.18 J	16	27 J
MW-18	W-R2330012-052014-ACN-026	5/20/2014	56	0.24 J	5.1	370	0.097 J	0.16 J	0.30 J	1.3 J	<4.0	<0.005	2,000	0.20 J	<50	250	<0.2	3.1 J	<5.0	<0.20	0.21 J	0.61 J	2.9 J
MW-18[A]	W-R2330012-112414-ACN-001	11/24/2014	25,000	1.0 J	46	730	1.2	1.4	48	34	74		72,000	52	<50	3,800	0.030 J	79	8.0	0.17 J	1.3 J	90	200
MW-18	W-R2330012-112414-ACN-001	11/24/2014	45 J	0.18 J	11	550	<1.0	0.088 J	<10	0.59 J	0.21 J	<5.0	3,600	<3.0	<50	210	<0.2	1.9 J	<5.0	<0.20	<2.0	<4.0	3.6 J
MW-18[A]	W-R2330017-031615-JCH-003	3/16/2015	28,000	1.3 J	51	740	0.77 J	1.4	35	25	60		60,000	45	<50	2700	<0.2	71	2.5 J	0.16 J	0.91 J	67	170
MW-18	W-R2330017-031615-JCH-003	3/16/2015	23 J	0.16 J	6.7	450	<1.0	0.041 J	0.15 J	0.97 J	1.5 J	<5.0	2,800	<3.0	<50	180	<0.2	5.3 J	<5.0	<0.20	<2.0	<4.0	4.6 J
MW-18[A]	W-R2330017-111715-JPM-007	11/17/2015	2,200	NS	NS	NS	NS	NS	NS	NS	NS		7,200	NS	30,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-18	W-R2330017-111715-JPM-007	11/17/2015	22 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,900	NS	25,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-19[A]	W-R2330012-052014-ACN-027	5/20/2014	1,900	0.089 J	6.2	350	<1.0	0.062 J	3.5 J	1.5 J	3.4 J		5,300	1.6 J	<50	350	<0.2	5.3 J	<5.0	<0.20	<2.0	6.3	9.2 J
MW-19	W-R2330012-052014-ACN-027	5/20/2014	120	0.12 J	4.5 J	320	<1.0	<1.0	0.53 J	1.1 J	0.87 J	1.2 J	2,400	0.088 J	<50	300	<0.2	1.9 J	<5.0	<0.20	<2.0	1.3 J	2.5 J
MW-19[A]	W-R2330012-112414-ACN-002	11/24/2014	7,900	0.49 J	14	380	0.34 J	0.27 J	16	6.7 J	17		16,000	9.7	<50	560	<0.2	21	1.7 J	0.080 J	<2.0	24	53
MW-19	W-R2330012-112414-ACN-002	11/24/2014	74	0.15 J	6.3	330	<1.0	0.054 J	0.30 J	0.93 J	0.18 J	<5.0	2,000	<3.0	<50	350	<0.2	1.8 J	<5.0	<0.20	<2.0	0.48 J	3.9 J
MW-19[A]	W-R2330017-031615-JCH-004	3/16/2015	1,600	0.12 J	11	510	<1.0	<1.0	2.8 J	1.9 J	4.1		6,600	1.7 J	<50	520	<0.2	9.4 J	0.82 J	<0.20	<2.0	4.2	11 J
MW-19	W-R2330017-031615-JCH-004	3/16/2015	18 J	0.14 J	5 J	540	<1.0	<1.0	0.3 J	0.91 J	1.8 J	<5.0	3,500	<3.0	<50	460	<0.2	5.6 J	<5.0	<0.20	<2.0	0.53 J	3.7 J
MW-19[A]	W-R2330017-111715-AFB-008	11/17/2015	4,100	NS	NS	NS	NS	NS	NS	NS	NS		11,000	NS	38,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-19	W-R2330017-111715-AFB-008	11/17/2015	370	NS	NS	NS	NS	NS	NS	NS	NS	NS	4,400	NS	34,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-20[A]	W-R2330012-052014-ACN-028	5/20/2014	1,800	0.15 J	9.5	340	<1.0	0.061 J	3.8 J	1.6 J	5.1		9,600	2.7 J	<50	280	<0.2	5.5 J	<5.0	<0.20	<2.0	6.4	11 J
MW-20	W-R2330012-052014-ACN-028	5/20/2014	15 J	0.065 J	5.6	330	<1.0	<1.0	0.39 J	0.71 J	1.1 J	<0.005	4,900	<3.0	<50	200	<0.2	1.9 J	<5.0	<0.20	<2.0	0.57 J	1.1 J
MW-20[A]	W-R2330012-112414-ACN-003	11/24/2014	330	<2.0	8.8	290	<1.0	<1.0	0.90 J	0.49 J	1.2 J		4,200	0.69 J	<50	160	<0.2	1.9 J	<5.0	<0.20	<2.0	1.9 J	5.3 J
MW-20	W-R2330012-112414-ACN-003	11/24/2014	100	<2.0	7.7	300	<1.0	<1.0	0.39 J	0.66 J	0.32 J	<5.0	3,600	<3.0	<50	150	<0.2	1.4 J	<5.0	<0.20	<2.0	0.68 J	4.5 J
MW-20[A]	W-R2330017-031615-ACN-005	3/16/2015	1,600	0.14 J	7.5	250	<1.0	<1.0	2.8 J	1.5 J	4.9		7,000	2.8 J	<50	210	<0.2	6.7 J	<5.0	<0.20	<2.0	4.0 J	12 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-20	W-R2330017-031615-ACN-005	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-20[A] (DUP)	W-R2330017-031615-ACN-006	3/16/2015																			
MW-20 (DUP)	W-R2330017-031615-ACN-006	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-20[A]	W-R2330017-111715-JPM-010	11/17/2015																			
MW-20	W-R2330017-111715-JPM-010	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A]	W-R2330012-051914-ACN-021	5/19/2014																			
MW-21	W-R2330012-051914-ACN-021	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-21[A]	W-R2330012-112514-ACN-006	11/25/2014																			
MW-21	W-R2330012-112514-ACN-006	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-21[A]	W-R2330017-032015-JCH-023	3/20/2015																			
MW-21	W-R2330017-032015-JCH-023	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-21[A]	W-R2330012-111815-JPM-013	11/18/2015																			
MW-21	W-R2330012-111815-JPM-013	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A] (DUP)	DUP 1	11/18/2015																			
MW-21 (DUP)	DUP 1	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-22[A]	W-R2330012-051914-ACN-022	5/19/2014																			
MW-22	W-R2330012-051914-ACN-022	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-22[A]	W-R2330012-112514-ACN-007	11/25/2014																			
MW-22	W-R2330012-112514-ACN-007	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-22[A] (DUP)	W-R2330012-112514-ACN-008	11/25/2014																			
MW-22 (DUP)	W-R2330012-112514-ACN-008	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-22[A]	W-R2330017-032015-JCH-027	3/20/2015																			
MW-22	W-R2330017-032015-JCH-027	3/20/2015	<25	<1.0	<1.0	<50	12 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-22[A]	W-R2330017-111815-JPM-014	11/18/2015																			
MW-22	W-R2330017-111815-JPM-014	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-23[A]	W-R2330012-051914-ACN-023	5/19/2014																			
MW-23	W-R2330012-051914-ACN-023	5/19/2014	<25	<1.0	<1.0	<50	<50	3.7	<1.0	<5.0	40	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-23[A] (DUP)	W-R2330012-051914-ACN-024	5/19/2014																			
MW-23 (DUP)	W-R2330012-051914-ACN-024	5/19/2014	<25	<1.0	<1.0	<50	<50	4.2	<1.0	<5.0	45	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-23[A]	W-R2330012-112514-ACN-009	11/25/2014																			
MW-23	W-R2330012-112514-ACN-009	11/25/2014	<25	<1.0	<1.0	<50	<50	5.4	<1.0	<5.0	89	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-23[A]	W-R2330017-032015-ACN-028	3/20/2015																			
MW-23	W-R2330017-032015-ACN-028	3/20/2015	<25	<1.0	<1.0	<50	<50	2.7	<1.0	<5.0	45	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-23[A]	W-R2330017-111815-JPM-016	11/18/2015																			
MW-23	W-R2330017-111815-JPM-016	11/18/2015	<25	<1.0	<1.0	<50	<50	4.1	<1.0	<5.0	72	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-24[A]	W-R2330012-052014-ACN-030	5/20/2014																			
MW-24	W-R2330012-052014-ACN-030	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-24[A]	W-R2330012-112614-JCH-013	11/26/2014																			
MW-24	W-R2330012-112614-JCH-013	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-20	W-R2330017-031615-ACN-005	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-20[A] (DUP)	W-R2330017-031615-ACN-006	3/16/2015																								
MW-20 (DUP)	W-R2330017-031615-ACN-006	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-20[A]	W-R2330017-111715-JPM-010	11/17/2015																								
MW-20	W-R2330017-111715-JPM-010	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A]	W-R2330012-051914-ACN-021	5/19/2014																								
MW-21	W-R2330012-051914-ACN-021	5/19/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.87 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-21[A]	W-R2330012-112514-ACN-006	11/25/2014																								
MW-21	W-R2330012-112514-ACN-006	11/25/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-21[A]	W-R2330017-032015-JCH-023	3/20/2015																								
MW-21	W-R2330017-032015-JCH-023	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-21[A]	W-R2330012-111815-JPM-013	11/18/2015																								
MW-21	W-R2330012-111815-JPM-013	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A] (DUP)	DUP 1	11/18/2015																								
MW-21 (DUP)	DUP 1	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-22[A]	W-R2330012-051914-ACN-022	5/19/2014																								
MW-22	W-R2330012-051914-ACN-022	5/19/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	1.5 J	<10	<10	<4.0	1.2 J	<5.0	0.88 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-22[A]	W-R2330012-112514-ACN-007	11/25/2014																								
MW-22	W-R2330012-112514-ACN-007	11/25/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.7 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-22[A] (DUP)	W-R2330012-112514-ACN-008	11/25/2014																								
MW-22 (DUP)	W-R2330012-112514-ACN-008	11/25/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.7 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-22[A]	W-R2330017-032015-JCH-027	3/20/2015																								
MW-22	W-R2330017-032015-JCH-027	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.0 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-22[A]	W-R2330017-111815-JPM-014	11/18/2015																								
MW-22	W-R2330017-111815-JPM-014	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-23[A]	W-R2330012-051914-ACN-023	5/19/2014																								
MW-23	W-R2330012-051914-ACN-023	5/19/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.85 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-23[A] (DUP)	W-R2330012-051914-ACN-024	5/19/2014																								
MW-23 (DUP)	W-R2330012-051914-ACN-024	5/19/2014	<10	<10	<5.0	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.91 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-23[A]	W-R2330012-112514-ACN-009	11/25/2014																								
MW-23	W-R2330012-112514-ACN-009	11/25/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-23[A]	W-R2330017-032015-ACN-028	3/20/2015																								
MW-23	W-R2330017-032015-ACN-028	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	1.0	<5.0	1.6 J	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-23[A]	W-R2330017-111815-JPM-016	11/18/2015																								
MW-23	W-R2330017-111815-JPM-016	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24[A]	W-R2330012-052014-ACN-030	5/20/2014																								
MW-24	W-R2330012-052014-ACN-030	5/20/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-24[A]	W-R2330012-112614-JCH-013	11/26/2014																								
MW-24	W-R2330012-112614-JCH-013	11/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-20	W-R2330017-031615-ACN-005	3/16/2015	64	0.13 J	5.8	260	<1.0	<1.0	0.36 J	0.73 J	0.98 J	<5.0	4,200	<3.0	<50	170	<0.2	3.7 J	<5.0	<0.20	<2.0	0.52 J	<50
MW-20[A] (DUP)	W-R2330017-031615-ACN-006	3/16/2015	1,600	0.13 J	7.6	250	<1.0	<1.0	2.8 J	1.5 J	4.7		7,100	2.8 J	<50	210	<0.2	6.7 J	<5.0	<0.20	<2.0	3.9 J	12 J
MW-20 (DUP)	W-R2330017-031615-ACN-006	3/16/2015	43 J	<2.0	6.1	250	<1.0	<1.0	0.28 J	0.61 J	0.93 J	<5.0	4,900	<3.0	<50	170	<0.2	3.7 J	<5.0	<0.20	<2.0	0.55 J	<50
MW-20[A]	W-R2330017-111715-JPM-010	11/17/2015	2,600	NS	NS	NS	NS	NS	NS	NS	NS		10,000	NS	56,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-20	W-R2330017-111715-JPM-010	11/17/2015	93	NS	NS	NS	NS	NS	NS	NS	NS	NS	4,200	NS	55,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A]	W-R2330012-051914-ACN-021	5/19/2014	1,400	0.16 J	1.9 J	38 J	<1.0	<1.0	2.4 J	1.7 J	4.1		2,400	1.4 J	<50	60	<0.2	5.5 J	0.68 J	<0.20	<2.0	3.8 J	9.9 J
MW-21	W-R2330012-051914-ACN-021	5/19/2014	48 J	0.16 J	<5.0	31 J	<1.0	<1.0	<10	0.91 J	1.2 J	<0.005	56 J	<3.0	<50	9.1 J	<0.2	1.9 J	<5.0	<0.20	<2.0	0.32 J	1.9 J
MW-21[A]	W-R2330012-112514-ACN-006	11/25/2014	480	0.15 J	1.1 J	81 J	<1.0	0.076 J	1.1 J	0.89 J	2.0 J		850	0.72 J	<50	52	<0.2	3.0 J	<5.0	<0.20	<2.0	1.8 J	8.2 J
MW-21	W-R2330012-112514-ACN-006	11/25/2014	23 J	0.24 J	0.70 J	72 J	<1.0	0.061 J	0.22 J	0.70 J	0.98 J	<5.0	42 J	<3.0	<50	37 J	<0.2	2.0 J	<5.0	<0.20	<2.0	<4.0	4.5 J
MW-21[A]	W-R2330017-032015-JCH-023	3/20/2015	3,000	0.23 J	2.2 J	73 J	<1.0	0.21 J	5.1 J	2.5 J	6.2		4,100	2.9 J	<50	100	<0.2	7.7 J	<5.0	0.038 J	<2.0	8.5	18 J
MW-21	W-R2330017-032015-JCH-023	3/20/2015	23 J	0.19 J	<5.0	62 J	<1.0	0.078 J	0.14 J	0.89 J	0.41 J	<5.0	20 J	<3.0	<50	25 J	<0.2	2.0 J	<5.0	<0.20	<2.0	<4.0	<50
MW-21[A]	W-R2330012-111815-JPM-013	11/18/2015	34 J	NS	NS	NS	NS	NS	NS	NS	NS		59 J	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21	W-R2330012-111815-JPM-013	11/18/2015	3.2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	11 J	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21[A] (DUP)	DUP 1	11/18/2015	27 J	NS	NS	NS	NS	NS	NS	NS	NS		47 J	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-21 (DUP)	DUP 1	11/18/2015	3.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	10 J	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-22[A]	W-R2330012-051914-ACN-022	5/19/2014	8,100	0.78 J	14	540	<1.0	0.56 J	14	9.5 J	31		21,000	19	<50	730	<0.2	23	2.7 J	<0.20	<2.0	24	81
MW-22	W-R2330012-051914-ACN-022	5/19/2014	23 J	0.24 J	4.3 J	440	<1.0	<1.0	<10	2.2 J	0.64 J	1.3 J	3,100	0.079 J	<50	360	<0.2	3.2 J	<5.0	<0.20	<2.0	0.64 J	2.2 J
MW-22[A]	W-R2330012-112514-ACN-007	11/25/2014	200	0.18 J	16	1,300	<1.0	0.11 J	1.1 J	1.9 J	1.3 J		11,000	0.62 J	<50	250	<0.2	4.4 J	<5.0	<0.20	<2.0	1.1 J	6.8 J
MW-22	W-R2330012-112514-ACN-007	11/25/2014	12 J	0.22 J	15	1,300	<1.0	<1.0	0.70 J	1.7 J	<4.0	<5.0	11,000	<3.0	<50	240	<0.2	3.7 J	<5.0	<0.20	<2.0	<4.0	23 J
MW-22[A] (DUP)	W-R2330012-112514-ACN-008	11/25/2014	160	<2.0	16	1,300	<1.0	0.095 J	0.80 J	1.7 J	1.1 J		11,000	<3.0	<50	270	<0.2	4.4 J	<5.0	<0.20	<2.0	0.75 J	5.6 J
MW-22 (DUP)	W-R2330012-112514-ACN-008	11/25/2014	14 J	0.11 J	16	1,300	<1.0	<1.0	0.61 J	1.7 J	0.37 J	17	11,000	<3.0	<50	260	<0.2	3.8 J	<5.0	<0.20	<2.0	<4.0	4.6 J
MW-22[A]	W-R2330017-032015-JCH-027	3/20/2015	340	0.17 J	14	1,300	<1.0	<1.0	1.3 J	2.2 J	4.0		13,000	2.3 J	<50	270	<0.2	6.5 J	<5.0	<0.20	<2.0	1.5 J	8.6 J
MW-22	W-R2330017-032015-JCH-027	3/20/2015	4.1 J	0.23 J	13	1,400	<1.0	<1.0	0.54 J	2.1 J	1.8 J	6.0	12,000	<3.0	<50	250	<0.2	5.9 J	<5.0	<0.20	<2.0	0.71 J	5.9 J
MW-22[A]	W-R2330017-111815-JPM-014	11/18/2015	95	NS	NS	NS	NS	NS	NS	NS	NS		7,000	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-22	W-R2330017-111815-JPM-014	11/18/2015	2.0 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	5,400	NS	120,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-23[A]	W-R2330012-051914-ACN-023	5/19/2014	560	0.15 J	13	610	<1.0	<1.0	1.7 J	2.2 J	2.1 J		13,000	1.2 J	<50	180	<0.2	4.4 J	0.92 J	<0.20	<2.0	2.5 J	7.2 J
MW-23	W-R2330012-051914-ACN-023	5/19/2014	7.7 J	0.089 J	12	560	<1.0	<1.0	0.76 J	1.9 J	<4.0	<0.005	12,000	0.067 J	<50	160	<0.2	3.3 J	<5.0	<0.20	<2.0	1.1 J	2.2 J
MW-23[A] (DUP)	W-R2330012-051914-ACN-024	5/19/2014	590	0.11 J	12	580	<1.0	<1.0	1.7 J	2.1 J	2.2 J		13,000	1.3 J	<50	180	<0.2	4.4 J	0.72 J	<0.20	<2.0	2.6 J	7.3 J
MW-23 (DUP)	W-R2330012-051914-ACN-024	5/19/2014	8.5 J	0.076 J	12	550	<1.0	<1.0	0.70 J	1.8 J	<4.0	<0.005	11,000	<3.0	<50	150	<0.2	3.1 J	<5.0	<0.20	<2.0	0.84 J	1.9 J
MW-23[A]	W-R2330012-112514-ACN-009	11/25/2014	6,700	1.1 J	46	1,300	0.31 J	0.68 J	18	9.3 J	37		35,000	30	<50	310	<0.2	25	2.8 J	0.059 J	<2.0	29	100
MW-23	W-R2330012-112514-ACN-009	11/25/2014	21 J	0.20 J	26	1,100	<1.0	0.037 J	1.3 J	2.4 J	0.18 J	<5.0	18,000	<3.0	<50	78	<0.2	3.8 J	<5.0	<0.20	<2.0	1.5 J	4.5 J
MW-23[A]	W-R2330017-032015-ACN-028	3/20/2015	650	0.20 J	17	940	<1.0	<1.0	2.2 J	3.1 J	3.7 J		17,000	2.6 J	<50	120	<0.2	7.4 J	0.76 J	0.023 J	<2.0	3.3 J	9.2 J
MW-23	W-R2330017-032015-ACN-028	3/20/2015	6.7 J	0.21 J	16	860	<1.0	<1.0	0.96 J	2.8 J	2.3 J	<5.0	16,000	0.82 J	<50	99	<0.2	6.3 J	<5.0	0.020 J	<2.0	1.2 J	4.1 J
MW-23[A]	W-R2330017-111815-JPM-016	11/18/2015	180	NS	NS	NS	NS	NS	NS	NS	NS		14,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-23	W-R2330017-111815-JPM-016	11/18/2015	5.0 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	14,000	NS	130,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-24[A]	W-R2330012-052014-ACN-030	5/20/2014	310	<2.0	5.7	170	<1.0	<1.0	0.57 J	0.50 J	1.6 J		5,300	0.38 J	<50	640	<0.2	3.8 J	0.69 J	<0.20	<2.0	0.69 J	4.9 J
MW-24	W-R2330012-052014-ACN-030	5/20/2014	4.8 J	0.074 J	5.2	160	<1.0	<1.0	<10	0.76 J	0.75 J	<0.005	4,700	<3.0	<50	620	<0.2	2.9 J	<5.0	<0.20	<2.0	<4.0	1.7 J
MW-24[A]	W-R2330012-112614-JCH-013	11/26/2014	12 J	<2.0	4.6 J	130	<1.0	0.051 J	0.13 J	0.25 J	<4.0		2,500	<3.0	<50	690	<0.2	1.7 J	<5.0	<0.20	<2.0	<4.0	4.7 J
MW-24	W-R2330012-112614-JCH-013	11/26/2014	<50	<2.0	4.9 J	130	<1.0	<1.0	<10	0.19 J	<4.0	<5.0	2,100	<3.0	<50	670	<0.2	0.93 J	<5.0	<0.20	<2.0	<4.0	5.4 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-24[A]	W-R2330017-032015-ACN-026	3/20/2015																			
MW-24	W-R2330017-032015-ACN-026	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-24[A]	W-R2330017-111815-AFB-015	11/18/2015																			
MW-24	W-R2330017-111815-AFB-015	11/18/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-25[A]	W-R2330012-051914-ACN-025	5/19/2014																			
MW-25	W-R2330012-051914-ACN-025	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-25[A]	W-R2330012-112614-JCH-012	11/26/2014																			
MW-25	W-R2330012-112614-JCH-012	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-25[A]	W-R2330017-032015-JCH-025	3/20/2015																			
MW-25	W-R2330017-032015-JCH-025	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-25[A]	W-R2330017-111815-AFB-011	11/18/2015																			
MW-25	W-R2330017-111815-AFB-011	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-26[A]	W-R2330012-051914-ACN-020	5/19/2014																			
MW-26	W-R2330012-051914-ACN-020	5/19/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-26[A]	W-R2330012-112614-JCH-011	11/26/2014																			
MW-26	W-R2330012-112614-JCH-011	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-26[A]	W-R2330017-032015-ACN-024	3/20/2015																			
MW-26	W-R2330017-032015-ACN-024	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-26[A]	W-R2330017-111815-AFB-012	11/18/2015																			
MW-26	W-R2330017-111815-AFB-012	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-091514-ACN-002	9/15/2014																			
MW-27	W-R2330012-091514-ACN-002	9/15/2014	NS	NS	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<5.0	<5.0	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-12114-JCH-018	12/1/2014																			
MW-27	W-R2330012-12114-JCH-018	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-27[A]	W-R2330017-031915-JCH-016	3/19/2015																			
MW-27	W-R2330017-031915-JCH-016	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-27[A]	W-R2330017-111915-JPM-020	11/19/2015																			
MW-27	W-R2330017-111915-JPM-020	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29[A]	W-R2330012-020515-ACN-001	2/5/2015																			
MW-29	W-R2330012-020515-ACN-001	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-29[A] (DUP)	W-R2330012-020515-ACN-002	2/5/2015																			
MW-29 (DUP)	W-R2330012-020515-ACN-002	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-29[A]	W-R2330017-031615-JCH-001	3/16/2015																			
MW-29	W-R2330017-031615-JCH-001	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-29[A]	W-R2330017-112015-AFB-028	11/20/2015																			
MW-29	W-R2330017-112015-AFB-028	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-30[A]	W-R2330012-020515-ACN-003	2/5/2015																			
MW-30	W-R2330012-020515-ACN-003	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-30[A]	W-R2330017-031615-ACN-002	3/16/2015																			

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-24[A]	W-R2330017-032015-ACN-026	3/20/2015																								
MW-24	W-R2330017-032015-ACN-026	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-24[A]	W-R2330017-111815-AFB-015	11/18/2015																								
MW-24	W-R2330017-111815-AFB-015	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-25[A]	W-R2330012-051914-ACN-025	5/19/2014																								
MW-25	W-R2330012-051914-ACN-025	5/19/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.80 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-25[A]	W-R2330012-112614-JCH-012	11/26/2014																								
MW-25	W-R2330012-112614-JCH-012	11/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-25[A]	W-R2330017-032015-JCH-025	3/20/2015																								
MW-25	W-R2330017-032015-JCH-025	3/20/2015	<10	<10	0.40 J	<10	<10	<5.0	<10	<5.0	0.30 J	<5.0	<10	<5.0	<10	<10	0.38 J	<5.0	<5.0	<5.0	<1.0	0.13 J	0.71 J	<2.0	<5.0	<5.0
MW-25[A]	W-R2330017-111815-AFB-011	11/18/2015																								
MW-25	W-R2330017-111815-AFB-011	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-26[A]	W-R2330012-051914-ACN-020	5/19/2014																								
MW-26	W-R2330012-051914-ACN-020	5/19/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-26[A]	W-R2330012-112614-JCH-011	11/26/2014																								
MW-26	W-R2330012-112614-JCH-011	11/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-26[A]	W-R2330017-032015-ACN-024	3/20/2015																								
MW-26	W-R2330017-032015-ACN-024	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-26[A]	W-R2330017-111815-AFB-012	11/18/2015																								
MW-26	W-R2330017-111815-AFB-012	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-091514-ACN-002	9/15/2014																								
MW-27	W-R2330012-091514-ACN-002	9/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-12114-JCH-018	12/1/2014																								
MW-27	W-R2330012-12114-JCH-018	12/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-27[A]	W-R2330017-031915-JCH-016	3/19/2015																								
MW-27	W-R2330017-031915-JCH-016	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-27[A]	W-R2330017-111915-JPM-020	11/19/2015																								
MW-27	W-R2330017-111915-JPM-020	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29[A]	W-R2330012-020515-ACN-001	2/5/2015																								
MW-29	W-R2330012-020515-ACN-001	2/5/2015	<11	<11	<5.3	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<10	<11	<4.2	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3
MW-29[A] (DUP)	W-R2330012-020515-ACN-002	2/5/2015																								
MW-29 (DUP)	W-R2330012-020515-ACN-002	2/5/2015	<11	<11	<5.3	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<10	<11	<4.2	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3
MW-29[A]	W-R2330017-031615-JCH-001	3/16/2015																								
MW-29	W-R2330017-031615-JCH-001	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-29[A]	W-R2330017-112015-AFB-028	11/20/2015																								
MW-29	W-R2330017-112015-AFB-028	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-30[A]	W-R2330012-020515-ACN-003	2/5/2015																								
MW-30	W-R2330012-020515-ACN-003	2/5/2015	<11	<11	<5.3	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<10	<11	<4.2	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3
MW-30[A]	W-R2330017-031615-ACN-002	3/16/2015																								

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-24[A]	W-R2330017-032015-ACN-026	3/20/2015	84	<2.0	7.4	140	<1.0	0.24 J	0.68 J	0.56 J	1.8 J		5,900	0.47 J	<50	740	<0.2	3.1 J	<5.0	<0.20	<2.0	<4.0	4.6 J
MW-24	W-R2330017-032015-ACN-026	3/20/2015	3.8 J	0.19 J	3.2 J	130	<1.0	0.066 J	<10	0.57 J	1.3 J	<5.0	2,600	0.36 J	<50	700	<0.2	2.8 J	<5.0	<0.20	<2.0	<4.0	<50
MW-24[A]	W-R2330017-111815-AFB-015	11/18/2015	260	NS	NS	NS	NS	NS	NS	NS	NS		5,900	NS	48,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	W-R2330017-111815-AFB-015	11/18/2015	7.6 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,700	NS	47,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-25[A]	W-R2330012-051914-ACN-025	5/19/2014	2,600	0.24 J	1.9 J	83 J	<1.0	<1.0	3.8 J	1.5 J	7.4		3,800	2.5 J	<50	190	<0.2	6.3 J	2.4 J	<0.20	<2.0	6.8	12 J
MW-25	W-R2330012-051914-ACN-025	5/19/2014	51	0.21 J	0.63 J	68 J	<1.0	<1.0	<10	0.59 J	3.7 J	<0.005	110 J	0.25 J	<50	150	<0.2	2.3 J	1.7 J	<0.20	<2.0	0.35 J	2.2 J
MW-25[A]	W-R2330012-112614-JCH-012	11/26/2014	400	0.18 J	0.85 J	72 J	<1.0	0.11 J	1.3 J	0.53 J	3.2 J		570	0.59 J	<50	340	<0.2	6.5 J	1.1 J	<0.20	<2.0	1.4 J	6.1 J
MW-25	W-R2330012-112614-JCH-012	11/26/2014	5.9 J	0.15 J	<5.0	66 J	<1.0	0.071 J	<10	0.33 J	2.9 J	<5.0	16 J	<3.0	<50	250	<0.2	4.4 J	<5.0	<0.20	<2.0	<4.0	4.4 J
MW-25[A]	W-R2330017-032015-JCH-025	3/20/2015	450	0.22 J	0.88 J	72 J	<1.0	0.060 J	0.84 J	0.77 J	4.2		620	0.57 J	<50	310	<0.2	4.9 J	1.2 J	<0.20	<2.0	1.5 J	6.3 J
MW-25	W-R2330017-032015-JCH-025	3/20/2015	12 J	0.28 J	<5.0	67 J	<1.0	0.061 J	<10	0.63 J	6.2	<5.0	28 J	0.37 J	<50	110	<0.2	4.8 J	1.1 J	<0.20	<2.0	<4.0	8.4 J
MW-25[A]	W-R2330017-111815-AFB-011	11/18/2015	6,000	NS	NS	NS	NS	NS	NS	NS	NS		14,000	NS	30,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-25	W-R2330017-111815-AFB-011	11/18/2015	46 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	63 J	NS	16,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-26[A]	W-R2330012-051914-ACN-020	5/19/2014	900	0.37 J	2.7 J	37 J	<1.0	<1.0	1.8 J	1.2 J	4.6		1,900	1.1 J	<50	110	<0.2	4.3 J	0.9 J	<0.20	<2.0	3.1 J	7.3 J
MW-26	W-R2330012-051914-ACN-020	5/19/2014	36 J	0.39 J	1.5 J	34 J	<1.0	<1.0	<10	1.1 J	1.0 J	<0.005	55 J	<3.0	<50	86	<0.2	0.23 J	<5.0	<0.20	<2.0	0.41 J	1.6 J
MW-26[A]	W-R2330012-112614-JCH-011	11/26/2014	210	0.22 J	<5.0	25 J	<1.0	0.13 J	0.52 J	0.65 J	2.0 J		360	<3.0	<50	69	<0.2	2.7 J	0.86 J	<0.20	<2.0	0.98 J	4.5 J
MW-26	W-R2330012-112614-JCH-011	11/26/2014	8.4 J	0.16 J	<5.0	24 J	<1.0	0.079 J	<10	0.54 J	1.0 J	<5.0	<200	<3.0	<50	65	<0.2	2.4 J	<5.0	<0.20	<2.0	<4.0	3.0 J
MW-26[A]	W-R2330017-032015-ACN-024	3/20/2015	2,200	0.33 J	3.5 J	34 J	<1.0	0.16 J	4.5 J	2.1 J	7.8		4,300	3.4	<50	100	<0.2	7.5 J	<5.0	<0.20	<2.0	7.0	16 J
MW-26	W-R2330017-032015-ACN-024	3/20/2015	82	0.27 J	<5.0	21 J	<1.0	0.070 J	0.29 J	0.80 J	2.2 J	<5.0	130 J	<3.0	<50	25 J	<0.2	2.9 J	<5.0	<0.20	<2.0	<4.0	<50
MW-26[A]	W-R2330017-111815-AFB-012	11/18/2015	910	NS	NS	NS	NS	NS	NS	NS	NS		2,300	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-26	W-R2330017-111815-AFB-012	11/18/2015	9.6 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	19 J	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-27[A]	W-R2330012-091514-ACN-002	9/15/2014	190	0.61 J	4.7 J	240	<1.0	0.097 J	0.69 J	2.4 J	3.7 J		1,700	0.70 J	<50	160	0.064 J	9.1 J	<5.0	<0.20	<2.0	1.1 J	7.0 J
MW-27	W-R2330012-091514-ACN-002	9/15/2014	5.8 J	0.58 J	4.5 J	240	<1.0	<1.0	<10	2.9 J	1.9 J	NS	1,500	0.076 J	<50	160	0.062 J	8.8 J	<5.0	<0.20	<2.0	0.55 J	5.0 J
MW-27[A]	W-R2330012-12114-JCH-018	12/1/2014	460	0.25 J	2.7 J	200	<1.0	0.063 J	1.2 J	2.5 J	4.2		1,900	1.2 J	<50	140	<0.2	9.3 J	1.1 J	<0.20	<2.0	1.9 J	11 J
MW-27	W-R2330012-12114-JCH-018	12/1/2014	32 J	0.18 J	2.2 J	290	<1.0	<1.0	0.22 J	2.1 J	1.4 J	<5.0	2,600	<3.0	<50	110	<0.2	7.5 J	0.79 J	<0.20	<2.0	0.66 J	4.2 J
MW-27[A]	W-R2330017-031915-JCH-016	3/19/2015	270	0.43 J	0.97 J	210	<1.0	0.13 J	0.76 J	1.9 J	2.3 J		2,200	0.62 J	<50	72	<0.2	5.7 J	<5.0	<0.20	<2.0	1.5 J	4.0 J
MW-27	W-R2330017-031915-JCH-016	3/19/2015	3.8 J	0.67 J	0.75 J	260	<1.0	0.23 J	0.35 J	2.4 J	1.3 J	<5.0	1,900	<3.0	<50	80	<0.2	6.8 J	0.97 J	0.095 J	<2.0	<4.0	3.1 J
MW-27[A]	W-R2330017-111915-JPM-020	11/19/2015	54	NS	NS	NS	NS	NS	NS	NS	NS		4,100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27	W-R2330017-111915-JPM-020	11/19/2015	2.2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	4,200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29[A]	W-R2330012-020515-ACN-001	2/5/2015	530	<2.0	2.5 J	200	<1.0	0.046 J	1.3 J	1.4 J	1.6 J		3,200	2.0 J	<50	410	<0.2	4.4 J	<5.0	<0.20	<2.0	1.2 J	6.8 J
MW-29	W-R2330012-020515-ACN-001	2/5/2015	8.8 J	<2.0	2.3 J	200	<1.0	<1.0	<10	1.1	0.35 J	<5.0	2,400	<3.0	<50	380	<0.2	3.3 J	<5.0	<0.20	<2.0	<4.0	3.6 J
MW-29[A] (DUP)	W-R2330012-020515-ACN-002	2/5/2015	370	<2.0	2.1 J	200	<1.0	0.065 J	1.3 J	1.3 J	0.88 J		2,900	0.60 J	<50	400	<0.2	4.3 J	<5.0	<0.20	<2.0	0.99 J	6.4 J
MW-29 (DUP)	W-R2330012-020515-ACN-002	2/5/2015	11 J	<2.0	2.4	200	<1.0	<1.0	<10	1.3 J	<4.0	<5.0	2,500	<3.0	<50	400	<0.2	3.5 J	<5.0	<0.20	<2.0	<4.0	3.4 J
MW-29[A]	W-R2330017-031615-JCH-001	3/16/2015	1,400	0.11 J	6.2	220	<1.0	0.11 J	3.3 J	2.0 J	5.6		5,400	2.8 J	<50	400	<0.2	8.0 J	<5.0	<0.20	<2.0	3.4 J	17 J
MW-29	W-R2330017-031615-JCH-001	3/16/2015	<50	<2.0	3.1 J	220	<1.0	0.048 J	<10	1.0 J	1.3 J	<5.0	2,800	<3.0	<50	400	<0.2	3.9 J	<5.0	<0.20	<2.0	<4.0	5.4 J
MW-29[A]	W-R2330017-112015-AFB-028	11/20/2015	420	NS	NS	NS	NS	NS	NS	NS	NS		4,100	NS	21,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-29	W-R2330017-112015-AFB-028	11/20/2015	5.3 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	3,300	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-30[A]	W-R2330012-020515-ACN-003	2/5/2015	580	0.30 J	4.3 J	120	<1.0	0.53 J	1.7 J	0.30 J	3.9 J		500	1.3 J	<50	72	<0.2	3.0 J	<5.0	<0.20	<2.0	1.6 J	8.0 J
MW-30	W-R2330012-020515-ACN-003	2/5/2015	11 J	0.39 J	3.2 J	110	<1.0	0.45 J	<10	0.28 J	1.1 J	5.0	18 J	<3.0	<50	67	<0.2	1.6 J	<5.0	<0.20	<2.0	0.68 J	3.8 J
MW-30[A]	W-R2330017-031615-ACN-002	3/16/2015	110	0.28 J	1.6 J	95 J	<1.0	0.54 J	0.34 J	0.19 J	2.2 J		100 J	<3.0	<50	47 J	<0.2	2.0 J	<5.0	<0.20	<2.0	0.96 J	4.6 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
MW-30	W-R2330017-031615-ACN-002	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-30[A]	W-R2330017-112015-JPM-029	11/20/2015																			
MW-30	W-R2330017-112015-JPM-029	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-060515-ACN-001	6/5/2015																			
MW-31	W-R2330017-060515-ACN-001	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-111615-AEP-001	11/16/2015																			
MW-31	W-R2330017-111615-AEP-001	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-060515-ACN-002	6/5/2015																			
MW-32	W-R2330017-060515-ACN-002	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-111615-AEP-002	11/16/2015																			
MW-32	W-R2330017-111615-AEP-002	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-060515-ACN-003	6/5/2015																			
MW-33	W-R2330017-060515-ACN-003	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-111615-AEP-003	11/16/2015																			
MW-33	W-R2330017-111615-AEP-003	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-34[A]	W-R2330017-060515-ACN-004	6/5/2015																			
MW-34	W-R2330017-060515-ACN-004	6/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
MW-34[A]	W-R2330017-111815-JPM-017	11/18/2015																			
MW-34	W-R2330017-111815-JPM-017	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M[A]	W-R2330017-032015-ACN-030	3/20/2015																			
CRA-266M	W-R2330017-032015-ACN-030	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
CRA-266M[A]	W-R2330017-111715-JPM-006	11/17/2015																			
CRA-266M	W-R2330017-111715-JPM-006	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-13[A]	W-R2330009-121013-AJL-008	12/10/2013																			
SB-13	W-R2330009-121013-AJL-008	12/10/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.37 J	<3.0
SB-14[A]	W-R2330009-121013-AJL-007	12/10/2013																			
SB-14	W-R2330009-121013-AJL-007	12/10/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-15[A]	W-R2330009-120913-AJL-006	12/9/2013																			
SB-15	W-R2330009-120913-AJL-006	12/9/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.31 J	<3.0
SB-21[A]	W-R2330009-120513-RD-001	12/5/2013																			
SB-21	W-R2330009-120513-RD-001	12/5/2013	<25	<1.0	<1.0	<50	<50	6.7	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	1.4	2.5 J	<1.0	0.44 J	4.2
SB-22[A]	W-R2330009-120513-RD-002	12/5/2013																			
SB-22	W-R2330009-120513-RD-002	12/5/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	0.72 J	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-23[A]	W-R2330009-120513-RD-003	12/5/2013																			
SB-23	W-R2330009-120513-RD-003	12/5/2013	<25	<1.0	<1.0	<50	<50	2.4	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-24[A]	W-R2330009-120613-RD-004	12/6/2013																			
SB-24	W-R2330009-120613-RD-004	12/6/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.29 J	<3.0
SB-25[A]	W-R2330009-120613-RD-005	12/6/2013																			
SB-25	W-R2330009-120613-RD-005	12/6/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.48 J	<3.0

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
MW-30	W-R2330017-031615-ACN-002	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-30[A]	W-R2330017-112015-JPM-029	11/20/2015																								
MW-30	W-R2330017-112015-JPM-029	11/20/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-060515-ACN-001	6/5/2015																								
MW-31	W-R2330017-060515-ACN-001	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-111615-AEP-001	11/16/2015																								
MW-31	W-R2330017-111615-AEP-001	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-060515-ACN-002	6/5/2015																								
MW-32	W-R2330017-060515-ACN-002	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-111615-AEP-002	11/16/2015																								
MW-32	W-R2330017-111615-AEP-002	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-060515-ACN-003	6/5/2015																								
MW-33	W-R2330017-060515-ACN-003	6/5/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-111615-AEP-003	11/16/2015																								
MW-33	W-R2330017-111615-AEP-003	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-34[A]	W-R2330017-060515-ACN-004	6/5/2015																								
MW-34	W-R2330017-060515-ACN-004	6/5/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
MW-34[A]	W-R2330017-111815-JPM-017	11/18/2015																								
MW-34	W-R2330017-111815-JPM-017	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M[A]	W-R2330017-032015-ACN-030	3/20/2015																								
CRA-266M	W-R2330017-032015-ACN-030	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	0.13 J	<5.0	<5.0	<2.0	<5.0	<5.0
CRA-266M[A]	W-R2330017-111715-JPM-006	11/17/2015																								
CRA-266M	W-R2330017-111715-JPM-006	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-13[A]	W-R2330009-121013-AJL-008	12/10/2013																								
SB-13	W-R2330009-121013-AJL-008	12/10/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	0.28 J	<10	<10	<4.0	<5.0	<5.0	0.21 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-14[A]	W-R2330009-121013-AJL-007	12/10/2013																								
SB-14	W-R2330009-121013-AJL-007	12/10/2013	<10	<10	<5.0	<10	<10	<5.0	<10	0.77 J	<5.0	<5.0	<10	0.34 J	<10	<10	<4.0	<5.0	<5.0	0.25 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-15[A]	W-R2330009-120913-AJL-006	12/9/2013																								
SB-15	W-R2330009-120913-AJL-006	12/9/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	0.56 J	<10	<10	<4.0	<5.0	<5.0	0.23 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-21[A]	W-R2330009-120513-RD-001	12/5/2013																								
SB-21	W-R2330009-120513-RD-001	12/5/2013	<10	<10	0.19 J	<10	0.41 J	<5.0	<10	1.6 J	0.54 J	0.22 J	0.79 J	<5.0	<10	<10	0.41 J	0.35 J	<5.0	<5.0	<1.0	0.94 J	<5.0	<2.0	<5.0	0.44 J
SB-22[A]	W-R2330009-120513-RD-002	12/5/2013																								
SB-22	W-R2330009-120513-RD-002	12/5/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	0.12 J	<5.0	0.51 J	<5.0	<10	<10	<4.0	<5.0	<5.0	0.14 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-23[A]	W-R2330009-120513-RD-003	12/5/2013																								
SB-23	W-R2330009-120513-RD-003	12/5/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-24[A]	W-R2330009-120613-RD-004	12/6/2013																								
SB-24	W-R2330009-120613-RD-004	12/6/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-25[A]	W-R2330009-120613-RD-005	12/6/2013																								
SB-25	W-R2330009-120613-RD-005	12/6/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (II)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
MW-30	W-R2330017-031615-ACN-002	3/16/2015	5.8 J	0.44 J	2.3 J	110	<1.0	0.22 J	<10	0.62 J	1.6 J	<5.0	180 J	<3.0	<50	110	<0.2	1.7 J	<5.0	<0.20	<2.0	0.91 J	5.3 J
MW-30[A]	W-R2330017-112015-JPM-029	11/20/2015	54	NS	NS	NS	NS	NS	NS	NS	NS		310	NS	14,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-30	W-R2330017-112015-JPM-029	11/20/2015	10 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	740	NS	13,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-060515-ACN-001	6/5/2015	330	NS	NS	NS	NS	NS	NS	NS	NS		490	NS	<50	240	NS	NS	NS	NS	NS	NS	NS
MW-31	W-R2330017-060515-ACN-001	6/5/2015	10 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	55 J	NS	<50	240	NS	NS	NS	NS	NS	NS	NS
MW-31[A]	W-R2330017-111615-AEP-001	11/16/2015	3,400	NS	NS	NS	NS	NS	NS	NS	NS		5,900	NS	27,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-31	W-R2330017-111615-AEP-001	11/16/2015	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	130	NS	17,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-060515-ACN-002	6/5/2015	1,400	NS	NS	NS	NS	NS	NS	NS	NS		4,700	NS	<50	95	NS	NS	NS	NS	NS	NS	NS
MW-32	W-R2330017-060515-ACN-002	6/5/2015	6.1 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,000	NS	<50	62	NS	NS	NS	NS	NS	NS	NS
MW-32[A]	W-R2330017-111615-AEP-002	11/16/2015	920	NS	NS	NS	NS	NS	NS	NS	NS		6,300	NS	66,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-32	W-R2330017-111615-AEP-002	11/16/2015	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	4,700	NS	66,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-060515-ACN-003	6/5/2015	1,000	NS	NS	NS	NS	NS	NS	NS	NS		4,500	NS	<50	120	NS	NS	NS	NS	NS	NS	NS
MW-33	W-R2330017-060515-ACN-003	6/5/2015	18 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	3,200	NS	<50	80	NS	NS	NS	NS	NS	NS	NS
MW-33[A]	W-R2330017-111615-AEP-003	11/16/2015	860	NS	NS	NS	NS	NS	NS	NS	NS		3,400	NS	84,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-33	W-R2330017-111615-AEP-003	11/16/2015	15 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,700	NS	85,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-34[A]	W-R2330017-060515-ACN-004	6/5/2015	1,700	0.24 J	4.2 J	120	<1.0	<1.0	2.6 J	2.2 J	5.0		2,800	2.4 J	<50	320	<0.2	7.4 J	<5.0	<0.20	<2.0	3.3 J	13 J
MW-34	W-R2330017-060515-ACN-004	6/5/2015	20 J	0.23 J	3.0 J	110	<1.0	<1.0	1.3 J	1.0 J	0.75 J	<0.005	120 J	<3.0	<50	270	<0.2	3.6 J	<5.0	<0.20	<2.0	<4.0	<50
MW-34[A]	W-R2330017-111815-JPM-017	11/18/2015	28 J	NS	NS	NS	NS	NS	NS	NS	NS		1,000	NS	20,000	NS	NS	NS	NS	NS	NS	NS	NS
MW-34	W-R2330017-111815-JPM-017	11/18/2015	2.9 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	930	NS	19,000	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M[A]	W-R2330017-032015-ACN-030	3/20/2015	150	0.15 J	9.1	24 J	<1.0	0.18 J	0.41 J	0.86 J	1.6 J		750	1.3 J	<50	210	<0.2	3.7 J	<5.0	<0.20	<2.0	0.76 J	7.8 J
CRA-266M	W-R2330017-032015-ACN-030	3/20/2015	<50	0.15 J	2.8 J	21 J	<1.0	0.23 J	0.16 J	0.60 J	1.1 J	<5.0	43 J	<3.0	<50	72	<0.2	2.4 J	<5.0	<0.20	<2.0	<4.0	<50
CRA-266M[A]	W-R2330017-111715-JPM-006	11/17/2015	8.6 J	NS	NS	NS	NS	NS	NS	NS	NS		480	NS	12,000	NS	NS	NS	NS	NS	NS	NS	NS
CRA-266M	W-R2330017-111715-JPM-006	11/17/2015	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	31	NS	12,000	NS	NS	NS	NS	NS	NS	NS	NS
SB-13[A]	W-R2330009-121013-AJL-008	12/10/2013	120,000	2.8 J	300	730 J	5.9 J	4.0 J	240	140 J	510		310,000	250	<50	5,300	0.98	410	13 J	0.78 J	7.6 J	380	1,500
SB-13	W-R2330009-121013-AJL-008	12/10/2013	23 J	0.37 J	<2.0	59 J	<1.0	0.071 J	<10	8.0 J	2.3 J	<0.005	71 J	0.072 J	<50	610	<0.2	14 J	<5.0	<0.20	<2.0	0.20 J	4.0 J
SB-14[A]	W-R2330009-121013-AJL-007	12/10/2013	2,100	0.54 J	2.1 J	65 J	0.12 J	0.20 J	4.6 J	9.6 J	7.4		3,500	4.0	<50	800	<0.2	22	0.68 J	<0.20	0.35 J	7.3	22 J
SB-14	W-R2330009-121013-AJL-007	12/10/2013	14 J	0.37 J	<2.0	49 J	<1.0	0.064 J	<10	5.4 J	1.9 J	<0.005	150 J	0.11 J	<50	470	<0.2	12 J	0.68 J	<0.20	<2.0	0.19 J	4.8 J
SB-15[A]	W-R2330009-120913-AJL-006	12/9/2013	790	0.32 J	2.0 J	33 J	<1.0	0.052 J	5.2 J	1.5 J	2.9 J		1,600	0.79 J	<50	53	<0.2	10 J	0.77 J	<0.20	<2.0	2.4 J	8.1 J
SB-15	W-R2330009-120913-AJL-006	12/9/2013	6.9 J	0.43 J	0.77 J	34 J	<1.0	<1.0	<10	2.2 J	2.0 J	2.3 J	770	<3.0	<50	53	<0.2	8.5 J	0.84 J	<0.20	<2.0	0.17 J	3.0 J
SB-21[A]	W-R2330009-120513-RD-001	12/5/2013	38,000 J	13 J	37 J	2,900	1.7 J	11	75 J	38 J	320		73,000	1,700	<50	1,800	0.39	86 J	<5.0	2.7	<2.0	86	2,200
SB-21	W-R2330009-120513-RD-001	12/5/2013	24 J	0.97 J	2.3 J	2,000	<1.0	<1.0	1.7 J	5.5 J	2.3 J	6.9	13,000	0.49 J	<50	530	<0.2	10 J	<5.0	<0.20	1.1 J	1.3 J	26 J
SB-22[A]	W-R2330009-120513-RD-002	12/5/2013	1,900	2.2 J	<5.0	1000	<1.0	<1.0	8.1 J	4.3 J	40 J		16,000	59	<50	550	<0.2	20 J	<5.0	<0.20	<2.0	4.0 J	210 J
SB-22	W-R2330009-120513-RD-002	12/5/2013	10 J	0.99 J	2.0 J	960	<1.0	<1.0	1.1 J	3.9 J	2.8 J	3.6 J	12,000	0.21 J	<50	560	<0.2	16 J	<5.0	<0.20	0.081 J	0.77 J	24 J
SB-23[A]	W-R2330009-120513-RD-003	12/5/2013	3,200	2.8 J	72	880 J	1.8 J	<1.0	130	40 J	150		8,600	86	<50	1,600	0.12 J	130 J	12 J	<0.20	0.96 J	9.3	420 J
SB-23	W-R2330009-120513-RD-003	12/5/2013	17 J	0.39 J	23	690	<1.0	<1.0	2.3 J	3.0 J	1.5 J	31	12,000	0.084 J	<50	70	<0.2	9.1 J	0.76 J	<0.20	<2.0	1.7 J	5.6 J
SB-24[A]	W-R2330009-120613-RD-004	12/6/2013	6,700	2.6 J	130	860 J	3.5 J	2.9 J	130	77 J	220		190,000	150	<50	4,100	0.30	210	9.8 J	0.53 J	2.4 J	86	580
SB-24	W-R2330009-120613-RD-004	12/6/2013	52 J	0.60 J	6.7	410	<1.0	<1.0	<10	2.5 J	2.5 J	9.2	4,700	<3.0	<50	360	<0.2	14 J	0.73 J	<0.20	<2.0	0.38 J	4.8 J
SB-25[A]	W-R2330009-120613-RD-005	12/6/2013	250,000	2.6 J	470	1,300	9.8 J	13	540	270	700		520,000	440	<50	9,200	0.95	1,100	27 J	1.7 J	6.3 J	590	1,700
SB-25	W-R2330009-120613-RD-005	12/6/2013	930	4.3	11	84 J	<1.0	0.10 J	1.4 J	4.0 J	1.5 J	46.0	1,100	0.63 J	<50	530	<0.2	5.0 J	<5.0	<0.20	0.26 J	3.2 J	4.5 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
SB-26[A]	W-R2330009-121013-AJL-009	12/10/2013																			
SB-26	W-R2330009-121013-AJL-009	12/10/2013	<25	<1.0	<1.0	<50	3.2 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.28 J	<3.0
SB-27[A]	W-R2330009-121113-AJL-010	12/11/2013																			
SB-27	W-R2330009-121113-AJL-010	12/11/2013	<25	<1.0	<1.0	<50	6.1 J	<1.0	<1.0	0.53 J	<1.0	2.9 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-27[A] (DUP)	W-R2330009-121113-AJL-011	12/11/2013																			
SB-27 (DUP)	W-R2330009-121113-AJL-011	12/11/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	4.3 J	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-28[A]	W-R2330009-121113-AJL-012	12/11/2013																			
SB-28	W-R2330009-121113-AJL-012	12/11/2013	<25	<1.0	<1.0	<50	3.6 J	<1.0	<1.0	0.53 J	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-29[A]	W-R2330009-121213-AJL-014	12/12/2013																			
SB-29	W-R2330009-121213-AJL-014	12/12/2013	<25	1.3	2.6	<50	4.7 J	12.0	<1.0	<5.0	<1.0	<5.0	<1.0	0.84 J	<5.0	<5.0	14.0	6.0	<1.0	39	74.0
SB-30[A]	W-R2330009-121213-AJL-016	12/12/2013																			
SB-30	W-R2330009-121213-AJL-016	12/12/2013	<25	<1.0	0.98 J	<50	<50	21.0	<1.0	<5.0	<1.0	<5.0	<1.0	5.5 J	<5.0	<5.0	0.29 J	2.0 J	<1.0	0.33 J	1.0 J
SB-31[A]	W-R2330009-121213-AJL-018	12/12/2013																			
SB-31	W-R2330009-121213-AJL-018	12/12/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	0.44 J	<3.0
SB-32[A]	W-R2330009-121213-AJL-015	12/12/2013																			
SB-32	W-R2330009-121213-AJL-015	12/12/2013	<25	<1.0	<1.0	<50	<50	1.1	<1.0	<5.0	1.4	<5.0	<1.0	<10	<5.0	<5.0	<1.0	1.3 J	<1.0	0.27 J	1.0 J
SB-33[A]	W-R2330009-121213-AJL-017	12/12/2013																			
SB-33	W-R2330009-121213-AJL-017	12/12/2013	<25	<1.0	<1.0	<50	3.9 J	0.71 J	<1.0	0.44 J	1.2	<5.0	<1.0	<10	<5.0	<5.0	<1.0	0.62 J	<1.0	0.29 J	1.3 J
SB-34[A]	W-R2330009-121313-AJL-018	12/13/2013																			
SB-34	W-R2330009-121313-AJL-018	12/13/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.44 J	<3.0
SB-34[A] (DUP)	W-R2330009-121313-AJL-019	12/13/2013																			
SB-34 (DUP)	W-R2330009-121313-AJL-019	12/13/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.38 J	<3.0
SB-16	W-R2330012-033114-ACN-001	3/31/2014	<25	<1.0	<1.0	<50	14 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-17	W-R2330012-033114-ACN-002	3/31/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	6.2	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-18	W-R2330012-033114-ACN-003	3/31/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-19	W-2330012-040114-ACN-004	4/1/2014	<25	<1.0	<1.0	<50	3.3 J	0.36 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	1.1	0.62 J	1.0 J
SB-20	W-2330012-040114-ACN-005	4/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.25 J	<3.0
SB-35	W-2330012-040114-ACN-006	4/1/2014	<25	<1.0	1.5	<50	3.3 J	6.1	<1.0	<5.0	2.0	<5.0	<1.0	1.5	<5.0	<5.0	0.18 J	1.4 J	1.1	0.25 J	1.9 J
SB-36	W-R2330012-040314-ACN-007	4/3/2014	<25	<1.0	<1.0	<50	7.1 J	2.5	<1.0	<5.0	1.2	<5.0	<1.0	<10	<5.0	<5.0	0.84 J	1.9 J	<1.0	0.54 J	2.8 J
SB-36 (DUP)	W-R2330012-040314-ACN-008	4/3/2014	<25	<1.0	<1.0	<50	7.8 J	2.7	<1.0	<5.0	1.4	<5.0	<1.0	1.4 J	<5.0	<5.0	0.86 J	2.0 J	<1.0	0.52 J	2.8 J
SB-37	W-R2330012-040314-ACN-009	4/3/2014	<25	<1.0	<1.0	<50	6.9 J	2.6	<1.0	1.3 J	<1.0	<5.0	<1.0	<10	<5.0	<5.0	0.84 J	<5.0	<1.0	0.82 J	1.7 J
SB-38	W-R2330012-040314-ACN-010	4/3/2014	2.2 J	<1.0	0.98 J	<50	16 J	2.8	<1.0	1.4 J	0.96 J	<5.0	<1.0	<10	<5.0	<5.0	<1.0	1.6 J	<1.0	0.38 J	1.5 J
SB-39	W-R2330012-040314-ACN-011	4/3/2014	<25	<1.0	0.91 J	<50	11 J	17	<1.0	1.6 J	90	<5.0	<1.0	2.0 J	<5.0	<5.0	<1.0	2.0 J	<1.0	0.30 J	1.5 J
SB-46	W-R2330012-041114-ACN-015	4/11/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.30 J	<3.0
SB-47	W-R2330012-041114-ACN-016	4/11/2014	<25	<1.0	<1.0	<50	<50	0.31 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.49 J	<3.0
SB-48	W-R2330012-040314-ACN-013	4/9/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.35 J	<3.0
SB-49	W-R2330012-040314-ACN-014	4/9/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SB-50	W-R2330012-040314-ACN-012	4/9/2014	<25	<1.0	<1.0	<50	<50	0.29 J	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.39 J	<3.0
SW-1	W-R2330009-050313-MJF-015	5/3/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
SB-26[A]	W-R2330009-121013-AJL-009	12/10/2013																								
SB-26	W-R2330009-121013-AJL-009	12/10/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.16 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-27[A]	W-R2330009-121113-AJL-010	12/11/2013																								
SB-27	W-R2330009-121113-AJL-010	12/11/2013	<10	<10	<5.0	<10	<10	<5.0	<10	0.26 J	<5.0	<5.0	<10	0.28 J	<10	<10	<4.0	<5.0	<5.0	0.22 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-27[A] (DUP)	W-R2330009-121113-AJL-011	12/11/2013																								
SB-27 (DUP)	W-R2330009-121113-AJL-011	12/11/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	0.29 J	<10	<10	<4.0	<5.0	<5.0	0.19 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-28[A]	W-R2330009-121113-AJL-012	12/11/2013																								
SB-28	W-R2330009-121113-AJL-012	12/11/2013	<10	<10	<5.0	<10	<10	<5.0	<10	0.46 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	0.18 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-29[A]	W-R2330009-121213-AJL-014	12/12/2013																								
SB-29	W-R2330009-121213-AJL-014	12/12/2013	<10	0.67 J	1.6 J	0.46 J	2.0 J	<5.0	<10	<5.0	6.0 J	1.0 J	1.2 J	<5.0	<10	<10	<4.0	<5.0	<5.0	0.26 J	<1.0	0.57 J	1.3 J	<2.0	<5.0	0.36 J
SB-30[A]	W-R2330009-121213-AJL-016	12/12/2013																								
SB-30	W-R2330009-121213-AJL-016	12/12/2013	<10	3.1 J	2.9 J	<10	<10	<5.0	<10	<5.0	1.2 J	<5.0	0.92 J	<5.0	<10	<10	0.64 J	<5.0	<5.0	0.21 J	<1.0	1.1 J	2.2 J	<2.0	<5.0	0.40 J
SB-31[A]	W-R2330009-121213-AJL-018	12/12/2013																								
SB-31	W-R2330009-121213-AJL-018	12/12/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.65 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-32[A]	W-R2330009-121213-AJL-015	12/12/2013																								
SB-32	W-R2330009-121213-AJL-015	12/12/2013	<10	<10	1.2 J	<10	<10	<5.0	<10	0.46 J	<5.0	<5.0	0.85 J	<5.0	<10	<10	<4.0	<5.0	<5.0	0.37 J	<1.0	0.17 J	1.0 J	<2.0	<5.0	<5.0
SB-33[A]	W-R2330009-121213-AJL-017	12/12/2013																								
SB-33	W-R2330009-121213-AJL-017	12/12/2013	<10	<10	0.29 J	<10	0.40 J	<5.0	<10	0.59 J	0.39 J	<5.0	0.73 J	<5.0	<10	<10	<4.0	0.37 J	<5.0	0.26 J	<1.0	<5.0	0.20 J	<2.0	<5.0	<5.0
SB-34[A]	W-R2330009-121313-AJL-018	12/13/2013																								
SB-34	W-R2330009-121313-AJL-018	12/13/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.65 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-34[A] (DUP)	W-R2330009-121313-AJL-019	12/13/2013																								
SB-34 (DUP)	W-R2330009-121313-AJL-019	12/13/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	0.69 J	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-16	W-R2330012-033114-ACN-001	3/31/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-17	W-R2330012-033114-ACN-002	3/31/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-18	W-R2330012-033114-ACN-003	3/31/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-19	W-2330012-040114-ACN-004	4/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-20	W-2330012-040114-ACN-005	4/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-35	W-2330012-040114-ACN-006	4/1/2014	<10	<10	2.4 J	<10	1.6 J	<5.0	<10	<5.0	1.7 J	<5.0	<10	<5.0	<10	1.9 J	<4.0	<5.0	<5.0	<5.0	<1.0	1.3 J	1.9 J	1.9 J	<5.0	<5.0
SB-36	W-R2330012-040314-ACN-007	4/3/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-36 (DUP)	W-R2330012-040314-ACN-008	4/3/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-37	W-R2330012-040314-ACN-009	4/3/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-38	W-R2330012-040314-ACN-010	4/3/2014	<10	<10	1.5 J	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-39	W-R2330012-040314-ACN-011	4/3/2014	<10	<10	1.2 J	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	0.80 J	<2.0	<5.0	<5.0
SB-46	W-R2330012-041114-ACN-015	4/11/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-47	W-R2330012-041114-ACN-016	4/11/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-48	W-R2330012-040314-ACN-013	4/9/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-49	W-R2330012-040314-ACN-014	4/9/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SB-50	W-R2330012-040314-ACN-012	4/9/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SW-1	W-R2330009-050313-MJF-015	5/3/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
SB-26[A]	W-R2330009-121013-AJL-009	12/10/2013	15,000	5.0 J	610	970 J	12	17	1,000	310	1,100		700,000	640	<50	14,000	0.51	1,100	47 J	2.5	13 J	660	2,900
SB-26	W-R2330009-121013-AJL-009	12/10/2013	60	22	8.6	57 J	<1.0	<1.0	<10	2.8 J	1.4 J	1.0 J	1,900	0.11 J	<50	92	<0.2	14 J	0.75 J	<0.20	<2.0	0.67 J	14 J
SB-27[A]	W-R2330009-121113-AJL-010	12/11/2013	62,000	2.5 J	86	610 J	3.2 J	3.2 J	290	57 J	220		140,000	100	<50	2,800	<0.2	210	9.4 J	<0.20	2.3 J	180	680
SB-27	W-R2330009-121113-AJL-010	12/11/2013	22 J	0.56 J	2.1 J	160	<1.0	<1.0	<10	5.3 J	2.8 J	1.5 J	7,400	<3.0	<50	310	<0.2	25	<5.0	<0.20	<2.0	0.46 J	19 J
SB-27[A] (DUP)	W-R2330009-121113-AJL-011	12/11/2013	17,000	1.1 J	18 J	300 J	<1.0	0.61 J	59 J	13 J	46		38,000	19 J	<50	730	<0.2	53 J	<5.0	<0.20	<2.0	46	140 J
SB-27 (DUP)	W-R2330009-121113-AJL-011	12/11/2013	11 J	0.48 J	2.0 J	150	<1.0	<1.0	<10	4.7 J	2.4 J	1.3 J	4,900	<3.0	<50	300	<0.2	24	<5.0	<0.20	<2.0	<4.0	18 J
SB-28[A]	W-R2330009-121113-AJL-012	12/11/2013	95,000	3.2 J	210	550 J	5.2 J	5.2 J	350	85 J	330		230,000	200	<50	4,100	0.23	310	13 J	0.75 J	3.3 J	320	800
SB-28	W-R2330009-121113-AJL-012	12/11/2013	31 J	1.8 J	10	110	<1.0	<1.0	<10	2.8 J	2.1 J	<0.005	1,400	<3.0	<50	180	<0.2	15 J	<5.0	<0.20	<2.0	0.49 J	4.2 J
SB-29[A]	W-R2330009-121213-AJL-014	12/12/2013	7,600	4.1 J	10 J	2,100	<1.0	2.8 J	71 J	12 J	90		51,000	330	<50	980	0.13	51 J	<5.0	<0.20	<2.0	24 J	470 J
SB-29	W-R2330009-121213-AJL-014	12/12/2013	25 J	0.83 J	<5.0	1,700	<1.0	<1.0	3.1 J	5.2 J	6.2 J	4.2 J	22,000	<3.0	<50	580	<0.2	12 J	<5.0	<0.20	<2.0	1.7 J	18 J
SB-30[A]	W-R2330009-121213-AJL-016	12/12/2013	7,300	3.1 J	6.8 J	2,700	<1.0	2.4 J	22 J	7.2 J	58		41,000	940	<50	380 J	0.15	22 J	<5.0	<0.20	<2.0	19 J	950
SB-30	W-R2330009-121213-AJL-016	12/12/2013	18 J	0.43 J	<5.0	2,100	<1.0	<1.0	<10	3.6 J	<4.0	3.9 J	29,000	1.1 J	<50	260 J	<0.2	8.2 J	<5.0	<0.20	<2.0	<4.0	<500
SB-31[A]	W-R2330009-121213-AJL-018	12/12/2013	2,000	0.34 J	5.7 J	84 J	0.1 J	<1.0	14	2.5 J	14		8,400	11	<50	130	0.1	9.7 J	<5.0	<2.0	<2.0	6.6	44
SB-31	W-R2330009-121213-AJL-018	12/12/2013	60 J	0.46 J	23 J	520 J	<10	<10	4.3 J	5.9 J	<40	2.1 J	21,000	<3.0	<50	170 J	<0.2	19 J	<5.0	<2.0	<2.0	<4.0	<27
SB-32[A]	W-R2330009-121213-AJL-015	12/12/2013	1,600	1.7 J	<5.0	1,600	<1.0	2.4 J	12 J	6.2 J	31 J		30,000	120	<50	290 J	<0.2	31 J	<5.0	<0.20	<2.0	2.4 J	210 J
SB-32	W-R2330009-121213-AJL-015	12/12/2013	21 J	0.53 J	<5.0	1,500	<1.0	<1.0	4.7 J	5.4 J	<4.0	3.7 J	26,000	<3.0	<50	270 J	<0.2	19 J	<5.0	<0.20	<2.0	2.4 J	16 J
SB-33[A]	W-R2330009-121213-AJL-017	12/12/2013	45,000	95	66	3,400	2.0 J	42	320	51 J	1,100		170,000	3,200	<50	2,200	2.2	320	<5.0	16	<2.0	90	9,900
SB-33	W-R2330009-121213-AJL-017	12/12/2013	30 J	1.6 J	<5.0	1,500	<1.0	<1.0	3.5 J	6.8 J	<4.0	60	23,000	<3.0	<50	420 J	<0.2	16 J	<5.0	<0.20	<2.0	2.3 J	61 J
SB-34[A]	W-R2330009-121313-AJL-018	12/13/2013	2,000	0.34 J	5.7	84 J	0.10 J	<1.0	14	2.5 J	14		8,400	11	<50	130	0.11	9.7 J	<5.0	<2.0	<2.0	6.6	44 J
SB-34	W-R2330009-121313-AJL-018	12/13/2013	60 J	0.46 J	23 J	520 J	<1.0	<1.0	4.3 J	5.9 J	<4.0	2.1 J	21,000	<3.0	<50	170 J	<0.2	19 J	<5.0	<2.0	<2.0	<4.0	27 J
SB-34[A] (DUP)	W-R2330009-121313-AJL-019	12/13/2013	11,000	0.97 J	12	150	0.49 J	0.26 J	59	11 J	50		31,000	77	<50	610	0.43	40	2.6 J	0.18 J	0.37 J	30	140
SB-34 (DUP)	W-R2330009-121313-AJL-019	12/13/2013	75 J	0.89 J	9.3 J	700 J	<1.0	<1.0	<10	4.6 J	<4.0	4.5 J	38,000	<3.0	<50	1,500	<0.2	26 J	<5.0	<2.0	<2.0	1.7 J	34 J
SB-16	W-R2330012-033114-ACN-001	3/31/2014	35 J	1.2 J	44	540	<1.0	0.12 J	0.97 J	4.1 J	0.76 J	<0.005	11,000	<3.0	<50	270	<0.2	31	0.98 J	<0.2	<2.0	0.86 J	360
SB-17	W-R2330012-033114-ACN-002	3/31/2014	38 J	0.16 J	5.7	370	<1.0	0.046 J	0.65 J	3.9 J	<4.0	<0.005	7,000	<3.0	<50	390	<0.2	7.5 J	1.7 J	<0.2	<2.0	0.69 J	19 J
SB-18	W-R2330012-033114-ACN-003	3/31/2014	380	0.33 J	6.2	58 J	<1.0	0.053 J	1.4 J	3.9 J	1.5 J	<0.005	13,000	0.44 J	<50	660	<0.2	11 J	<5.0	<0.2	<2.0	1.4 J	140
SB-19	W-2330012-040114-ACN-004	4/1/2014	39 J	0.46 J	5.3	140	<1.0	<1.0	<10	5.8 J	0.54 J	2.1	2,100	0.081 J	<50	930	<0.2	18 J	0.84 J	<0.20	<2.0	0.46 J	62
SB-20	W-2330012-040114-ACN-005	4/1/2014	300	0.19 J	<5.0	21 J	<1.0	<1.0	<10	1.8 J	1.2 J	1.3	490	0.13 J	<50	98	<0.2	2.6 J	0.73 J	<0.20	<2.0	1.3 J	2.8 J
SB-35	W-2330012-040114-ACN-006	4/1/2014	43 J	0.81 J	4.3 J	1,000	<1.0	<1.0	3.6 J	3.2 J	<4.0	2.4 J	25,000	0.43 J	<50	550	<0.2	10 J	<5.0	<0.20	<2.0	2.2 J	16 J
SB-36	W-R2330012-040314-ACN-007	4/3/2014	160 J	0.75 J	4.3 J	2,800	<1.0	<1.0	1.6 J	6.4 J	<4.0	2.5 J	27,000	0.47 J	<50	260	<0.2	9.7 J	<5.0	<0.20	<2.0	3.3 J	2.9 J
SB-36 (DUP)	W-R2330012-040314-ACN-008	4/3/2014	130 J	0.43 J	4.4 J	2,600	<1.0	<1.0	1.4 J	6.6 J	<4.0	6.3 J	27,000	0.41 J	<50	250 J	<0.2	9.6 J	<5.0	<0.20	<2.0	3.3 J	2.5 J
SB-37	W-R2330012-040314-ACN-009	4/3/2014	66 J	1.5 J	24 J	640	<1.0	<1.0	3.5 J	8.8 J	<4.0	9.5 J	16,000	3.1 J	<50	530	<0.2	31 J	<5.0	<0.20	<2.0	1.1 J	340
SB-38	W-R2330012-040314-ACN-010	4/3/2014	13 J	2.5 J	14 J	380	<1.0	<1.0	<10	6.2 J	<4.0	5.2 J	2,200	0.47 J	<50	430	<0.2	15 J	<5.0	<0.20	<2.0	<4.0	21 J
SB-39	W-R2330012-040314-ACN-011	4/3/2014	75	0.61 J	2.3 J	2,100	<1.0	<1.0	4.4 J	4.6 J	2.3 J	6.6 J	25,000	1.5 J	<50	300	<0.2	11 J	1.1 J	<0.20	1.5 J	1.1 J	6.9 J
SB-46	W-R2330012-041114-ACN-015	4/11/2014	38 J	0.40 J	6.4 J	100 J	<1.0	<1.0	1.8 J	3.1 J	2.7 J	<0.005	5,100	1.2 J	<50	960	<0.2	9.6 J	<5.0	<0.20	<2.0	<4.0	7.8 J
SB-47	W-R2330012-041114-ACN-016	4/11/2014	39 J	0.43 J	2.8 J	160	<1.0	<1.0	0.95 J	6.7 J	2.4 J	<0.005	3,200	0.18 J	<50	1,200	<0.2	17 J	7.2	<0.2	<2.0	0.59 J	9.0 J
SB-48	W-R2330012-040314-ACN-013	4/9/2014	170 J	1.4 J	<5.0	69 J	<1.0	<1.0	<10	7.7 J	6.1 J	<0.005	280 J	<3.0	<50	410	<0.2	20 J	5.4 J	<0.20	<2.0	2.4 J	21J
SB-49	W-R2330012-040314-ACN-014	4/9/2014	21 J	<2.0	<5.0	9.3 J	<1.0	<1.0	<10	0.17 J	0.65 J	2.3 J	31 J	0.62 J	<50	59	<0.2	1.4 J	<5.0	<0.20	<2.0	<4.0	1.3 J
SB-50	W-R2330012-040314-ACN-012	4/9/2014	74 J	0.43 J	<5.0	44 J	<1.0	0.58 J	<10	2.6 J	<4.0	2.6 J	200 J	14 J	<50	110 J	<0.2	4.3 J	<5.0	<0.20	<2.0	<4.0	8.0 J
SW-1	W-R2330009-050313-MJF-015	5/3/2013	25 J	0.40 J	<5.0	27 J	<1.0	<1.0	1.1 J	1.5 J	4.0	<0.005	50 J	0.069 J	<50	22 J	<0.2	6.4 J	<5.0	<0.20	<2.0	<4.0	1.9 J

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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
SW-1	W-R2330012-041514-ACN-017	4/15/2014	<25	<1.0	<1.0	1.4 J	7.5 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SW-2	W-R2330009-050313-MJF-014	5/3/2013	<25	<1.0	<1.0	<50	4.0 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SW-2	W-R2330012-041514-ACN-019	4/15/2014	<25	<1.0	<1.0	<50	3.6 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SW-3	W-R2330009-051013-MJF-016	5/10/2013	<120	<1.0	<1.0	<50	<50	<5.0	<1.0	<5.0	<5.0	<25	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
SW-3	W-R2330012-041514-ACN-018	4/15/2014	<120	<1.0	<1.0	<50	3.4 J	<5.0	<1.0	<5.0	<5.0	<25	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank	W-R2330004-090512-MJF-05	9/5/2012	<25	<1.0	<1.0	<50	120	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank	W-R2330009-050113-MJF-006	5/1/2013	6.2 J	<1.0	<1.0	<50	4.4 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330009-080813-ZTR-012	8/8/2013																			
Equipment Blank	W-R2330009-080813-ZTR-012	8/8/2013	2.8 J	<1.0	<1.0	<50	0.79 J	<1.0	<1.0	<5.0	<1.0	<5.0	1.3	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330009-121113-AJL-013	12/11/2013																			
Equipment Blank	W-R2330009-121113-AJL-013	12/11/2013	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-032814-ACN-012	3/28/2014																			
Equipment Blank	W-R2330012-032814-ACN-012	3/28/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-052014-ACN-031	5/20/2014																			
Equipment Blank	W-R2330012-052014-ACN-031	5/20/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	0.4 J	<3.0
Equipment Blank[A]	W-R2330012-112414-ACN-005	11/24/2014																			
Equipment Blank	W-R2330012-112414-ACN-005	11/24/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-112514-ACN-010	11/25/2014																			
Equipment Blank	W-R2330012-112514-ACN-010	11/25/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-112614-JCH-016	11/26/2014																			
Equipment Blank	W-R2330012-112614-JCH-016	11/26/2014	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-12114-JCH-022	12/1/2014																			
Equipment Blank	W-R2330012-12114-JCH-022	12/1/2014	<25	<1.0	<1.0	<50	<50	<1.0	7.2	<5.0	<1.0	<5.0	15	<10	3.4 J	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-12214-JCH-029	12/2/2014																			
Equipment Blank	W-R2330012-12214-JCH-029	12/2/2014	<25	<1.0	<1.0	<50	<50	<1.0	2.2	<5.0	<1.0	<5.0	5.7	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330012-020515-ACN-004	2/5/2015																			
Equipment Blank	W-R2330012-020515-ACN-004	2/5/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330017-031615-ACN-008	3/16/2015																			
Equipment Blank	W-R2330017-031615-ACN-008	3/16/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330017-031715-ACN-014	3/17/2015																			
Equipment Blank	W-R2330017-031715-ACN-014	3/17/2015	<25	<1.0	<1.0	<50	5.1 J	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330017-031915-ACN-022	3/19/2015																			
Equipment Blank	W-R2330017-031915-ACN-022	3/19/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330017-032015-ACN-031	3/20/2015																			
Equipment Blank	W-R2330017-032015-ACN-031	3/20/2015	<25	<1.0	<1.0	<50	<50	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<10	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<3.0
Equipment Blank[A]	W-R2330017-111615-AEP-024	11/16/2015																			
Equipment Blank	W-R2330017-111615-AEP-024	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111715-JPM-025	11/17/2015																			
Equipment Blank	W-R2330017-111715-JPM-025	11/17/2015	NS	NS	NS	NS	NS	NS	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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3+ Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
SW-1	W-R2330012-041514-ACN-017	4/15/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	1.6 H	<5.0	<5.0	<2.0	0.69 H	<5.0
SW-2	W-R2330009-050313-MJF-014	5/3/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	1.3 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
SW-2	W-R2330012-041514-ACN-019	4/15/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	1.3 H	<5.0	<5.0	<2.0	<5.0	<5.0
SW-3	W-R2330009-051013-MJF-016	5/10/2013	<80	<10	<5.0	<10	<10	<80	<80	<40	<5.0	<5.0	<10	<5.0	<10	<80	<4.0	<40	<40	<40	<1.0	<40	<5.0	<2.0	<5.0	<5.0
SW-3	W-R2330012-041514-ACN-018	4/15/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	1.3 H	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank	W-R2330004-090512-MJF-05	9/5/2012	<10	<10	<5.0	<10	<10	<5.0	<1.1	<5.0	<5.0	<5.0	<10	<5.0	<10	<0.84	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank	W-R2330009-050113-MJF-006	5/1/2013	0.56 J	<10	<5.0	<10	<10	<5.0	<10	1.1 J	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	0.89 J	0.88 J	1.7 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330009-080813-ZTR-012	8/8/2013																								
Equipment Blank	W-R2330009-080813-ZTR-012	8/8/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330009-121113-AJL-013	12/11/2013																								
Equipment Blank	W-R2330009-121113-AJL-013	12/11/2013	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<5.0	<5.0	<5.0	0.16 J	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-032814-ACN-012	3/28/2014																								
Equipment Blank	W-R2330012-032814-ACN-012	3/28/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-052014-ACN-031	5/20/2014																								
Equipment Blank	W-R2330012-052014-ACN-031	5/20/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-112414-ACN-005	11/24/2014																								
Equipment Blank	W-R2330012-112414-ACN-005	11/24/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-112514-ACN-010	11/25/2014																								
Equipment Blank	W-R2330012-112514-ACN-010	11/25/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-112614-JCH-016	11/26/2014																								
Equipment Blank	W-R2330012-112614-JCH-016	11/26/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-12114-JCH-022	12/1/2014																								
Equipment Blank	W-R2330012-12114-JCH-022	12/1/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-12214-JCH-029	12/2/2014																								
Equipment Blank	W-R2330012-12214-JCH-029	12/2/2014	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330012-020515-ACN-004	2/5/2015																								
Equipment Blank	W-R2330012-020515-ACN-004	2/5/2015	<11	<11	<5.3	<11	<10	<5.3	<11	<5.3	<5.3	<5.3	<11	<5.3	<10	<11	<4.2	<5.3	<5.3	<5.3	<1.1	<5.3	<5.3	<2.1	<5.3	<5.3
Equipment Blank[A]	W-R2330017-031615-ACN-008	3/16/2015																								
Equipment Blank	W-R2330017-031615-ACN-008	3/16/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330017-031715-ACN-014	3/17/2015																								
Equipment Blank	W-R2330017-031715-ACN-014	3/17/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330017-031915-ACN-022	3/19/2015																								
Equipment Blank	W-R2330017-031915-ACN-022	3/19/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330017-032015-ACN-031	3/20/2015																								
Equipment Blank	W-R2330017-032015-ACN-031	3/20/2015	<10	<10	<5.0	<10	<10	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<10	<10	<4.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<2.0	<5.0	<5.0
Equipment Blank[A]	W-R2330017-111615-AEP-024	11/16/2015																								
Equipment Blank	W-R2330017-111615-AEP-024	11/16/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111715-JPM-025	11/17/2015																								
Equipment Blank	W-R2330017-111715-JPM-025	11/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	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			Metals																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
SW-1	W-R2330012-041514-ACN-017	4/15/2014	16 J	1.3 J	<5.0	34 J	<1.0	0.4 J	4.3 J	1.7 J	36 J	110	33 J	2.3 J	<50	51 J	<0.2	4.0 J	<5.0	<0.20	<2.0	1.2 J	38 J
SW-2	W-R2330009-050313-MJF-014	5/3/2013	3.4 J	1.1 J	0.93 J	93 J	<1.0	0.063 J	0.44 J	0.55 J	5.2 J	0.0012 J	170 J	0.25 J	<50	69	<0.2	4.8 J	<5.0	<0.20	<2.0	0.28 J	10 J
SW-2	W-R2330012-041514-ACN-019	4/15/2014	<250	1.4 J	<25	78 J	<1.0	0.23 J	<10	1.3 J	5.9 J	<0.005	250 J	0.77 J	<50	460 J	<0.2	5.2 J	<5.0	<0.20	<2.0	<4.0	80 J
SW-3	W-R2330009-051013-MJF-016	5/10/2013	26 J	0.43 J	4.6 J	340	<1.0	0.046 J	1.2 J	3.4 J	13 J	<0.005	4,100	1.7 J	<50	880	<0.2	13 J	<50	<0.20	0.093 J	1.1 J	51
SW-3	W-R2330012-041514-ACN-018	4/15/2014	11 J	0.52 J	<5.0	150 J	<1.0	<1.0	<10	0.93 J	5.7 J	<0.005	<100	2.6 J	<50	6.2 J	<0.2	4.2 J	<5.0	<0.20	<2.0	<4.0	8.8 J
Equipment Blank	W-R2330004-090512-MJF-05	9/5/2012	2.9 J	<2.0	<5.0	0.59 J	<1.0	<1.0	0.14 J	0.26 J	0.70 J	<0.005	24 J	0.27 J	<50	1.5 J	<0.2	0.42 J	0.48 J	<0.025	<2.0	<0.30	15 J
Equipment Blank	W-R2330009-050113-MJF-006	5/1/2013	2.4 J	0.11 J	<5.0	3.1 J	<1.0	<1.0	0.59 J	0.79 J	0.57 J	<0.005	23 J	0.0053 J	<50	2.3 J	<0.2	0.6 J	<5.0	<0.20	<2.0	<4.0	1.8 J
Equipment Blank[A]	W-R2330009-080813-ZTR-012	8/8/2013	3.4 J	<2.0	<5.0	2.7 J	<1.0	0.049 J	0.28 J	<20	1.5 J		26 J	0.053 J	<50	0.38 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	4.1 J
Equipment Blank	W-R2330009-080813-ZTR-012	8/8/2013	1.7 J	0.080 J	<5.0	2.2 J	<1.0	<1.0	<10	0.46 J	1.1 J	<0.005	21 J	<3.0	<50	1.0 J	<0.2	0.46 J	<5.0	<0.20	<2.0	<4.0	3.1 J
Equipment Blank[A]	W-R2330009-121113-AJL-013	12/11/2013	7.0 J	<2.0	<5.0	0.085 J	<1.0	<1.0	<10	<20	0.72 J		12 J	<3.0	<50	0.13 J	<0.2	<20	<5.0	<0.20	<2.0	0.3 J	2.2 J
Equipment Blank	W-R2330009-121113-AJL-013	12/11/2013	2.7 J	<2.0	<5.0	0.11 J	<1.0	<1.0	<10	0.14 J	<4.0	<0.005	10 J	<3.0	<50	0.31 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	1.7 J
Equipment Blank[A]	W-R2330012-032814-ACN-012	3/28/2014	51	0.094 J	<5.0	14 J	0.15 J	<1.0	<1.0	0.17 J	65 J		17 J	0.16 J	<50	0.17 J	<0.2	1.3 J	<5.0	<0.20	<2.0	<4.0	5.3 J
Equipment Blank	W-R2330012-032814-ACN-012	3/28/2014	150	0.48 J	<5.0	7.5 J	91 J	<1.0	<1.0	0.076 J	53 J	1.4 J	29 J	0.037 J	<50	1.2 J	<0.2	0.57 J	<5.0	<0.20	<2.0	<4.0	2.1 J
Equipment Blank[A]	W-R2330012-052014-ACN-031	5/20/2014	5.0 J	<2.0	<5.0	0.28 J	<1.0	<1.0	<1.0	<20	0.56 J		8.4 J	0.054 J	<50	0.25 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	0.57 J
Equipment Blank	W-R2330012-052014-ACN-031	5/20/2014	9.4 J	<2.0	<5.0	0.35 J	<1.0	<1.0	<1.0	<20	<4.0	<0.005	13 J	<3.0	<50	0.39 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	0.87 J
Equipment Blank[A]	W-R2330012-112414-ACN-005	11/24/2014	3.3 J	<2.0	<5.0	<100	<1.0	<1.0	<1.0	<20	6.3		<200	<3.0	<50	0.53 J	<0.2	0.63 J	<5.0	<0.20	<2.0	<4.0	3.7 J
Equipment Blank	W-R2330012-112414-ACN-005	11/24/2014	6.3 J	<2.0	<5.0	<100	<1.0	0.027 J	<10	<20	6.3	<5.0	<200	<3.0	<50	0.22 J	<0.2	0.67 J	<5.0	<0.20	<2.0	<4.0	3.4 J
Equipment Blank[A]	W-R2330012-112514-ACN-010	11/25/2014	3.6 J	<2.0	<5.0	0.67 J	<1.0	<1.0	<10	<20	2.3 J		17 J	<3.0	<50	0.28 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	3.4 J
Equipment Blank	W-R2330012-112514-ACN-010	11/25/2014	3.2 J	<2.0	<5.0	0.58 J	<1.0	<1.0	<10	<20	2.2 J	<5.0	<200	<3.0	<50	0.23 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	3.4 J
Equipment Blank[A]	W-R2330012-112614-JCH-016	11/26/2014	3.8 J	<2.0	<5.0	<100	<1.0	0.091 J	<10	<20	6.2		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330012-112614-JCH-016	11/26/2014	6.2 J	<2.0	<5.0	<100	<1.0	0.27 J	0.37 J	<20	5.9	<5.0	21 J	<3.0	<50	0.24 J	<0.2	0.68 J	<5.0	0.026 J	<2.0	<4.0	3.5 J
Equipment Blank[A]	W-R2330012-12114-JCH-022	12/1/2014	23 J	0.15 J	<5.0	16 J	<1.0	0.032 J	0.30 J	<20	170		33 J	<3.0	<50	3.5 J	<0.2	1.1 J	<5.0	0.043 J	<2.0	<4.0	14 J
Equipment Blank	W-R2330012-12114-JCH-022	12/1/2014	23 J	0.16 J	<5.0	15 J	<1.0	0.034 J	<10	<20	160	<5.0	27 J	<3.0	<50	3.2 J	<0.2	1.0 J	<5.0	0.022 J	<2.0	0.54 J	14 J
Equipment Blank[A]	W-R2330012-12214-JCH-029	12/2/2014	<50	<2.0	<5.0	1.4 J	<1.0	<1.0	<10	<20	<4.0		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330012-12214-JCH-029	12/2/2014	<50	<2.0	<5.0	0.45 J	<1.0	<1.0	0.13 J	<20	<4.0	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330012-020515-ACN-004	2/5/2015	12 J	<2.0	<5.0	6.8 J	<1.0	<1.0	<10	0.21 J	83		<200	<3.0	<50	8.1 J	<0.2	1.4 J	<5.0	<0.20	<2.0	<4.0	8.6 J
Equipment Blank	W-R2330012-020515-ACN-004	2/5/2015	<50	<2.0	<5.0	<100	<1.0	<1.0	<10	<20	2.0 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-031615-ACN-008	3/16/2015	<50	<2.0	<5.0	<100	<1.0	<1.0	0.21 J	<20	1.1 J		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-031615-ACN-008	3/16/2015	<50	<2.0	<5.0	<100	<1.0	<1.0	0.30 J	<20	1.4 J	<5.0	<200	<3.0	<50	<50	<0.2	0.47 J	<5.0	<0.20	<2.0	<4.0	4.1 J
Equipment Blank[A]	W-R2330017-031715-ACN-014	3/17/2015	<50	<2.0	<5.0	<100	<1.0	0.027 J	0.17 J	<20	1.0 J		<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-031715-ACN-014	3/17/2015	<50	<2.0	<5.0	<100	<1.0	<1.0	0.19 J	<20	1.1 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-031915-ACN-022	3/19/2015	21 J	<2.0	<5.0	3.3 J	<1.0	<1.0	<10	<20	1.4 J		22 J	<3.0	<50	0.26 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-031915-ACN-022	3/19/2015	18 J	<2.0	<5.0	1.5 J	<1.0	<1.0	<10	<20	1.3 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-032015-ACN-031	3/20/2015	<50	<2.0	<5.0	<100	<1.0	<1.0	0.21 J	<20	1.4 J		43 J	<3.0	<50	0.20 J	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank	W-R2330017-032015-ACN-031	3/20/2015	<50	<2.0	<5.0	<100	<1.0	<1.0	0.21 J	<20	1.1 J	<5.0	<200	<3.0	<50	<50	<0.2	<20	<5.0	<0.20	<2.0	<4.0	<50
Equipment Blank[A]	W-R2330017-111615-AEP-024	11/16/2015	<50	NS	NS	NS	NS	NS	NS	NS	NS		33 J	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111615-AEP-024	11/16/2015	1.3 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	<200	NS	66 J	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111715-JPM-025	11/17/2015	2.7 J	NS	NS	NS	NS	NS	NS	NS	NS		100 J	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111715-JPM-025	11/17/2015	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	<200	NS	<50	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			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	Chloroform	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methylcyclohexane	Toluene	Xylenes
Residential Drinking Water Criteria (II)			13,000	600 (A)	75 (A)	1,800	730	5.0 (A)	80 (A,W)	800	100 (A)	430	80 (A,W)	NA	80 (A,W)	1,700	74 (E)	800	NA	790 (E)	280 (E)
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	700	NA	NA	1,000	10,000
Ground Water Surface Water Interface Criteria (GSI) (III)			2,200	13	17	ID	1,700	200	ID	ID	25	1,100	350	NA	ID	ID	18	28	NA	270	41
GSI Final Acute Value (FAV)			40,000	240	210	ID	30,000	1,900	ID	ID	450	20,000	11,000	ID	ID	ID	320	500	NA	2,600	730
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)	28,000	NA	14,000	2.2E+05	1.1E+05	56,000 (S)	NA	5.3E+5 (S)	1.9E+05 (S)
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			4.3E+06	7,600	76	1,100	8.2E+06	27	NA	2,400	1,100	44,000	140	1,900	NA	NA	700 (d)	10	NA	36,000	10,000 (d)
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	7.92E+06	NA	2.60E+06	3.00E+05	1.69E+05	56,000	NA	5.26E+05	1.86E+5 (S)
Flammability & Explosivity Screening Level (VIII)			ID	NA	NA	ID	1.5E+07	68,000	ID	13,000	1.6E+05	1.1E+05	ID	NA	ID	ID	43,000	29,000	NA	61,000	70,000
ID	SAMPLE ID	SAMPLE DATE																			
Equipment Blank[A]	W-R2330017-111815-AFB-026	11/18/2015																			
Equipment Blank	W-R2330017-111815-AFB-026	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111915-AEP-027	11/19/2015																			
Equipment Blank	W-R2330017-111915-AEP-027	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Bold indicates concentration above method detection limits.

Roman numerals indicate DEQ criterion number.

A = Total Metals sample collected for comparison to dissolved metals analytical results.
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

Per the approval from the EPA, ground water analytical suite was modified prior to the November 2015 monitoring event.
Notes in parentheses and standard abbreviations from MDEQ Operational Memorandum 1, Attachment 1, dated September 28, 2012 or MDEQ Guidance Document for the Vapor Intrusion Pathway, dated May 2013.

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)																						
			1,1-Biphenyl	2-Chlorophenol	2- Methylnaphthalene	2- Methylphenol	3- Methylphenol	4- Methylphenol	2,4-Dimethylphenol	4-Chloroaniline	Bis(2-ethylhexyl)phthalate	Acenaphthene	Acetophenone	Benzaldehyde	Butyl benzyl phthalate	Caprolactam	Carbazole	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Phenol
Residential Drinking Water Criteria (II)			ID	45	260	370	370	370	370	NA	6.0 (A)	1,300	1,500	NA	1,200	5,800	85	ID	5,500	73,000	880	210 (S)	880	520	52	140 (S)	4,400
Residential Health-Based Drinking Water Value (E)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			ID	18	19	30 (M); 25	30 (M); 25	380	NA	25	38	ID	NA	67	NA	10 (M); 4.0	4	110	110	9.7	1.6	12	11	2.0 (M); 1.4	ID	450
GSI Final Acute Value (FAV)			ID	NA	340	1,400	1,400	2,700	ID	285	200	NA	NA	630	ID	72	72	2.0E+03	NA	75	220	220	200	11	ID	6,800
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)			ID	490,000	25,000 (S)	NLV	NLV	NLV	NA	NLV	4,200 (S)	6.1E+06 (S)	NA	NLV	NLV	NLV	NLV	10,000 (S)	NLV	NLV	NLV	210 (S)	2,000 (S)	31,000 (S)	1,000 (S)	140 (S)	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			ID	78,000	940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLV	2.30E+01	NA	NA	NA	NA	7.1E+04	240	110	410	NA
Water Solubility (VII)			ID	2.20E+07	24,600	2.80E+07	2.80E+07	7.87E+06	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	1,980	31,000	1,000	135	8.28E+7
Flammability & Explosivity Screening Level (VIII)			ID	ID	ID	NA	NA	ID	NA	NA	ID	ID	NA	ID	NA	ID	ID	NA	NA	NA	ID	ID	NA	ID	ID	NA
ID	SAMPLE ID	SAMPLE DATE																								
Equipment Blank[A]	W-R2330017-111815-AFB-026	11/18/2015																								
Equipment Blank	W-R2330017-111815-AFB-026	11/18/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111915-AEP-027	11/19/2015																								
Equipment Blank	W-R2330017-111915-AEP-027	11/19/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Bold indicates concentration above method detection limits.

Roman numerals indicate DEQ criterion number.

A = Total Metals sample collected for comparison to dissolved metals analytical results.
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

Notes in parentheses and standard abbreviations from MDEQ Operational Memorandum 1, Attachment 1, dated September 28, 2012 or MDEQ Guidance Document for the Vapor Intrusion Pathway, dated May 2013.

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																			
			Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	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)			50 (E)(V)	6.0 (A)	10 (A)	2,000 (A)	4.0 (A)	5.0 (A)	100 (A)	40	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)			300	NA	NA	NA	NA	NA	NA	NA	1,400	NA	2,000	NA	NA	860	NA	NA	NA	NA	NA	NA	NA
Ground Water Surface Water Interface Criteria (GSI) (III)			NA	130	10	670 (G)	6.7 (G)	3 (G)	11	100	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)			NA	2,300	680	3,844 (G)	120	13 (G)	1,588	740	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	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	56 (S)	NLV	NLV	NLV	NLV	NLV	NLV
Groundwater Concentration for Vapor Intrusion ($GW_{VI\text{-}res}$) (a)			NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Water Solubility (VII)			NA	NA	NA	NA	NA	NA	NA	NA	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	ID	ID	ID	ID	ID	ID	ID	ID
ID	SAMPLE ID	SAMPLE DATE																					
Equipment Blank[A]	W-R2330017-111815-AFB-026	11/18/2015	1.8 J	NS	NS	NS	NS	NS	NS	NS	NS		<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111815-AFB-026	11/18/2015	1.4 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank[A]	W-R2330017-111915-AEP-027	11/19/2015	1.4 J	NS	NS	NS	NS	NS	NS	NS	NS		<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS
Equipment Blank	W-R2330017-111915-AEP-027	11/19/2015	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	<200	NS	<50	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Bold indicates concentration above method detection limits.

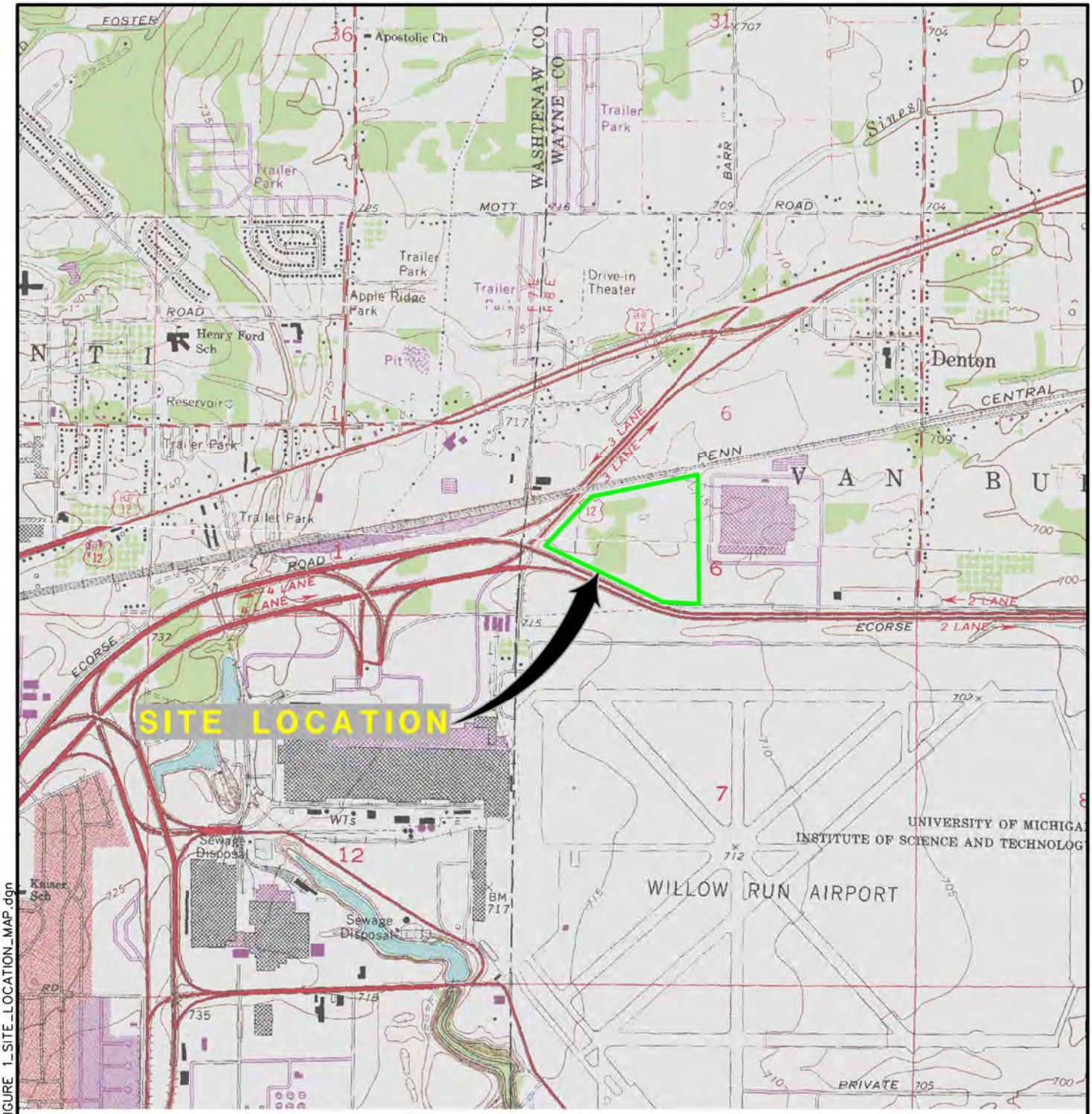
Roman numerals indicate DEQ criterion number.

A = Total Metals sample collected for comparison to dissolved metals analytical results.
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

Notes in parentheses and standard abbreviations from MDEQ Operational Memorandum 1, Attachment 1, dated September 28, 2012 or MDEQ Guidance Document for the Vapor Intrusion Pathway, dated May 2013.

FIGURES



SCALE 1:24000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

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)

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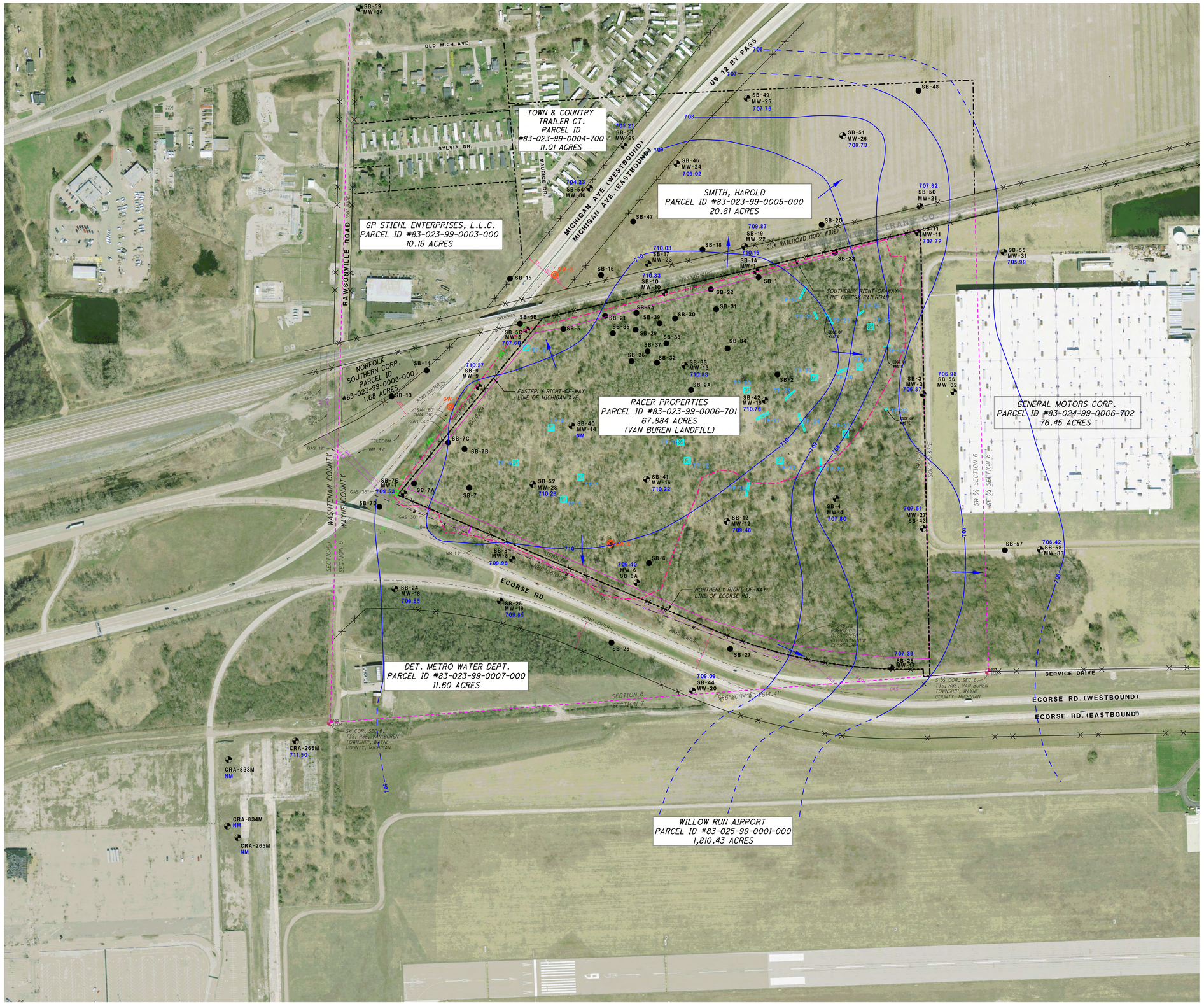
FIGURE 1
SITE LOCATION MAP

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

DATE	DRAWN BY	DESIGNED BY	PROJECT NO.
3/12/14	CJB	MJF	R2330012

W:\Projects\Projects P-T\R2330012\CAD\R2330012_FIGURE 1_SITE_LOCATION_MAP.dgn



MSG

GRAPHIC SCALE

0' 200' 400'

LEGEND

- PROPERTY LINE
- R/W LINE
- FENCE
- EXTENT OF EARTH DISTRUBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
- GAS — EXISTING GAS MAIN
- FO — EXISTING FIBER OPTIC CABLE
- W — EXISTING FIRE WATER
- W — EXISTING WATER MAIN
- 707 — GROUND WATER ELEVATION CONTOUR (FEET ABOVE MSL)
- 707 — ESTIMATE GROUND WATER ELEVATION CONTOUR
- GROUND WATER FLOW DIRECTION (NOVEMBER 12, 2013)
- ST (3) — THREE EX. PARALLEL STORM SEWERS
- SURFACE WATER SAMPLE LOCATION
- SOIL BORING LOCATION
- 859.92 — MONITORING WELL LOCATION WITH GROUND WATER ELEVATION (FEET ABOVE MSL)
- * — SUSPECT GROUND WATER ELEVATION NOT USED IN CONTOURING
- NM — NOT MEASURED
- TP-32 — TEST PIT LOCATION

GENERAL NOTES:

1. AERIAL PHOTO FROM SEMCOG DATED 2010.
2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/QAPP AND MISS DIG UTILITY MARKINGS.

NO.	DATE	BY	DESCRIPTION
1	7/14/14	CJB	PHASE III SITE INVESTIGATION SAMPLING LOCATIONS

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RACER

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

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP (NOVEMBER 2015)

W:\Projects\Projects P-TV\R2330021\CAD\Semi-Annual Ground Water Monitoring Report\R2330021GW_Fig2_GW_Flow_11-2015_Revised2016

GRAPHIC SCALE
0' 200' 400'

CHEMICAL ABBEVIATIONS
B = Benzene
Ba = Barium
As = Dissolved Arsenic
Fe = Dissolved Iron
BC = Below Applicable Criteria

LEGEND

- PROPERTY LINE
- R/W LINE
- FENCE
- EXTENT OF EARTH DISTRUBANCE 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
- TP-32 TEST PIT LOCATION

GENERAL NOTES:

1. AERIAL PHOTO FROM SEMCOG DATED 2010.
2. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/QAPP 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 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	7/14/14	CJB	PHASE III SITE INVESTIGATION SAMPLING LOCATIONS

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VAN BUREN TWP., WAYNE CO. MICHIGAN

FIGURE 3
MONITORING WELL ANALYTICAL SUMMARY THROUGH NOVEMBER 2015
SEMI-ANNUAL GROUNDWATER MONITORING

2/15/2016

W:\Projects\Projects P-TVR2330017\CAD\Phase IV\R2330012.MW_Analytical_Summary-Nov2015_FIG_3.dgn

ATTACHMENT 1

LOW FLOW GROUND WATER FIELD SAMPLING FORMS

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 11/19/15

SAMPLE LOCATION: MW-1

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

PERSONNEL: JPM / AEP

OBSERVERS: _____

SITE CONDITIONS: Partly Cloudy, Mid 40's

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: Teflon Line PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1315	13.7	59.49	2054	1.35	6.60	-13.7	203	0.25		
1320	13.7	54.76	2017	0.99	6.43	-26.6	128	0.5		
1325	13.7	55.02	2012	0.73	6.39	-34.0	76	0.8		
1330	13.7	55.10	1999	0.66	6.35	-38.5	56	1		
1335	13.7	55.19	1988	0.58	6.32	-42.7	37	1.2		
1340	13.7	55.19	1971	0.53	6.29	-44.4	30	1.4		
1345	13.7	55.15	1957	0.47	6.27	-46.2	29	1.6		
1350	13.7	55.10	1943	0.45	6.27	-48.2	21	1.8		
1355	13.7	55.34	1940	0.44	6.25	-48.4	21	2		
1406	13.7	55.11	1931	0.41	6.27	-49.1	19	2.2		

SAMPLE ID: W-R2330017-111915-AEP-021

SAMPLE DATE: 11/19/15

SAMPLE TIME: 1406

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/19/15

SAMPLE LOCATION: MW-3

PERSONNEL: JPM

OBSERVERS: _____

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: clear, Sunny mid 40's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 7.41

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
0900	-	53.89	569	2.65	—	-17.4	157	.2		
0905	—	54.41	585	1.73	—	-22.8	27.2	.65		
0910	—	54.41	577	1.22	-	-28.1	18.2	1		
0915	—	54.65	570	1.02	—	-31.3	14.4	1.3		
0920	-	54.76	566	0.94	—	-33.4	12.4	1.8		
0925	-	54.6	559	0.66	—	-33.4	12.1	2.2		

SAMPLE ID: W-R2330017-1119/5-JPM-016

SAMPLE DATE: 11/19/15

SAMPLE TIME: 0930

Notes: Ph malfunction. All other parameters working. No water level. Bladder above top of water.

[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 GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-4

DATE: 11/20/15

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

PERSONNEL: JPM

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: Teflon Line PE

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1214	—	52.29	460	4.11	—	-11.3	>1000	.2		
1219	—	52.44	447	4.16	—	-19.2	>1000	.5		
1224	—	52.43	431	3.99	—	-22.9	524	.85		
1229	—	52.58	421	387	—	-23.5	267	1.15		
1234	—	52.44	412	3.89	—	-23.7	144	1.75		
1239	—	52.51	403	4.02	—	-23.4	69	2.2		
1244	—	52.61	400	3.99	—	-23.1	45	2.6		
1249	—	52.58	394	3.96	—	-22.7	33	3		
1254	—	52.54	388	4.03	—	-22.4	23	3.5		
1259	—	52.50	385	4.04	—	-22.0	21	3.9		
1304	—	52.44	380	4.01	—	-21.8	19	4.2		

SAMPLE ID: W-R2330017-112015-JPM-033

SAMPLE DATE: 11/20/15

SAMPLE TIME: 1307

Notes: Ph malfunction. Bladder pump above top of water. All other parameters working.

[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 GROUND WATER SAMPLING FORM

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DATE: 11/20/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-5

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: clear, breezy, Mid 30's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level meter

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	COND. (µS/cm) +/- 3%	DO (mg/L)[1] +/- 10%	Ph +/- 0.1	ORP (mV) +/- 10 mV	TURB. (NTU)[2] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1022	12.30	60.13	695	5.06	-	-61	>1000	.15		
1027	12.30	60.47	707	1.46	-	-52.9	>1000	.75		
1032	12.33	60.83	699	0.75	-	-61.5	>1000	1.2		
1037	12.38	60.70	693	0.56	-	-63.8	>1000	1.8		
1042	12.39	60.95	691	0.52	-	-64.7	>1000	2.25		
1047	12.38	61.12	690	0.49	-	-63.9	>1000	2.8		
1052	12.38	61.14	686	0.45	-	-62.9	>1000	3.2		

SAMPLE ID: W-R2330017-112015-JPM-031

SAMPLE DATE: 11/20/15

SAMPLE TIME: ~~1057~~ 1055

Notes: Ph malfunction. All other parameters working.

[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 GROUND WATER SAMPLING FORM

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DATE: 11/19/15

PERSONNEL: JPM / AEP

OBSERVERS: _____

SAMPLE LOCATION: MW-6

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1450	9.02	54.17	1848	2.83	7.06	18.3	>1000	0.02		
1455	9.02	54.21	1805	1.86	6.56	-13.1	148	0.8		
1500	9.06	54.08	1787	1.94	6.42	-17.8	105	1		
1505	9.06	54.11	1780	2.03	6.31	-21.1	60	1.2		
1510	9.04	54.17	1776	2.06	6.27	-22.6	31.4	1.75		
1515	9.07	54.20	1772	2.10	6.23	-23.9	24.4	2.2		
1520	9.07	54.19	1765	2.04	6.21	-24.3	20.4	2.5		
1525	9.07	54.18	1760	2.06	6.19	-24.7	16.3	2.9		
1530	9.07	54.12	1753	2.06	6.17	-24.7	11.3	3.2		
1535	9.07	54.07	1745	2.05	6.16	-24.6	8.26	3.75		
1540	9.07	54.08	1711	2.02	6.15	-24.6	7.80	4.1		
1545	9.07	54.09	1738	2.03	6.15	-24.5	6.79	4.6		

SAMPLE ID: W-R2330017-111615-JPM-023

SAMPLE DATE: 11/19/15

SAMPLE TIME: 1550

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/16/15

SAMPLE LOCATION: MW-7

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

PERSONNEL: JPM, AEP

OBSERVERS:

SITE CONDITIONS: Sunny

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 7.32

SCREEN LENGTH:

WELL DIAMETER: 2

TUBING TYPE: Teflon Line PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1504	—	60.13	800	2.71	—	12.7	245	.1		
1507	—	59.73	733	1.58	—	0.6	104	.12		
1510	—	59.43	700	1.14	—	-6.0	80.5	.16		
1513	—	59.18	674	0.73	—	-10.9	31.8	.2		
1516	—	59.36	665	0.63	—	-13.2	16.7	.25		
1519	—	59.16	657	0.57	—	-14.6	11.5	.27		
1522	—	59.03	643	0.51	—	-15.6	8.9	.31		
1525	—	58.90	632	0.48	—	-16.1	6.18	.36		
1528	~	58.68	623	0.47	~	-16.4	5.61	.41		
1531	—	58.53	611	0.44	—	-17.0	4.41	.51		
1534	—	58.49	608	0.44	—	-17.2	3.95	.55		
1537	—	58.10	596	0.42	—	-17.4	3.98	.62		

SAMPLE ID: W-R2330017-111615-AEP-005

SAMPLE DATE: 11/16/15

SAMPLE TIME: 1540

Notes: PH malfuaction, all other perameters stable, water level below top of pump.

[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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/16/15

PERSONNEL: AEP

OBSERVERS: _____

SAMPLE LOCATION: MW-8

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 3.41'

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1344	—	55.55	794	3.82	—	34.0	533	0.2	155/155	Fill/purge
1347	—	55.36	741	1.60	—	35.3	370	0.4		
1350	—	55.38	725	1.24	—	34.9	251	0.6		
1353	—	55.26	704	0.88	—	32.8	140	0.8		
1356	—	55.13	689	0.68	—	30.3	85.9	1.0		
1359	—	55.10	674	0.60	—	25.6	61.6	1.2		
1402	—	55.15	666	0.54	—	21.2	46.5	1.4		
1405	—	55.20	658	0.51	—	17.0	37.8	1.6		
1408	—	55.17	652	0.48	—	14.5	32.0	1.8		
1411	—	55.23	647	0.47	—	12.6	32.6	2.0		

SAMPLE ID: MW-8 W-R2330017-111615-AEP-004

SAMPLE DATE: 11/16/15

SAMPLE TIME: 1414

Notes: PH malfunction. Water level abelow top of pump.

[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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/20/15

PERSONNEL: JPM, AFB

OBSERVERS: _____

SAMPLE LOCATION: MW-9

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
~~1038~~		~~43.99~~	~~1205~~	~~7.43~~	–	~~77.0~~	~~272~~	~~0.1~~	10/15	Purge/Fill
1043		54.38	1506	2.31	–	17.1	382	0.1		
1048		55.48	1579	1.25	–	-25.6	218	0.2		
1053		55.90	1579	0.91	–	-40.8	138	0.3		
1058		55.82	1570	0.67	–	-44.8	89	0.5		
1103		56.09	1570	0.58	–	-48.5	66	0.7		
1108		55.88	1552	0.50	–	-49.2	60	1.0		
1113		55.83	1545	0.48	–	-50.7	58	1.2		

SAMPLE ID: W-R2330017-112015-AFB-030

SAMPLE DATE: 11/20/15

SAMPLE TIME: 1118

Notes: Need new tubing for next sampling event

[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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 11/19/15

PERSONNEL: AEP

OBSERVERS: _____

SAMPLE LOCATION: MW-10

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1314	—	54.61	399	8.70	—	216.1	43.6			
1319	—	54.95	420	1.65	—	-30.5	15.7			
1324	—	55.08	401	1.41	—	-35.2	9.89			
1329	—	55.28	424	1.05	—	-43.3	6.53			
1334	—	55.70	433	0.93	—	-46.5	5.45			
1339	—	55.87	437	0.83	—	-47.4	4.63			
1344	—	55.86	435	0.82	—	-47.6	6.05			
1349	—	56.02	434	0.74	—	-47.5	4.01			
1354	—	55.86	431	0.70	—	-47.3	3.87			
1359	—	55.60	406	0.71	—	-46.7	3.66			

SAMPLE ID: W-R2330017-111915-AEP-022

SAMPLE DATE: 11/19/15

SAMPLE TIME: 1402

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/19/15

PERSONNEL: JPM / AEP

OBSERVERS: _____

SAMPLE LOCATION: MW-11

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: cloudy, low 40's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level meter

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	COND. (µS/cm) +/- 3%	DO (mg/L)[1] +/- 10%	Ph +/- 0.1	ORP (mV) +/- 10 mV	TURB. (NTU)[2] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1200	—	55.07	254	5.01	—	23.3	84.6			
1205	—	54.87	271	1.95	—	21.2	68.8			
1210	—	54.84	264	1.61	—	20.6	42.7			
1215	—	54.82	259	1.62	—	21.0	29.2			
1220	—	54.91	255	1.51	—	21.7	20.2			
1225	—	54.93	251	1.27	—	21.2	13.8			
1230	—	54.88	252	1.36	—	23.5	9.14			
1235	—	54.87	258	1.42	—	25.1	6.34			
1240	—	54.86	263	1.48	—	24.4	4.74			
1245	—	55.17	268	1.54	—	21.5	3.30			

SAMPLE ID: W-R2330017-111915-AEP-019

SAMPLE DATE: 11/19/15

SAMPLE TIME: 1248

Notes: Ph malfunction. All other parameters working. No water level due to bladder above top of water

[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

032

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/20/15

PERSONNEL: JPM, AFB

OBSERVERS: _____

SAMPLE LOCATION: MW-12

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1216	12.55	53.16	1589	4.41	—	21.5	>1000	0.2	15/15	Purge/Fill
1221	12.55	53.49	1583	1.13	—	-16.2	355	0.4		
1226	12.55	53.61	1574	0.78	—	-29.5	142	0.7		
1231	12.55	53.53	1553	0.64	—	-36.3	87.6	1.0		
1236	12.55	53.42	1533	0.56	—	-40.2	60.1	1.3		
1241	12.55	53.48	1529	0.50	—	-42.4	56.8	1.6		
1246	12.55	53.50	1527	0.43	—	-44.9	51.2	2.0		

SAMPLE ID: W-R2330017-112015-AFB-032, W-R2330017-112015-AFB-DUP2

SAMPLE DATE: 11/20/15

SAMPLE TIME: 1251

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/17/15

PERSONNEL: JM, AFB

OBSERVERS: _____

SAMPLE LOCATION: MW-17

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1443	9.80	57.19	1550	3.93	–	-12.6	661	0.2	20/20	Purge/Fill
1446	9.80	57.11	1470	2.04	–	-20.8	170	0.4		
1449	9.80	57.11	1429	1.56	–	-21.6	137	0.6		
1452	9.80	57.14	1415	1.31	–	-21.3	124	0.8		
1455	9.80	57.14	1404	1.19	–	-21.2	114	1.0		
1458	9.80	57.16	1397	0.99	–	-21.2	92.7	1.2		

SAMPLE ID: W-R2330017-111715-AFB-009

SAMPLE DATE: 11/17/15

SAMPLE TIME: 1501

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/17/16

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-18

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: Partly Cloudy, 50's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1330	6.1	55.5	3200	1.84	6.94	333	>1000	1		
1333	6.15	55.48	3260	1.21	6.73	4.0	>1000	1.5		
1336	6.24	55.45	3133	1.07	6.67	-14.0	>1000	2.0		
1339	6.32	55.47	2755	1.64	6.69	-22.1	9.99	2.4		
1342	6.26	55.44	2637	1.62	6.67	-24.7	9.99	2.85		
1345	6.31	55.32	25.27	1.42	6.66	-26.1	9.99	3		
1348	6.31	55.37	2503	1.18	6.65	-26.5	9.99	3.3		

SAMPLE ID: W-R2330017-111716-JPM-007

SAMPLE DATE: 11/17/16

SAMPLE TIME: 1351

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/17/15

SAMPLE LOCATION: MW-19

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

PERSONNEL: JM, AFB

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: Teflon Line PE

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1257	5.60	57.30	1694	51.05	-	-27.2	>1000	0.2	15/15	Purge/Fill
1300	5.60	57.10	1687	3.42	-	-22.8	>1000	0.4		
1303	5.61	57.03	1724	1.61	-	-24.3	>1000	0.6		
1306	5.60	56.99	1755	1.31	-	-25.0	>1000	0.8		
1309	5.60	57.01	1761	2.10	-	-25.4	>1000	1.0		
1312	5.60	56.97	1767	0.74	-	-24.3	>1000	1.2		
1315	5.60	57.02	1804	0.73	-	-22.4	930	1.4		
1318	5.60	57.05	1811	0.69	-	-22.1	789	1.6		
1321	5.60	57.10	1820	0.59	-	-21.9	752	1.8		
1324	5.60	57.09	1832	0.62	-	-21.2	665	2.0		
1327	5.60	57.07	1843	0.53	-	-20.9	557	2.2		
1330	5.60	57.10	1851	0.59	-	-20.8	537	2.4		
1333	5.60	57.05	1858	0.54	-	-20.6	459	2.6		
1336	5.60	57.03	1868	0.49	-	-20.3	410	2.8		
1339	5.60	57.02	1873	0.53	-	-20.5	396	3.0		

SAMPLE ID: WJ-R2330017-111715-AFB-008

SAMPLE DATE: 11/17/15

SAMPLE TIME: 1342

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/17/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-20

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 7.42

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1443	7.44'	58.84	2710	1.54	7.63	27.6	>1000	.25		
1446	7.45'	58.74	2565	0.81	7.17	3.2	>1000	.75		
1449	7.45'	58.74	2552	0.70	7.01	-6.1	>1000	1.25		
1452	7.45'	58.77	2548	.65	6.86	-14.0	>1000	1.75		
1455	7.45'	58.79	2542	0.58	6.76	-19.6	>1000	2.25		
1458	7.46'	58.78	2535	0.53	6.69	-23.2	9.99	2.75		
1501	7.45'	58.80	2536	0.46	6.64	-25.9	9.99	3.25		
1504	7.45'	58.82	2544	0.47	6.60	-28.6	9.99	3.75		
1507	7.45'	58.85	2545	0.41	6.58	-29.8	9.99	4.25		

SAMPLE ID: W-R2330017-111715-JPM-010

SAMPLE DATE: 11/17/15

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/18/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-21

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: Cloudy, windy, high 50's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 9.85

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
0855	~~9.88~~	56.29	43	4.26	—	36.7	681	0.08		
0900	~~9.88~~	56.62	41	2.92	—	32.4	571	0.3		
0905	~~9.85~~	56.67	39	2.54	—	30.4	346	1		
0910	~~9.85~~ 9.85	56.68	37	2.09	—	29.2	146	1.25		
0915	9.85	56.78	38	1.96	—	29.0	63	2		
0920	9.85	56.85	36	1.76	—	28.5	30	2.6		
0925	9.85	56.83	37	1.55	—	28.0	16	2.9		
0930	9.85	56.84	36	1.54	—	28.5	10	3.2		
0935	9.85	56.90	36	1.49	—	28.1	6	3.75		
0940	9.85	56.87	34	1.51	—	27.7	4	4		
0945	9.85	56.89	34	1.59	—	28.0	4.2	4		
0950	9.85	5.90	34	1.50	—	28.3	4.5	3		

SAMPLE ID: W-R2330017-111815-JPM-013

SAMPLE DATE: 11/18/15

SAMPLE TIME: 0955

Notes: Ph malfunction, All other peramters working properly

[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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/18/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-22

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: Cloudy, High 50's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 8.89

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1019	8.90	57.54	678	5.19	—	-27.1	247	.18		
1022	8.89	57.52	663	5.38	—	-35	175	.25		
1025	8.90	57.55	654	5.33	—	-37.9	129	.38		
1028	8.90	57.56	648	5.14	—	-39.4	94	.85		
1031	8.93	57.52	642	5.19	—	-40.2	69	1.1		
1034	8.93	57.55	636	5.32	—	-41.2	49	1.6		
1037	8.93	57.53	632	5.46	—	-41.1	43	2		
1040	8.93	57.52	625	5.57	—	-41.7	31	2.4		
1043	8.93	57.54	623	5.45	—	-41.2	29	2.8		
1046	8.93	57.51	620	5.41	—	-41.3	25	3.2		
1049	8.93	57.52	615	5.41	—	-41.1	20	3.8		
1052	8.93	57.53	610	5.35	—	-40	18	4.1		
1055	8.93	57.56	606	5.35	—	-40.8	17	4.35		

SAMPLE ID: W-R2330017-111815-JPM-014

SAMPLE DATE: 11/18/15

SAMPLE TIME: 1100

Notes: Ph malfunction. All other parameters working.

[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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/18/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-23

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 11.05

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1145	11.05	58.15	677	1.51	—	32.1	117	.03		
1150	11.05	58.05	653	0.91	—	-39.2	89	.20		
1155	11.07	58.01	638	0.82	—	-41.6	56	.58		
1200	11.07	58.10	627	0.57	—	-41.6	38	.9		
1205	11.07	58.08	615	0.51	—	-41.7	29	1.2		
1210	11.07	57.94	605	0.48	—	-42.1	21	1.49		
1215	11.07	57.89	598	0.61	—	-42.6	18	2		
1220	11.07	57.88	591	0.54	—	-42.8	13	2.4		
1225	11.07	57.36	574	0.48	—	-43.1	13	2.75		
1230	11.07	57.38	571	0.44	—	-43.3	12	3		

SAMPLE ID: MW-R2330017-111815-JPM-016

SAMPLE DATE: 11/18/15

SAMPLE TIME: 1235

Notes: Ph malfunction, All other parameters working

[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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/18/15

SAMPLE LOCATION: MW-24

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

PERSONNEL: JPM, AFB

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: Teflon Line PE

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1138	10.78	62.22	1061	0.63	-	68.7	909	0.2	20/20	Purge/Fill
1143	10.78	62.33	1056	0.91	-	46.2	441	0.4		
1148	10.78	62.19	1042	0.75	-	35.2	416	0.6		
1153	10.78	62.29	1036	0.67	-	24.0	322	0.8		
1158	10.78	62.53	1033	0.63	-	9.9	215	1.0		
1203	10.78	62.62	1029	0.62	-	0.1	159	1.2		
1208	10.78	62.62	1024	0.61	-	-5.8	106	1.4		
1213	10.78	62.45	1017	0.60	-	-9.5	97.2	1.6		
1218	10.78	62.34	1010	0.58	-	-13.7	90.5	1.8		

SAMPLE ID: W-R2330017-111815-AFB-015

SAMPLE DATE: 11/18/15

SAMPLE TIME: 1221

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 GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-25

DATE: 11/18/15

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

PERSONNEL: JM, AFB

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: Teflon Line PE

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1007	9.50	62.16	597	1.77	–	55.5	>1000	0.2	20/20	Purge/Fill
1010	9.50	62.25	594	1.10	–	57.5	>1000	0.4		
1013	9.50	62.27	593	1.00	–	58.0	>1000	0.6		
1016	9.50	62.22	591	0.67	–	60.9	255	0.8		
1019	9.50	62.23	590	0.65	–	61.4	149	1.0		
1022	9.50	62.28	590	0.60	–	62.1	84.2	1.2		
1025	9.50	62.30	590	0.55	–	62.4	52.6	1.4		
1028	9.50	62.24	590	0.68	–	63.2	49.5	1.6		
1031	9.50	62.22	589	0.70	–	64.5	48.0	1.8		

SAMPLE ID: W-R2330017-111815-AFB-012

SAMPLE DATE: 11/18/15

SAMPLE TIME: 1034

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/18/15

PERSONNEL: JM, AFB

OBSERVERS: _____

SAMPLE LOCATION: MW-26

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
0904	11.10	57.36	475	4.58	–	73.3	>1000	0.2	20/20	Purge/Fill
0907	11.10	57.33	439	4.26	–	85.5	528	0.4		
0910	11.10	57.35	437	4.22	–	86.4	371	0.6		
0913	11.10	57.39	439	3.71	–	85.6	313	0.8		
0916	11.10	57.44	439	3.41	–	85.0	220	1.0		
0919	11.10	57.55	444	3.12	–	83.2	173	1.2		
0922	11.10	57.56	446	2.85	–	81.4	135	1.4		
0925	11.10	57.57	448	2.74	–	80.4	115	1.6		
0928	11.10	57.48	449	2.67	–	79.9	100	1.8		

SAMPLE ID: W-R2330017-111815-AFB-011

SAMPLE DATE: 11/18/15

SAMPLE TIME: 0931

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 GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 11/19/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: MW-27

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: Clear Sunny Mid 40's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 7.42

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1005	7.42	54.13	494	2.37	—	2.5	97.6	.08		
1010	7.42	54.11	470	1.29	—	-1.1	66.8	1.1		
1015	7.39	54.08	448	0.91	—	-.50	41.7	1.5		
1020	7.41	54.18	438	0.78	—	-7.2	26.9	1.9		
1025	7.41	54.10	423	0.64	—	-8.5	19.2	2.3		
1030	7.41	54.10	415	0.58	—	-9.2	17.9	2.75		
1035	7.41	54.18	409	0.55	—	-9.5	12.4	3.25		
1040	7.41	54.15	406	0.53	—	-9.8	11.3	3.8		
1045	7.41	54.38	400	0.51	—	-10.4	9.75	4.4		
1050	7.41	54.33	398	0.47	—	-10.6	6.59	4.9		
1055	7.411	54.38	397	0.43	—	10.9	7.39	5.2		

SAMPLE ID: W-R2330017-111915-JPM-028

SAMPLE DATE: 11/19/15

SAMPLE TIME: 1100

Notes: Ph malfunction. All other parameters working.

[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 GROUND WATER SAMPLING FORM

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DATE: 11/20/15

SAMPLE LOCATION: MW-29

PERSONNEL: JPM, AFB

OBSERVERS: _____

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
0802	6.12	52.55	623	3.79	-	84.7	-	0.2	20/20	Purge/Fill
0807	6.12	54.44	688	1.26	-	48.7	-	0.4		
0812	6.12	54.26	785	0.81	-	21.6	44	0.6		
0817	6.12	54.68	824	0.57	-	-2.7	26	0.8		
0822	6.12	54.53	832	0.62	-	-18.5	26	1.0		
0827	6.12	54.89	835	0.46	-	-28.6	28	1.2		
0832	6.12	55.06	835	0.41	-	-33.7	27	1.4		

SAMPLE ID: W-R2330017-112015-AFB-028

SAMPLE DATE: 11/20/15

SAMPLE TIME: 0837

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 GROUND WATER SAMPLING FORM

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DATE: 11/20/15

SAMPLE LOCATION: MW-30

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

PERSONNEL: JPM

OBSERVERS: _____

SITE CONDITIONS: Clear 33°F

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: Teflon Line PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
0800	7.9	55.91	306	5.76	—	-6.9	80	.25		
0805	8.0	55.96	308	2.17	—	-3.6	33	.4		
0810	8.0	56.14	314	1.24	—	-4.3	12	.75		
0815	8.8	54.43	321	0.95	—	-14.0	4	1.2		
0820	8.9	56.25	320	0.83	—	-20.7	3	1.5		
0825	8.35	56.24	313	0.74	—	-22.3	5	2		

SAMPLE ID: W-R2330017-112015-JPM-029

SAMPLE DATE: 11/20/15

SAMPLE TIME: 0830

Notes: Ph malfunction. All other parameters working

[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 GROUND WATER SAMPLING FORM

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DATE: 11/18/15

PERSONNEL: JPM / AFB

OBSERVERS: _____

SAMPLE LOCATION: MW-34

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: Rain, 50's

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 4.9

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: Bladder pump, YSI 556 MPS, turbidity meter, water level 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%			
1420	4.9	56.46	2337	1.44	6.71	104.8	57.7	.05		
1425	4.4	56.33	2414	1.16	1.66	70.7	26.4	.1		
1430	5.05	56.82	2509	0.52	6.62	65.2	27.2	.4		
1435	5.04	56.91	2526	0.45	6.62	31.4	13.2	1.1		
1440	4.98	56.80	2523	0.36	6.61	21.1	10.3	1.6		
1445	4.98	56.84	2511	0.35	6.60	8.6	6.7	2.3		
1450	4.98	56.84	2516	0.34	6.60	3.6	6.88	3.3		
1455	4.98	56.84	2522	0.27	6.60	-0.3	4.78	3.75		
1500	4.98	56.81	2525	0.30	6.60	-3.9	4.34	4.8		
1505		56.82	2528	0.26	6.6	-6.4	3.66	5		

SAMPLE ID: W-R2330017-111815-JPM-017

SAMPLE DATE: 11/18/15

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 GROUND WATER SAMPLING FORM

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DATE: 11/17/15

PERSONNEL: JPM

OBSERVERS: _____

SAMPLE LOCATION: CRA - 266M

PROJECT #: R2330017

SITE NAME: RACER - Van Buren Landfill

SITE ADDRESS: MI Ave and Ecorse Rd, Van Buren Twp, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: Teflon Line PE

DEPTH TO WATER LEVEL: 5.47

WELL DIAMETER: _____

CASING TYPE: PVC

MONITORING EQUIPMENT: ~~Bladder pump~~, YSI 556 MPS, turbidity meter, water level meter

P Pump

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%			
1021	5.47'	56.02	368	3.17	—	-2.8	21.8	.12		
1024	5.48'	56.09	362	1.92	—	23.4	17.6	.21		
1027	5.50'	56.07	354	1.38	—	28.2	12.0	.50		
1030	5.50'	56.25	350	1.04	—	28.7	9.05	.68		
1033	5.50'	56.23	344	0.94	—	28.0	6.96	.82		
1036	5.50	56.27	339	0.80	—	27.1	5.75	1.01		
1039	5.50	56.5	338	0.74	—	26.4	4.29	1.25		
1042	5.50	56.67	336	0.65	—	23.5	3.09	1.51		
1045	5.50	56.65	332	0.59	-	22.8	2.67	1.79		
1048	5.50	56.50	326	0.57	-	21.5	2.26	2.01		
1051	5.50	56.53	323	0.55	-	20.02	1.79	2.33		
1054	5.50	56.53	320	0.55	-	19.6	1.45	2.60		
1057	5.50	56.63	319	0.49	-	18.1	1.35	2.80		
1100										

SAMPLE ID: W-R2330017-111715-JPM-006

SAMPLE DATE: 11/17/15

SAMPLE TIME: 1100

Notes: Ph malfunctioning. All other parameters working properly.

[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

Work Order: 15111329

Project Name:

RACER - Van Buren Landfill

The Mannik & Smith Group, Inc.

Frank Biehl

2365 Haggerty Road South

Suite 100

Canton, MI 48188

(734) 397-3100

07-Dec-2015

Certificate No: MN 532786

07-Dec-2015

Frank Biehl
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER - Van Buren Landfill** Work Order: **15111329**

Dear Frank,

ALS Environmental received 36 samples on 24-Nov-2015 08:00 AM for the analyses presented in the following report.

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

Sample results are compliant with NELAP standard requirements and QC 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 63.

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

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 07-Dec-15

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Work Order: **15111329**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
15111329-01	W-R230017-111615-AEP-001	Liquid		11/16/2015 10:35	11/24/2015 08:00	☐
15111329-02	W-R230017-111615-AEP-002	Liquid		11/16/2015 11:44	11/24/2015 08:00	☐
15111329-03	W-R230017-111615-AEP-003	Liquid		11/16/2015 12:24	11/24/2015 08:00	☐
15111329-04	W-R230017-111615-AEP-004	Liquid		11/16/2015 14:14	11/24/2015 08:00	☐
15111329-05	W-R230017-111615-AEP-005	Liquid		11/16/2015 15:40	11/24/2015 08:00	☐
15111329-06	W-R230017-111615-AEP-024	Liquid		11/16/2015 16:40	11/24/2015 08:00	☐
15111329-07	W-R230017-111715-JMP-006	Liquid		11/17/2015 11:00	11/24/2015 08:00	☐
15111329-08	W-R230017-111715-JMP-007	Liquid		11/17/2015 13:51	11/24/2015 08:00	☐
15111329-09	W-R230017-111715-AFB-008	Liquid		11/17/2015 13:42	11/24/2015 08:00	☐
15111329-10	W-R230017-111715-AFB-009	Liquid		11/17/2015 15:01	11/24/2015 08:00	☐
15111329-11	W-R230017-111715-JMP-010	Liquid		11/17/2015 15:10	11/24/2015 08:00	☐
15111329-12	W-R230017-111715-JMP-025	Liquid		11/17/2015 15:45	11/24/2015 08:00	☐
15111329-13	W-R230017-111815-AFB-011	Liquid		11/18/2015 09:31	11/24/2015 08:00	☐
15111329-14	W-R230017-111815-AFB-012	Liquid		11/18/2015 10:34	11/24/2015 08:00	☐
15111329-15	W-R230017-111815-JPM-013	Liquid		11/18/2015 09:55	11/24/2015 08:00	☐
15111329-16	W-R230017-111815-JPM-014	Liquid		11/18/2015 11:00	11/24/2015 08:00	☐
15111329-17	W-R230017-111815-AFB-015	Liquid		11/18/2015 12:21	11/24/2015 08:00	☐
15111329-18	W-R230017-111815-JPM-016	Liquid		11/18/2015 12:35	11/24/2015 08:00	☐
15111329-19	W-R230017-111815-JPM-017	Liquid		11/18/2015 15:10	11/24/2015 08:00	☐
15111329-20	DUP 1	Liquid		11/18/2015	11/24/2015 08:00	☐
15111329-21	W-R230017-111815-AFB-026	Liquid		11/18/2015 15:20	11/24/2015 08:00	☐
15111329-22	W-R230017-111915-JPM-018	Liquid		11/19/2015 09:30	11/24/2015 08:00	☐
15111329-23	W-R230017-111915-JPM-020	Liquid		11/19/2015 11:00	11/24/2015 08:00	☐
15111329-24	W-R230017-111915-AEP-019	Liquid		11/19/2015 12:48	11/24/2015 08:00	☐
15111329-25	W-R230017-111915-AEP-021	Liquid		11/19/2015 14:05	11/24/2015 08:00	☐
15111329-26	W-R230017-111915-AEP-022	Liquid		11/19/2015 14:02	11/24/2015 08:00	☐
15111329-27	W-R230017-111915-JPM-023	Liquid		11/19/2015 15:50	11/24/2015 08:00	☐
15111329-28	W-R230017-111915-AEP-027	Liquid		11/19/2015 16:20	11/24/2015 08:00	☐
15111329-29	W-R230017-112015-JPM-029	Liquid		11/20/2015 08:30	11/24/2015 08:00	☐
15111329-30	W-R230017-112015-AFB-028	Liquid		11/20/2015 08:37	11/24/2015 08:00	☐
15111329-31	W-R230017-112015-AFB-030	Liquid		11/20/2015 11:18	11/24/2015 08:00	☐
15111329-32	W-R230017-112015-JPM-031	Liquid		11/20/2015 10:55	11/24/2015 08:00	☐
15111329-33	W-R230017-112015-AFB-032	Liquid		11/20/2015 12:51	11/24/2015 08:00	☐
15111329-34	W-R230017-112015-AFB-DUP2	Liquid		11/20/2015	11/24/2015 08:00	☐
15111329-35	W-R230017-112015-JPM-033	Liquid		11/20/2015 13:07	11/24/2015 08:00	☐
15111329-36	Trip Blank	Water		11/20/2015	11/24/2015 08:00	☐

ALS Group USA, Corp

Date: 07-Dec-15

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
WorkOrder: **15111329**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
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 PQL, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
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

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

ALS Group USA, Corp

Date: 07-Dec-15

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Work Order: 15111329

Case Narrative

Samples for the above noted Work Order were received on 11/24/2015. The attached "Sample Receipt Checklist" documents the 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. 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.

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

Volatile Organics:
No other deviations or anomalies were noted.

Metals:
No other deviations or anomalies were noted.

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111615-AEP-004
Collection Date: 11/16/2015 02:14 PM

Work Order: 15111329
Lab ID: 15111329-04
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	**0.54**		**0.0011**	**0.050**	**mg/L**	1	11/26/2015 02:30
Iron	**3.3**		**0.010**	**0.20**	**mg/L**	1	11/26/2015 02:30
Magnesium	**92**		**0.019**	**0.20**	**mg/L**	1	11/26/2015 02:30
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	**0.015**	J	**0.0011**	**0.050**	**mg/L**	1	11/26/2015 04:51
Iron	**2.3**		**0.010**	**0.20**	**mg/L**	1	11/26/2015 04:51
Magnesium	**91**		**0.019**	**0.20**	**mg/L**	1	11/26/2015 04:51

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111615-AEP-005
Collection Date: 11/16/2015 03:40 PM

Work Order: 15111329
Lab ID: 15111329-05
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	**0.069**		**0.0011**	**0.050**	**mg/L**	1	11/26/2015 02:36
Iron	**7.5**		**0.010**	**0.20**	**mg/L**	1	11/26/2015 02:36
Magnesium	**150**		**0.019**	**0.20**	**mg/L**	1	11/26/2015 02:36
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	**0.035**	J	**0.0011**	**0.050**	**mg/L**	1	11/26/2015 04:57
Iron	**7.6**		**0.010**	**0.20**	**mg/L**	1	11/26/2015 04:57
Magnesium	**150**		**0.019**	**0.20**	**mg/L**	1	11/26/2015 04:57

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111615-AEP-024
Collection Date: 11/16/2015 04:40 PM

Work Order: 15111329
Lab ID: 15111329-06
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	U		0.0011	0.050	mg/L	1	11/26/2015 04:18
Iron	**0.033**	J	**0.010**	**0.20**	**mg/L**	1	11/26/2015 04:18
Magnesium	U		0.019	0.20	mg/L	1	11/26/2015 04:18
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	**0.0013**	J	**0.0011**	**0.050**	**mg/L**	1	11/26/2015 05:04
Iron	U		0.010	0.20	mg/L	1	11/26/2015 05:04
Magnesium	**0.066**	J	**0.019**	**0.20**	**mg/L**	1	11/26/2015 05:04

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111715-JMP-006
Collection Date: 11/17/2015 11:00 AM

Work Order: 15111329
Lab ID: 15111329-07
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	**0.0086**	J	**0.0011**	**0.050**	**mg/L**	1	11/26/2015 04:25
Iron	**0.48**		**0.010**	**0.20**	**mg/L**	1	11/26/2015 04:25
Magnesium	**12**		**0.019**	**0.20**	**mg/L**	1	11/26/2015 04:25
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/25/15		Analyst: **RH**
BatchID: 79471							
Aluminum	U		0.0011	0.050	mg/L	1	11/26/2015 05:42
Iron	**0.31**		**0.010**	**0.20**	**mg/L**	1	11/26/2015 05:42
Magnesium	**12**		**0.019**	**0.20**	**mg/L**	1	11/26/2015 05:42

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111715-JMP-007
Collection Date: 11/17/2015 01:51 PM

Work Order: 15111329
Lab ID: 15111329-08
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**2.2**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 17:20
Iron	**7.2**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 17:20
Magnesium	**30**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 17:20
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.022**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 23:20
Iron	**2.9**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 23:20
Magnesium	**25**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 23:20

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111715-AFB-008
Collection Date: 11/17/2015 01:42 PM

Work Order: 15111329
Lab ID: 15111329-09
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**4.1**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 17:25
Iron	**11**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 17:25
Magnesium	**38**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 17:25
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.37**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 23:35
Iron	**4.4**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 23:35
Magnesium	**34**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 23:35

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111715-AFB-009
Collection Date: 11/17/2015 03:01 PM

Work Order: 15111329
Lab ID: 15111329-10
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.99**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 17:31
Iron	**4.6**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 17:31
Magnesium	**22**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 17:31
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0086**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 23:41
Iron	**2.6**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 23:41
Magnesium	**21**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 23:41

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111715-JMP-010
Collection Date: 11/17/2015 03:10 PM

Work Order: 15111329
Lab ID: 15111329-11
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**2.6**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 17:36
Iron	**10**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 17:36
Magnesium	**56**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 17:36
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.093**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 23:46
Iron	**4.2**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 23:46
Magnesium	**55**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 23:46

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111715-JMP-025
Collection Date: 11/17/2015 03:45 PM

Work Order: 15111329
Lab ID: 15111329-12
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.0027**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 17:41
Iron	**0.010**	J	**0.010**	**0.20**	**mg/L**	1	12/1/2015 17:41
Magnesium	U		0.019	0.20	mg/L	1	12/1/2015 17:41
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	U		0.0011	0.050	mg/L	1	12/2/2015 00:07
Iron	U		0.010	0.20	mg/L	1	12/2/2015 00:07
Magnesium	U		0.019	0.20	mg/L	1	12/2/2015 00:07

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-AFB-011
Collection Date: 11/18/2015 09:31 AM

Work Order: 15111329
Lab ID: 15111329-13
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**6.0**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 17:56
Iron	**14**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 17:56
Magnesium	**30**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 17:56
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.046**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:23
Iron	**0.063**	J	**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:23
Magnesium	**16**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:23

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-AFB-012
Collection Date: 11/18/2015 10:34 AM

Work Order: 15111329
Lab ID: 15111329-14
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.91**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:27
Iron	**2.3**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:27
Magnesium	**21**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:27
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0096**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:28
Iron	**0.019**	J	**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:28
Magnesium	**20**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:28

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-JPM-013
Collection Date: 11/18/2015 09:55 AM

Work Order: 15111329
Lab ID: 15111329-15
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.034**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:32
Iron	**0.059**	J	**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:32
Magnesium	**21**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:32
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0032**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:33
Iron	**0.011**	J	**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:33
Magnesium	**21**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:33

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-JPM-014
Collection Date: 11/18/2015 11:00 AM

Work Order: 15111329
Lab ID: 15111329-16
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.095**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:38
Iron	**7.0**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:38
Magnesium	**120**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:38
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0020**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:38
Iron	**5.4**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:38
Magnesium	**120**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:38

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-AFB-015
Collection Date: 11/18/2015 12:21 PM

Work Order: 15111329
Lab ID: 15111329-17
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.26**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:43
Iron	**5.9**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:43
Magnesium	**48**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:43
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0076**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:44
Iron	**2.7**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:44
Magnesium	**47**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:44
VOLATILE ORGANIC COMPOUNDS			**SW8260B**				Analyst: **DD**
BatchID: R177133							
1,1,1-Trichloroethane	U		0.19	1.0	µg/L	1	11/29/2015 12:29
1,1,2,2-Tetrachloroethane	U		0.34	1.0	µg/L	1	11/29/2015 12:29
1,1,2-Trichloroethane	U		0.25	1.0	µg/L	1	11/29/2015 12:29
1,1,2-Trichlorotrifluoroethane	U		0.47	1.0	µg/L	1	11/29/2015 12:29
1,1-Dichloroethane	U		0.21	1.0	µg/L	1	11/29/2015 12:29
1,1-Dichloroethene	U		0.24	1.0	µg/L	1	11/29/2015 12:29
1,2,4-Trichlorobenzene	U		0.19	5.0	µg/L	1	11/29/2015 12:29
1,2-Dibromo-3-chloropropane	U		0.42	1.0	µg/L	1	11/29/2015 12:29
1,2-Dibromoethane	U		0.34	1.0	µg/L	1	11/29/2015 12:29
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	11/29/2015 12:29
1,2-Dichloroethane	U		0.26	1.0	µg/L	1	11/29/2015 12:29
1,2-Dichloropropane	U		0.26	1.0	µg/L	1	11/29/2015 12:29
1,3-Dichlorobenzene	U		0.21	1.0	µg/L	1	11/29/2015 12:29
1,4-Dichlorobenzene	U		0.20	1.0	µg/L	1	11/29/2015 12:29
2-Butanone	U		0.87	25	µg/L	1	11/29/2015 12:29
2-Hexanone	U		0.15	50	µg/L	1	11/29/2015 12:29
4-Methyl-2-pentanone	U		0.15	50	µg/L	1	11/29/2015 12:29
Acetone	U		3.1	50	µg/L	1	11/29/2015 12:29
Benzene	U		0.25	1.0	µg/L	1	11/29/2015 12:29
Bromodichloromethane	U		0.16	1.0	µg/L	1	11/29/2015 12:29
Bromoform	U		0.099	1.0	µg/L	1	11/29/2015 12:29
Bromomethane	U		1.0	5.0	µg/L	1	11/29/2015 12:29
Carbon disulfide	U		0.26	5.0	µg/L	1	11/29/2015 12:29
Carbon tetrachloride	U		0.14	1.0	µg/L	1	11/29/2015 12:29
Chlorobenzene	U		0.19	1.0	µg/L	1	11/29/2015 12:29
Chloroethane	U		0.21	5.0	µg/L	1	11/29/2015 12:29

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-AFB-015
Collection Date: 11/18/2015 12:21 PM

Work Order: 15111329
Lab ID: 15111329-17
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroform	U		0.25	1.0	µg/L	1	11/29/2015 12:29
Chloromethane	U		0.25	5.0	µg/L	1	11/29/2015 12:29
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	11/29/2015 12:29
cis-1,3-Dichloropropene	U		0.24	1.0	µg/L	1	11/29/2015 12:29
Cyclohexane	U		0.31	1.0	µg/L	1	11/29/2015 12:29
Dibromochloromethane	U		0.17	5.0	µg/L	1	11/29/2015 12:29
Dichlorodifluoromethane	U		0.41	5.0	µg/L	1	11/29/2015 12:29
Ethylbenzene	U		0.22	1.0	µg/L	1	11/29/2015 12:29
Isopropylbenzene	U		0.25	5.0	µg/L	1	11/29/2015 12:29
Methyl acetate	U		0.62	10	µg/L	1	11/29/2015 12:29
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	11/29/2015 12:29
Methylcyclohexane	U		0.32	1.0	µg/L	1	11/29/2015 12:29
Methylene chloride	U		0.64	5.0	µg/L	1	11/29/2015 12:29
Styrene	U		0.18	1.0	µg/L	1	11/29/2015 12:29
Tetrachloroethene	U		0.25	1.0	µg/L	1	11/29/2015 12:29
Toluene	U		0.20	1.0	µg/L	1	11/29/2015 12:29
trans-1,2-Dichloroethene	U		0.29	1.0	µg/L	1	11/29/2015 12:29
trans-1,3-Dichloropropene	U		0.19	1.0	µg/L	1	11/29/2015 12:29
Trichloroethene	U		0.34	1.0	µg/L	1	11/29/2015 12:29
Trichlorofluoromethane	U		0.39	1.0	µg/L	1	11/29/2015 12:29
Vinyl chloride	U		0.19	1.0	µg/L	1	11/29/2015 12:29
Xylenes, Total	U		0.62	3.0	µg/L	1	11/29/2015 12:29
Surr: 1,2-Dichloroethane-d4	*99.2*			*75-120*	*%REC*	1	11/29/2015 12:29
Surr: 4-Bromofluorobenzene	*98.6*			*80-110*	*%REC*	1	11/29/2015 12:29
Surr: Dibromofluoromethane	*99.2*			*85-115*	*%REC*	1	11/29/2015 12:29
Surr: Toluene-d8	*98.1*			*85-110*	*%REC*	1	11/29/2015 12:29

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-JPM-016
Collection Date: 11/18/2015 12:35 PM

Work Order: 15111329
Lab ID: 15111329-18
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.18**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:48
Iron	**14**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:48
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:48
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0050**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:49
Iron	**14**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:49
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:49
VOLATILE ORGANIC COMPOUNDS			**SW8260B**				Analyst: **DD**
BatchID: R177133							
1,1,1-Trichloroethane	U		0.19	1.0	µg/L	1	11/29/2015 13:18
1,1,2,2-Tetrachloroethane	U		0.34	1.0	µg/L	1	11/29/2015 13:18
1,1,2-Trichloroethane	U		0.25	1.0	µg/L	1	11/29/2015 13:18
1,1,2-Trichlorotrifluoroethane	U		0.47	1.0	µg/L	1	11/29/2015 13:18
1,1-Dichloroethane	U		0.21	1.0	µg/L	1	11/29/2015 13:18
1,1-Dichloroethene	U		0.24	1.0	µg/L	1	11/29/2015 13:18
1,2,4-Trichlorobenzene	U		0.19	5.0	µg/L	1	11/29/2015 13:18
1,2-Dibromo-3-chloropropane	U		0.42	1.0	µg/L	1	11/29/2015 13:18
1,2-Dibromoethane	U		0.34	1.0	µg/L	1	11/29/2015 13:18
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	11/29/2015 13:18
1,2-Dichloroethane	U		0.26	1.0	µg/L	1	11/29/2015 13:18
1,2-Dichloropropane	U		0.26	1.0	µg/L	1	11/29/2015 13:18
1,3-Dichlorobenzene	U		0.21	1.0	µg/L	1	11/29/2015 13:18
1,4-Dichlorobenzene	U		0.20	1.0	µg/L	1	11/29/2015 13:18
2-Butanone	U		0.87	25	µg/L	1	11/29/2015 13:18
2-Hexanone	U		0.15	50	µg/L	1	11/29/2015 13:18
4-Methyl-2-pentanone	U		0.15	50	µg/L	1	11/29/2015 13:18
Acetone	U		3.1	50	µg/L	1	11/29/2015 13:18
Benzene	**4.1**		**0.25**	**1.0**	**µg/L**	1	11/29/2015 13:18
Bromodichloromethane	U		0.16	1.0	µg/L	1	11/29/2015 13:18
Bromoform	U		0.099	1.0	µg/L	1	11/29/2015 13:18
Bromomethane	U		1.0	5.0	µg/L	1	11/29/2015 13:18
Carbon disulfide	U		0.26	5.0	µg/L	1	11/29/2015 13:18
Carbon tetrachloride	U		0.14	1.0	µg/L	1	11/29/2015 13:18
Chlorobenzene	**72**		**0.19**	**1.0**	**µg/L**	1	11/29/2015 13:18
Chloroethane	U		0.21	5.0	µg/L	1	11/29/2015 13:18

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-JPM-016
Collection Date: 11/18/2015 12:35 PM

Work Order: 15111329
Lab ID: 15111329-18
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroform	U		0.25	1.0	µg/L	1	11/29/2015 13:18
Chloromethane	U		0.25	5.0	µg/L	1	11/29/2015 13:18
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	11/29/2015 13:18
cis-1,3-Dichloropropene	U		0.24	1.0	µg/L	1	11/29/2015 13:18
Cyclohexane	U		0.31	1.0	µg/L	1	11/29/2015 13:18
Dibromochloromethane	U		0.17	5.0	µg/L	1	11/29/2015 13:18
Dichlorodifluoromethane	U		0.41	5.0	µg/L	1	11/29/2015 13:18
Ethylbenzene	U		0.22	1.0	µg/L	1	11/29/2015 13:18
Isopropylbenzene	U		0.25	5.0	µg/L	1	11/29/2015 13:18
Methyl acetate	U		0.62	10	µg/L	1	11/29/2015 13:18
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	11/29/2015 13:18
Methylcyclohexane	U		0.32	1.0	µg/L	1	11/29/2015 13:18
Methylene chloride	U		0.64	5.0	µg/L	1	11/29/2015 13:18
Styrene	U		0.18	1.0	µg/L	1	11/29/2015 13:18
Tetrachloroethene	U		0.25	1.0	µg/L	1	11/29/2015 13:18
Toluene	U		0.20	1.0	µg/L	1	11/29/2015 13:18
trans-1,2-Dichloroethene	U		0.29	1.0	µg/L	1	11/29/2015 13:18
trans-1,3-Dichloropropene	U		0.19	1.0	µg/L	1	11/29/2015 13:18
Trichloroethene	U		0.34	1.0	µg/L	1	11/29/2015 13:18
Trichlorofluoromethane	U		0.39	1.0	µg/L	1	11/29/2015 13:18
Vinyl chloride	U		0.19	1.0	µg/L	1	11/29/2015 13:18
Xylenes, Total	U		0.62	3.0	µg/L	1	11/29/2015 13:18
Surr: 1,2-Dichloroethane-d4	*101*			*75-120*	*%REC*	1	11/29/2015 13:18
Surr: 4-Bromofluorobenzene	*100*			*80-110*	*%REC*	1	11/29/2015 13:18
Surr: Dibromofluoromethane	*100*			*85-115*	*%REC*	1	11/29/2015 13:18
Surr: Toluene-d8	*98.0*			*85-110*	*%REC*	1	11/29/2015 13:18

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-JPM-017
Collection Date: 11/18/2015 03:10 PM

Work Order: 15111329
Lab ID: 15111329-19
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.028**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:53
Iron	**1.0**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:53
Magnesium	**20**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:53
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0029**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 00:54
Iron	**0.93**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 00:54
Magnesium	**19**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 00:54

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: DUP 1
Collection Date: 11/18/2015

Work Order: 15111329
Lab ID: 15111329-20
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.027**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 18:58
Iron	**0.047**	J	**0.010**	**0.20**	**mg/L**	1	12/1/2015 18:58
Magnesium	**20**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 18:58
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0037**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:18
Iron	**0.010**	J	**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:18
Magnesium	**21**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:18

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111815-AFB-026
Collection Date: 11/18/2015 03:20 PM

Work Order: 15111329
Lab ID: 15111329-21
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.0018**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 19:04
Iron	U		0.010	0.20	mg/L	1	12/1/2015 19:04
Magnesium	U		0.019	0.20	mg/L	1	12/1/2015 19:04
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0014**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:23
Iron	U		0.010	0.20	mg/L	1	12/2/2015 02:23
Magnesium	U		0.019	0.20	mg/L	1	12/2/2015 02:23

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-JPM-018
Collection Date: 11/19/2015 09:30 AM

Work Order: 15111329
Lab ID: 15111329-22
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.24**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 19:09
Iron	**11**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 19:09
Magnesium	**120**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 19:09
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.010**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:29
Iron	**11**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:29
Magnesium	**120**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:29

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-JPM-020
Collection Date: 11/19/2015 11:00 AM

Work Order: 15111329
Lab ID: 15111329-23
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.054**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 19:14
Iron	**4.1**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 19:14
Magnesium	**74**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 19:14
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0022**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:34
Iron	**4.2**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:34
Magnesium	**78**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:34

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-AEP-019
Collection Date: 11/19/2015 12:48 PM

Work Order: 15111329
Lab ID: 15111329-24
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.017**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 20:48
Iron	**0.48**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 20:48
Magnesium	**29**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 20:48
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0027**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:39
Iron	**0.47**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:39
Magnesium	**29**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:39

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-AEP-021
Collection Date: 11/19/2015 02:05 PM

Work Order: 15111329
Lab ID: 15111329-25
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.21**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 20:53
Iron	**23**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 20:53
Magnesium	**160**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 20:53
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0052**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:45
Iron	**23**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:45
Magnesium	**160**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:45

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-AEP-022
Collection Date: 11/19/2015 02:02 PM

Work Order: 15111329
Lab ID: 15111329-26
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.031**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 20:58
Iron	**22**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 20:58
Magnesium	**160**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 20:58
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0077**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:50
Iron	**22**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:50
Magnesium	**160**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:50
VOLATILE ORGANIC COMPOUNDS			**SW8260B**				Analyst: **DD**
BatchID: R177133							
1,1,1-Trichloroethane	U		0.19	1.0	µg/L	1	11/29/2015 12:53
1,1,2,2-Tetrachloroethane	U		0.34	1.0	µg/L	1	11/29/2015 12:53
1,1,2-Trichloroethane	U		0.25	1.0	µg/L	1	11/29/2015 12:53
1,1,2-Trichlorotrifluoroethane	U		0.47	1.0	µg/L	1	11/29/2015 12:53
1,1-Dichloroethane	U		0.21	1.0	µg/L	1	11/29/2015 12:53
1,1-Dichloroethene	U		0.24	1.0	µg/L	1	11/29/2015 12:53
1,2,4-Trichlorobenzene	U		0.19	5.0	µg/L	1	11/29/2015 12:53
1,2-Dibromo-3-chloropropane	U		0.42	1.0	µg/L	1	11/29/2015 12:53
1,2-Dibromoethane	U		0.34	1.0	µg/L	1	11/29/2015 12:53
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	11/29/2015 12:53
1,2-Dichloroethane	U		0.26	1.0	µg/L	1	11/29/2015 12:53
1,2-Dichloropropane	U		0.26	1.0	µg/L	1	11/29/2015 12:53
1,3-Dichlorobenzene	U		0.21	1.0	µg/L	1	11/29/2015 12:53
1,4-Dichlorobenzene	**0.48**	J	**0.20**	**1.0**	**µg/L**	1	11/29/2015 12:53
2-Butanone	U		0.87	25	µg/L	1	11/29/2015 12:53
2-Hexanone	U		0.15	50	µg/L	1	11/29/2015 12:53
4-Methyl-2-pentanone	U		0.15	50	µg/L	1	11/29/2015 12:53
Acetone	U		3.1	50	µg/L	1	11/29/2015 12:53
Benzene	**12**		**0.25**	**1.0**	**µg/L**	1	11/29/2015 12:53
Bromodichloromethane	U		0.16	1.0	µg/L	1	11/29/2015 12:53
Bromoform	U		0.099	1.0	µg/L	1	11/29/2015 12:53
Bromomethane	U		1.0	5.0	µg/L	1	11/29/2015 12:53
Carbon disulfide	U		0.26	5.0	µg/L	1	11/29/2015 12:53
Carbon tetrachloride	U		0.14	1.0	µg/L	1	11/29/2015 12:53
Chlorobenzene	**44**		**0.19**	**1.0**	**µg/L**	1	11/29/2015 12:53
Chloroethane	U		0.21	5.0	µg/L	1	11/29/2015 12:53

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-AEP-022
Collection Date: 11/19/2015 02:02 PM

Work Order: 15111329
Lab ID: 15111329-26
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroform	U		0.25	1.0	µg/L	1	11/29/2015 12:53
Chloromethane	U		0.25	5.0	µg/L	1	11/29/2015 12:53
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	11/29/2015 12:53
cis-1,3-Dichloropropene	U		0.24	1.0	µg/L	1	11/29/2015 12:53
Cyclohexane	U		0.31	1.0	µg/L	1	11/29/2015 12:53
Dibromochloromethane	U		0.17	5.0	µg/L	1	11/29/2015 12:53
Dichlorodifluoromethane	U		0.41	5.0	µg/L	1	11/29/2015 12:53
Ethylbenzene	U		0.22	1.0	µg/L	1	11/29/2015 12:53
Isopropylbenzene	**0.29**	J	**0.25**	**5.0**	**µg/L**	1	11/29/2015 12:53
Methyl acetate	U		0.62	10	µg/L	1	11/29/2015 12:53
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	11/29/2015 12:53
Methylcyclohexane	U		0.32	1.0	µg/L	1	11/29/2015 12:53
Methylene chloride	U		0.64	5.0	µg/L	1	11/29/2015 12:53
Styrene	U		0.18	1.0	µg/L	1	11/29/2015 12:53
Tetrachloroethene	U		0.25	1.0	µg/L	1	11/29/2015 12:53
Toluene	U		0.20	1.0	µg/L	1	11/29/2015 12:53
trans-1,2-Dichloroethene	U		0.29	1.0	µg/L	1	11/29/2015 12:53
trans-1,3-Dichloropropene	U		0.19	1.0	µg/L	1	11/29/2015 12:53
Trichloroethene	U		0.34	1.0	µg/L	1	11/29/2015 12:53
Trichlorofluoromethane	U		0.39	1.0	µg/L	1	11/29/2015 12:53
Vinyl chloride	U		0.19	1.0	µg/L	1	11/29/2015 12:53
Xylenes, Total	U		0.62	3.0	µg/L	1	11/29/2015 12:53
Surr: 1,2-Dichloroethane-d4	*96.6*			*75-120*	*%REC*	1	11/29/2015 12:53
Surr: 4-Bromofluorobenzene	*97.7*			*80-110*	*%REC*	1	11/29/2015 12:53
Surr: Dibromofluoromethane	*98.3*			*85-115*	*%REC*	1	11/29/2015 12:53
Surr: Toluene-d8	*99.0*			*85-110*	*%REC*	1	11/29/2015 12:53

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-JPM-023
Collection Date: 11/19/2015 03:50 PM

Work Order: 15111329
Lab ID: 15111329-27
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79540							
Aluminum	**0.030**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:03
Iron	**22**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 21:03
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 21:03
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79541							
Aluminum	**0.0077**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 02:55
Iron	**22**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 02:55
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 02:55

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-111915-AEP-027
Collection Date: 11/19/2015 04:20 PM

Work Order: 15111329
Lab ID: 15111329-28
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.0014**	J	**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:09
Iron	U		0.010	0.20	mg/L	1	12/1/2015 21:09
Magnesium	U		0.019	0.20	mg/L	1	12/1/2015 21:09
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	U		0.0011	0.050	mg/L	1	12/1/2015 09:09
Iron	U		0.010	0.20	mg/L	1	12/1/2015 09:09
Magnesium	U		0.019	0.20	mg/L	1	12/1/2015 09:09

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-JPM-029
Collection Date: 11/20/2015 08:30 AM

Work Order: 15111329
Lab ID: 15111329-29
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.054**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:14
Iron	**0.31**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 21:14
Magnesium	**14**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 21:14
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.010**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 03:01
Iron	**0.74**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 03:01
Magnesium	**13**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 03:01

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-AFB-028
Collection Date: 11/20/2015 08:37 AM

Work Order: 15111329
Lab ID: 15111329-30
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.42**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:19
Iron	**4.1**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 21:19
Magnesium	**21**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 21:19
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.0053**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 03:06
Iron	**3.3**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 03:06
Magnesium	**20**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 03:06

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-AFB-030
Collection Date: 11/20/2015 11:18 AM

Work Order: 15111329
Lab ID: 15111329-31
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.51**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:25
Iron	**33**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 21:25
Magnesium	**120**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 21:25
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.0079**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 04:30
Iron	**32**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 04:30
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 04:30

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-JPM-031
Collection Date: 11/20/2015 10:55 AM

Work Order: 15111329
Lab ID: 15111329-32
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**3.1**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:30
Iron	**13**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 21:30
Magnesium	**150**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 21:30
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.15**		**0.0011**	**0.050**	**mg/L**	1	12/2/2015 04:35
Iron	**6.4**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 04:35
Magnesium	**140**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 04:35

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-AFB-032
Collection Date: 11/20/2015 12:51 PM

Work Order: 15111329
Lab ID: 15111329-33
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.34**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 21:35
Iron	**12**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 21:35
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 21:35
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.0072**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 04:41
Iron	**11**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 04:41
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 04:41

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-AFB-DUP2
Collection Date: 11/20/2015

Work Order: 15111329
Lab ID: 15111329-34
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.38**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 22:58
Iron	**12**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 22:58
Magnesium	**140**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 22:58
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.0072**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 04:46
Iron	**11**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 04:46
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 04:46

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: W-R230017-112015-JPM-033
Collection Date: 11/20/2015 01:07 PM

Work Order: 15111329
Lab ID: 15111329-35
Matrix: LIQUID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.084**		**0.0011**	**0.050**	**mg/L**	1	12/1/2015 23:04
Iron	**12**		**0.010**	**0.20**	**mg/L**	1	12/1/2015 23:04
Magnesium	**140**		**0.019**	**0.20**	**mg/L**	1	12/1/2015 23:04
METALS BY ICP-MS (DISSOLVED)			**SW6020A**		Prep: SW3005A / 11/30/15		Analyst: **RH**
BatchID: 79542							
Aluminum	**0.0026**	J	**0.0011**	**0.050**	**mg/L**	1	12/2/2015 04:51
Iron	**11**		**0.010**	**0.20**	**mg/L**	1	12/2/2015 04:51
Magnesium	**130**		**0.019**	**0.20**	**mg/L**	1	12/2/2015 04:51

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: Trip Blank
Collection Date: 11/20/2015

Work Order: 15111329
Lab ID: 15111329-36
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**				Analyst: **DD**
BatchID: R177133							
1,1,1-Trichloroethane	U		0.19	1.0	µg/L	1	11/29/2015 11:39
1,1,2,2-Tetrachloroethane	U		0.34	1.0	µg/L	1	11/29/2015 11:39
1,1,2-Trichloroethane	U		0.25	1.0	µg/L	1	11/29/2015 11:39
1,1,2-Trichlorotrifluoroethane	U		0.47	1.0	µg/L	1	11/29/2015 11:39
1,1-Dichloroethane	U		0.21	1.0	µg/L	1	11/29/2015 11:39
1,1-Dichloroethene	U		0.24	1.0	µg/L	1	11/29/2015 11:39
1,2,4-Trichlorobenzene	U		0.19	5.0	µg/L	1	11/29/2015 11:39
1,2-Dibromo-3-chloropropane	U		0.42	1.0	µg/L	1	11/29/2015 11:39
1,2-Dibromoethane	U		0.34	1.0	µg/L	1	11/29/2015 11:39
1,2-Dichlorobenzene	U		0.22	1.0	µg/L	1	11/29/2015 11:39
1,2-Dichloroethane	U		0.26	1.0	µg/L	1	11/29/2015 11:39
1,2-Dichloropropane	U		0.26	1.0	µg/L	1	11/29/2015 11:39
1,3-Dichlorobenzene	U		0.21	1.0	µg/L	1	11/29/2015 11:39
1,4-Dichlorobenzene	U		0.20	1.0	µg/L	1	11/29/2015 11:39
2-Butanone	U		0.87	25	µg/L	1	11/29/2015 11:39
2-Hexanone	U		0.15	50	µg/L	1	11/29/2015 11:39
4-Methyl-2-pentanone	U		0.15	50	µg/L	1	11/29/2015 11:39
Acetone	U		3.1	50	µg/L	1	11/29/2015 11:39
Benzene	U		0.25	1.0	µg/L	1	11/29/2015 11:39
Bromodichloromethane	U		0.16	1.0	µg/L	1	11/29/2015 11:39
Bromoform	U		0.099	1.0	µg/L	1	11/29/2015 11:39
Bromomethane	U		1.0	5.0	µg/L	1	11/29/2015 11:39
Carbon disulfide	U		0.26	5.0	µg/L	1	11/29/2015 11:39
Carbon tetrachloride	U		0.14	1.0	µg/L	1	11/29/2015 11:39
Chlorobenzene	U		0.19	1.0	µg/L	1	11/29/2015 11:39
Chloroethane	U		0.21	5.0	µg/L	1	11/29/2015 11:39
Chloroform	**0.95**	J	**0.25**	**1.0**	**µg/L**	1	11/29/2015 11:39
Chloromethane	U		0.25	5.0	µg/L	1	11/29/2015 11:39
cis-1,2-Dichloroethene	U		0.25	1.0	µg/L	1	11/29/2015 11:39
cis-1,3-Dichloropropene	U		0.24	1.0	µg/L	1	11/29/2015 11:39
Cyclohexane	U		0.31	1.0	µg/L	1	11/29/2015 11:39
Dibromochloromethane	U		0.17	5.0	µg/L	1	11/29/2015 11:39
Dichlorodifluoromethane	U		0.41	5.0	µg/L	1	11/29/2015 11:39
Ethylbenzene	U		0.22	1.0	µg/L	1	11/29/2015 11:39
Isopropylbenzene	U		0.25	5.0	µg/L	1	11/29/2015 11:39
Methyl acetate	U		0.62	10	µg/L	1	11/29/2015 11:39
Methyl tert-butyl ether	U		0.12	5.0	µg/L	1	11/29/2015 11:39

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

ALS Group USA, Corp

Date: *07-Dec-15*

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill
Sample ID: Trip Blank
Collection Date: 11/20/2015

Work Order: 15111329
Lab ID: 15111329-36
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.32	1.0	µg/L	1	11/29/2015 11:39
Methylene chloride	**0.77**	J	**0.64**	**5.0**	**µg/L**	1	11/29/2015 11:39
Styrene	U		0.18	1.0	µg/L	1	11/29/2015 11:39
Tetrachloroethene	U		0.25	1.0	µg/L	1	11/29/2015 11:39
Toluene	U		0.20	1.0	µg/L	1	11/29/2015 11:39
trans-1,2-Dichloroethene	U		0.29	1.0	µg/L	1	11/29/2015 11:39
trans-1,3-Dichloropropene	U		0.19	1.0	µg/L	1	11/29/2015 11:39
Trichloroethene	U		0.34	1.0	µg/L	1	11/29/2015 11:39
Trichlorofluoromethane	U		0.39	1.0	µg/L	1	11/29/2015 11:39
Vinyl chloride	U		0.19	1.0	µg/L	1	11/29/2015 11:39
Xylenes, Total	U		0.62	3.0	µg/L	1	11/29/2015 11:39
Surr: 1,2-Dichloroethane-d4	*101*			*75-120*	*%REC*	1	11/29/2015 11:39
Surr: 4-Bromofluorobenzene	*99.0*			*80-110*	*%REC*	1	11/29/2015 11:39
Surr: Dibromofluoromethane	*102*			*85-115*	*%REC*	1	11/29/2015 11:39
Surr: Toluene-d8	*98.2*			*85-110*	*%REC*	1	11/29/2015 11:39

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

QC BATCH REPORT

Batch ID: **79471** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-79471-79471** Units: **mg/L** Analysis Date: **11/26/2015 01:45 A**

Client ID: Run ID: **ICPMS1_151125A** SeqNo: **3591867** Prep Date: **11/25/2015** 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								
Magnesium	U	0.20								

LCS Sample ID: **LCS-79471-79471** Units: **mg/L** Analysis Date: **11/26/2015 01:52 A**

Client ID: Run ID: **ICPMS1_151125A** SeqNo: **3591868** Prep Date: **11/25/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09681	0.010	0.1	0	96.8	80-120	0			
Iron	9.665	0.080	10	0	96.6	80-120	0			
Magnesium	9.861	0.20	10	0	98.6	80-120	0			

MS Sample ID: **15111329-06BMS** Units: **mg/L** Analysis Date: **11/26/2015 05:10 A**

Client ID: **W-R230017-111615-AEP-024** Run ID: **ICPMS1_151125A** SeqNo: **3591906** Prep Date: **11/25/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09735	0.010	0.1	0.001331	96	75-125	0			
Iron	9.512	0.080	10	0.0033	95.1	75-125	0			
Magnesium	9.853	0.20	10	0.06615	97.9	75-125	0			

MSD Sample ID: **15111329-06BMSD** Units: **mg/L** Analysis Date: **11/26/2015 05:17 A**

Client ID: **W-R230017-111615-AEP-024** Run ID: **ICPMS1_151125A** SeqNo: **3591907** Prep Date: **11/25/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0969	0.010	0.1	0.001331	95.6	75-125	0.09735	0.463	20	
Iron	9.52	0.080	10	0.0033	95.2	75-125	9.512	0.0841	20	
Magnesium	9.796	0.20	10	0.06615	97.3	75-125	9.853	0.58	20	

The following samples were analyzed in this batch:

15111329-01A	15111329-01B	15111329-02A
15111329-02B	15111329-03A	15111329-03B
15111329-04A	15111329-04B	15111329-05A
15111329-05B	15111329-06A	15111329-06B
15111329-07A	15111329-07B	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **79540** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK Sample ID: **MBLK-79540-79540** Units: **mg/L** Analysis Date: **12/1/2015 05:10 PM**
Client ID: Run ID: **ICPMS2_151201B** SeqNo: **3598009** Prep Date: **11/30/2015** 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								
Magnesium	U	0.20								

LCS Sample ID: **LCS-79540-79540** Units: **mg/L** Analysis Date: **12/1/2015 05:15 PM**
Client ID: Run ID: **ICPMS2_151201B** SeqNo: **3598010** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1029	0.010	0.1	0	103	80-120	0			
Iron	10.34	0.080	10	0	103	80-120	0			
Magnesium	10.33	0.20	10	0	103	80-120	0			

MS Sample ID: **15111329-12AMS** Units: **mg/L** Analysis Date: **12/1/2015 05:46 PM**
Client ID: **W-R230017-111715-JMP-025** Run ID: **ICPMS2_151201B** SeqNo: **3598016** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09924	0.010	0.1	0.002748	96.5	75-125	0			
Iron	10.31	0.080	10	0.01023	103	75-125	0			
Magnesium	10.08	0.20	10	0.006968	101	75-125	0			

MSD Sample ID: **15111329-12AMSD** Units: **mg/L** Analysis Date: **12/1/2015 05:51 PM**
Client ID: **W-R230017-111715-JMP-025** Run ID: **ICPMS2_151201B** SeqNo: **3598017** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09903	0.010	0.1	0.002748	96.3	75-125	0.09924	0.212	20	
Iron	10.17	0.080	10	0.01023	102	75-125	10.31	1.37	20	
Magnesium	10.01	0.20	10	0.006968	100	75-125	10.08	0.697	20	

The following samples were analyzed in this batch:

15111329-08A	15111329-09A	15111329-10A
15111329-11A	15111329-12A	15111329-13A
15111329-14A	15111329-15A	15111329-16A
15111329-17A	15111329-18A	15111329-19A
15111329-20A	15111329-21A	15111329-22A
15111329-23A	15111329-24A	15111329-25A
15111329-26A	15111329-27A	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **79541** Instrument ID **ICPMS2** Method: **SW6020A** **(Dissolve)**

MBLK Sample ID: **MBLK-79541-79541** Units: **mg/L** Analysis Date: **12/1/2015 11:09 PM**
Client ID: Run ID: **ICPMS2_151201B** SeqNo: **3598141** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001905	0.010								J
Iron	U	0.080								
Magnesium	U	0.20								

LCS Sample ID: **LCS-79541-79541** Units: **mg/L** Analysis Date: **12/1/2015 11:14 PM**
Client ID: Run ID: **ICPMS2_151201B** SeqNo: **3598143** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09675	0.010	0.1	0	96.8	80-120	0			
Iron	10.35	0.080	10	0	104	80-120	0			
Magnesium	10.26	0.20	10	0	103	80-120	0			

MS Sample ID: **15111329-08BMS** Units: **mg/L** Analysis Date: **12/1/2015 11:25 PM**
Client ID: **W-R230017-111715-JMP-007** Run ID: **ICPMS2_151201B** SeqNo: **3598146** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.116	0.010	0.1	0.02233	93.7	75-125	0			
Iron	12.81	0.080	10	2.939	98.7	75-125	0			
Magnesium	34.46	0.20	10	24.72	97.4	75-125	0			

MSD Sample ID: **15111329-08BMSD** Units: **mg/L** Analysis Date: **12/1/2015 11:30 PM**
Client ID: **W-R230017-111715-JMP-007** Run ID: **ICPMS2_151201B** SeqNo: **3598148** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1135	0.010	0.1	0.02233	91.2	75-125	0.116	2.18	20	
Iron	12.62	0.080	10	2.939	96.8	75-125	12.81	1.49	20	
Magnesium	33.76	0.20	10	24.72	90.4	75-125	34.46	2.05	20	

The following samples were analyzed in this batch:

15111329-08B	15111329-09B	15111329-10B
15111329-11B	15111329-12B	15111329-13B
15111329-14B	15111329-15B	15111329-16B
15111329-17B	15111329-18B	15111329-19B
15111329-20B	15111329-21B	15111329-22B
15111329-23B	15111329-24B	15111329-25B
15111329-26B	15111329-27B	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **79542** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK Sample ID: **MBLK-79542-79542** Units: **mg/L** Analysis Date: **12/1/2015 08:58 AM**
Client ID: Run ID: **ICPMS2_151201A** SeqNo: **3596890** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001439	0.010								J
Iron	U	0.080								
Magnesium	U	0.20								

LCS Sample ID: **LCS-79542-79542** Units: **mg/L** Analysis Date: **12/1/2015 09:04 AM**
Client ID: Run ID: **ICPMS2_151201A** SeqNo: **3596891** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1008	0.010	0.1	0	101	80-120	0			
Iron	10.22	0.080	10	0	102	80-120	0			
Magnesium	10.17	0.20	10	0	102	80-120	0			

MS Sample ID: **15111329-28BMS** Units: **mg/L** Analysis Date: **12/1/2015 09:14 AM**
Client ID: **W-R230017-111915-AEP-027** Run ID: **ICPMS2_151201A** SeqNo: **3596893** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1038	0.010	0.1	0.001074	103	75-125	0			
Iron	10.39	0.080	10	0.009901	104	75-125	0			
Magnesium	10.3	0.20	10	0.006066	103	75-125	0			

MSD Sample ID: **15111329-28BMSD** Units: **mg/L** Analysis Date: **12/1/2015 09:25 AM**
Client ID: **W-R230017-111915-AEP-027** Run ID: **ICPMS2_151201A** SeqNo: **3596894** Prep Date: **11/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1021	0.010	0.1	0.001074	101	75-125	0.1038	1.65	20	
Iron	10.31	0.080	10	0.009901	103	75-125	10.39	0.773	20	
Magnesium	10.29	0.20	10	0.006066	103	75-125	10.3	0.0971	20	

The following samples were analyzed in this batch:

15111329-28A	15111329-28B	15111329-29A
15111329-29B	15111329-30A	15111329-30B
15111329-31A	15111329-31B	15111329-32A
15111329-32B	15111329-33A	15111329-33B
15111329-34A	15111329-34B	15111329-35A
15111329-35B		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

MBLK	Sample ID: **VBLKW2-151129-R177133**				Units: **µg/L**			Analysis Date: **11/29/2015 11:14 A**		
Client ID:		Run ID: **VMS7_151129A**			SeqNo: **3594517**		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	1.0								
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.

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

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					
Surr: 1,2-Dichloroethane-d4	*20.01*	0	*20*	0	*100*	*75-120*	0
Surr: 4-Bromofluorobenzene	*19.55*	0	*20*	0	*97.8*	*80-110*	0
Surr: Dibromofluoromethane	*20.43*	0	*20*	0	*102*	*85-115*	0
Surr: Toluene-d8	*19.51*	0	*20*	0	*97.6*	*85-110*	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

LCS Sample ID: **VLCSW1-151129-R177133** Units: **µg/L** Analysis Date: **11/29/2015 09:57 A**

Client ID: Run ID: **VMS7_151129A** SeqNo: **3594516** 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	19.69	1.0	20	0	98.4	75-130	0			
1,1,2,2-Tetrachloroethane	18.9	1.0	20	0	94.5	75-130	0			
1,1,2-Trichloroethane	19.38	1.0	20	0	96.9	75-125	0			
1,1-Dichloroethane	19.11	1.0	20	0	95.6	75-133	0			
1,1-Dichloroethene	19.9	1.0	20	0	99.5	70-145	0			
1,2,4-Trichlorobenzene	20.72	1.0	20	0	104	70-135	0			
1,2-Dibromo-3-chloropropane	19.36	1.0	20	0	96.8	60-130	0			
1,2-Dibromoethane	22.85	1.0	20	0	114	80-150	0			
1,2-Dichlorobenzene	19.65	1.0	20	0	98.2	70-130	0			
1,2-Dichloroethane	18.88	1.0	20	0	94.4	78-125	0			
1,2-Dichloropropane	18.58	1.0	20	0	92.9	75-125	0			
1,3-Dichlorobenzene	20.45	1.0	20	0	102	75-130	0			
1,4-Dichlorobenzene	19.14	1.0	20	0	95.7	75-130	0			
2-Butanone	14.09	5.0	20	0	70.4	55-150	0			
2-Hexanone	14.52	5.0	20	0	72.6	60-135	0			
4-Methyl-2-pentanone	20.88	1.0	20	0	104	77-178	0			
Acetone	14.94	10	20	0	74.7	60-160	0			
Benzene	19.26	1.0	20	0	96.3	85-125	0			
Bromodichloromethane	18.49	1.0	20	0	92.4	75-125	0			
Bromoform	18.74	1.0	20	0	93.7	60-125	0			
Bromomethane	16.77	1.0	20	0	83.8	30-185	0			
Carbon disulfide	19.61	1.0	20	0	98	60-165	0			
Carbon tetrachloride	19.74	1.0	20	0	98.7	65-140	0			
Chlorobenzene	18.4	1.0	20	0	92	80-120	0			
Chloroethane	17.3	1.0	20	0	86.5	50-140	0			
Chloroform	18.16	1.0	20	0	90.8	80-130	0			
Chloromethane	16.24	1.0	20	0	81.2	50-130	0			
cis-1,2-Dichloroethene	19.13	1.0	20	0	95.6	75-134	0			
cis-1,3-Dichloropropene	18.22	1.0	20	0	91.1	70-130	0			
Dibromochloromethane	18.49	1.0	20	0	92.4	60-115	0			
Dichlorodifluoromethane	16.36	1.0	20	0	81.8	20-120	0			
Ethylbenzene	18.76	1.0	20	0	93.8	85-125	0			
Isopropylbenzene	19.57	1.0	20	0	97.8	80-127	0			
Methyl tert-butyl ether	16.44	1.0	20	0	82.2	80-130	0			
Methylene chloride	20.21	5.0	20	0	101	75-140	0			
Styrene	19.11	1.0	20	0	95.6	85-125	0			
Tetrachloroethene	19.6	1.0	20	0	98	77-138	0			
Toluene	19.11	1.0	20	0	95.6	85-125	0			
trans-1,2-Dichloroethene	19.51	1.0	20	0	97.6	80-140	0			
trans-1,3-Dichloropropene	19.56	1.0	20	0	97.8	81-123	0			
Trichloroethene	18.31	1.0	20	0	91.6	84-130	0			
Trichlorofluoromethane	17.12	1.0	20	0	85.6	60-140	0			

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

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

Vinyl chloride	17.07	1.0	20	0	85.4	50-136	0
Xylenes, Total	56.25	3.0	60	0	93.8	80-126	0
Surr: 1,2-Dichloroethane-d4	*19*	0	*20*	0	*95*	*75-120*	0
Surr: 4-Bromofluorobenzene	*19.29*	0	*20*	0	*96.4*	*80-110*	0
Surr: Dibromofluoromethane	*19.81*	0	*20*	0	*99*	*85-115*	0
Surr: Toluene-d8	*19.54*	0	*20*	0	*97.7*	*85-110*	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

MS Sample ID: **15111224-05A MS** Units: **µg/L** Analysis Date: **11/29/2015 08:03 PM**
Client ID: Run ID: **VMS7_151129A** SeqNo: **3594532** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1602	100	2000	0	80.1	75-130	0			
1,1,2,2-Tetrachloroethane	1585	100	2000	0	79.2	75-130	0			
1,1,2-Trichloroethane	1567	100	2000	0	78.4	75-125	0			
1,1-Dichloroethane	1579	100	2000	0	79	75-133	0			
1,1-Dichloroethene	1754	100	2000	0	87.7	70-145	0			
1,2,4-Trichlorobenzene	1425	100	2000	0	71.2	70-135	0			
1,2-Dibromo-3-chloropropane	1583	100	2000	0	79.2	60-130	0			
1,2-Dibromoethane	1827	100	2000	0	91.4	80-150	0			
1,2-Dichlorobenzene	1511	100	2000	0	75.6	70-130	0			
1,2-Dichloroethane	1515	100	2000	0	75.8	78-125	0			S
1,2-Dichloropropane	1497	100	2000	0	74.8	75-125	0			S
1,3-Dichlorobenzene	1547	100	2000	0	77.4	75-130	0			
1,4-Dichlorobenzene	1479	100	2000	0	74	75-130	0			S
2-Butanone	1282	500	2000	0	64.1	55-150	0			
2-Hexanone	1179	500	2000	0	59	60-135	0			S
4-Methyl-2-pentanone	1783	100	2000	0	89.2	77-178	0			
Acetone	1461	1,000	2000	0	73	60-160	0			
Benzene	1554	100	2000	0	77.7	85-125	0			S
Bromodichloromethane	1428	100	2000	0	71.4	75-125	0			S
Bromoform	1437	100	2000	0	71.8	60-125	0			
Bromomethane	1340	100	2000	0	67	30-185	0			
Carbon disulfide	1714	100	2000	0	85.7	60-165	0			
Carbon tetrachloride	1620	100	2000	0	81	65-140	0			
Chlorobenzene	1525	100	2000	0	76.2	80-120	0			S
Chloroethane	1520	100	2000	0	76	50-140	0			
Chloroform	1528	100	2000	0	76.4	80-130	0			S
Chloromethane	1385	100	2000	0	69.2	50-130	0			
cis-1,2-Dichloroethene	1535	100	2000	0	76.8	75-134	0			
cis-1,3-Dichloropropene	1381	100	2000	0	69	70-130	0			S
Dibromochloromethane	1420	100	2000	0	71	60-115	0			
Dichlorodifluoromethane	1539	100	2000	0	77	20-120	0			
Ethylbenzene	2971	100	2000	1418	77.6	85-125	0			S
Isopropylbenzene	1630	100	2000	95	76.8	80-127	0			S
Methyl tert-butyl ether	1365	100	2000	0	68.2	80-130	0			S
Methylene chloride	1696	500	2000	0	84.8	75-140	0			
Styrene	1582	100	2000	0	79.1	85-125	0			S
Tetrachloroethene	1562	100	2000	0	78.1	77-138	0			
Toluene	1554	100	2000	0	77.7	85-125	0			S
trans-1,2-Dichloroethene	1690	100	2000	0	84.5	80-140	0			
trans-1,3-Dichloropropene	1469	100	2000	0	73.4	81-123	0			S
Trichloroethene	1521	100	2000	0	76	84-130	0			S
Trichlorofluoromethane	1521	100	2000	0	76	60-140	0			

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

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

Vinyl chloride	1443	100	2000	0	72.2	50-136	0	
Xylenes, Total	11330	300	6000	6608	78.7	80-126	0	S
Surr: 1,2-Dichloroethane-d4	*1929*	0	*2000*	0	*96.4*	*75-120*	0	
Surr: 4-Bromofluorobenzene	*1959*	0	*2000*	0	*98*	*80-110*	0	
Surr: Dibromofluoromethane	*1989*	0	*2000*	0	*99.4*	*85-115*	0	
Surr: Toluene-d8	*1946*	0	*2000*	0	*97.3*	*85-110*	0	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

MSD Sample ID: **15111224-05A MSD** Units: **µg/L** Analysis Date: **11/29/2015 08:30 PM**
Client ID: Run ID: **VMS7_151129A** SeqNo: **3594533** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2487	100	2000	0	124	75-130	1602	43.3	30	R
1,1,2,2-Tetrachloroethane	2402	100	2000	0	120	75-130	1585	41	30	R
1,1,2-Trichloroethane	2423	100	2000	0	121	75-125	1567	42.9	30	R
1,1-Dichloroethane	2364	100	2000	0	118	75-133	1579	39.8	30	R
1,1-Dichloroethene	2540	100	2000	0	127	70-145	1754	36.6	30	R
1,2,4-Trichlorobenzene	2168	100	2000	0	108	70-135	1425	41.4	30	R
1,2-Dibromo-3-chloropropane	2455	100	2000	0	123	60-130	1583	43.2	30	R
1,2-Dibromoethane	2841	100	2000	0	142	80-150	1827	43.4	30	R
1,2-Dichlorobenzene	2291	100	2000	0	115	70-130	1511	41	30	R
1,2-Dichloroethane	2322	100	2000	0	116	78-125	1515	42.1	30	R
1,2-Dichloropropane	2268	100	2000	0	113	75-125	1497	41	30	R
1,3-Dichlorobenzene	2357	100	2000	0	118	75-130	1547	41.5	30	R
1,4-Dichlorobenzene	2219	100	2000	0	111	75-130	1479	40	30	R
2-Butanone	1868	500	2000	0	93.4	55-150	1282	37.2	30	R
2-Hexanone	1845	500	2000	0	92.2	60-135	1179	44	30	R
4-Methyl-2-pentanone	2688	100	2000	0	134	77-178	1783	40.5	30	R
Acetone	2171	1,000	2000	0	109	60-160	1461	39.1	30	R
Benzene	2359	100	2000	0	118	85-125	1554	41.1	30	R
Bromodichloromethane	2201	100	2000	0	110	75-125	1428	42.6	30	R
Bromoform	2289	100	2000	0	114	60-125	1437	45.7	30	R
Bromomethane	1961	100	2000	0	98	30-185	1340	37.6	30	R
Carbon disulfide	2450	100	2000	0	122	60-165	1714	35.4	30	R
Carbon tetrachloride	2495	100	2000	0	125	65-140	1620	42.5	30	R
Chlorobenzene	2306	100	2000	0	115	80-120	1525	40.8	30	R
Chloroethane	2206	100	2000	0	110	50-140	1520	36.8	30	R
Chloroform	2272	100	2000	0	114	80-130	1528	39.2	30	R
Chloromethane	1997	100	2000	0	99.8	50-130	1385	36.2	30	R
cis-1,2-Dichloroethene	2270	100	2000	0	114	75-134	1535	38.6	30	R
cis-1,3-Dichloropropene	2134	100	2000	0	107	70-130	1381	42.8	30	R
Dibromochloromethane	2168	100	2000	0	108	60-115	1420	41.7	30	R
Dichlorodifluoromethane	2151	100	2000	0	108	20-120	1539	33.2	30	R
Ethylbenzene	3695	100	2000	1418	114	85-125	2971	21.7	30	
Isopropylbenzene	2480	100	2000	95	119	80-127	1630	41.4	30	R
Methyl tert-butyl ether	2023	100	2000	0	101	80-130	1365	38.8	30	R
Methylene chloride	2466	500	2000	0	123	75-140	1696	37	30	R
Styrene	2396	100	2000	0	120	85-125	1582	40.9	30	R
Tetrachloroethene	2403	100	2000	0	120	77-138	1562	42.4	30	R
Toluene	2355	100	2000	0	118	85-125	1554	41	30	R
trans-1,2-Dichloroethene	2434	100	2000	0	122	80-140	1690	36.1	30	R
trans-1,3-Dichloropropene	2242	100	2000	0	112	81-123	1469	41.7	30	R
Trichloroethene	2322	100	2000	0	116	84-130	1521	41.7	30	R
Trichlorofluoromethane	2170	100	2000	0	108	60-140	1521	35.2	30	R

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

Client: The Mannik & Smith Group, Inc.
Work Order: 15111329
Project: RACER - Van Buren Landfill

QC BATCH REPORT

Batch ID: **R177133** Instrument ID **VMS7** Method: **SW8260B**

Vinyl chloride	2151	100	2000	0	108	50-136	1443	39.4	30	R
Xylenes, Total	13270	300	6000	6608	111	80-126	11330	15.8	30	
Surr: 1,2-Dichloroethane-d4	*1903*	0	*2000*	0	*95.2*	*75-120*	1929	*1.36*	*30*	
Surr: 4-Bromofluorobenzene	*1995*	0	*2000*	0	*99.8*	*80-110*	1959	*1.82*	*30*	
Surr: Dibromofluoromethane	*2001*	0	*2000*	0	*100*	*85-115*	1989	*0.602*	*30*	
Surr: Toluene-d8	*1964*	0	*2000*	0	*98.2*	*85-110*	1946	*0.921*	*30*	

The following samples were analyzed in this batch:

15111329-17C	15111329-18C	15111329-26C
15111329-36A		

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

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Chain of Custody Form

Page 1 of ____

COC ID: 30584

ALS Project Manager: | ALS Work Order #: 511329

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	RACER VBT semi-Annual sampling	A	Metals - Fe, Mg, Al
Work Order		Project Number	R2330017	B	Dissolved Metals - Fe, Mg, Al
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	
Send Report To		Invoice Attn	Accounts Payable	D	
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	
				F	
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	
Phone	(734) 397-3100	Phone		H	
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-R2330017-111615-AEP-001	11/16/15	1035	L	HNO3	2	X	X									
2	W-R2330017-111615-AEP-002	11/16/15	1144	L	HNO3	2	X	X									
3	W-R2330017-111615-AEP-003	11/16/15	1224	L	HNO3	2	X	X									
4	W-R2330017-111615-AEP-004	11/16/15	1414	L	HNO3	2	X	X									
5	W-R2330017-111615-AEP-005	11/16/15	1540	L	HNO3	2	X	X									
6	W-R2330017-111615-AEP-024	11/16/15	1640	L	HNO3	2	X	X									
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: | Shipment Method: | Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other ____ | Results Due Date:

Relinquished by:	Date: 11/16/15	Time: 1700	Received by: MSG Fridge	Notes: Field filtered for Dissolved Metals	
Relinquished by:	Date: 11-23-15	Time: 1305	Received by (Laboratory): 11/24/15 0800	Cooler ID	Cooler Temp: 3.8 c
Logged by (Laboratory): DES	Date: 11/24/15	Time: 0900	Checked by (Laboratory):		

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

Page ____ of ____

COC ID: 30583

ALS Project Manager: | ALS Work Order #: 1511329

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	RACER VBL Semi-annual sampling	A	Metals - Fe, Mg, Al
Work Order		Project Number	R2330017	B	Dissolved metals - Fe, Mg, Al
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	~~VOCs~~
Send Report To		Invoice Attn	Accounts Payable	D	
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	
				F	
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	
Phone	(734) 397-3100	Phone		H	
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-R2330017-111715-JPM-006	11/17/15	1100	L	HNO_3	2	X	X									
2	W-R2330017-111715-JPM-007	11/17/15	1351	L	HNO_3	2	X	X									
3	W-R2330017-111715-AFB-008	11/17/15	1342	L	HNO_3	2	X	X									
4	W-R2330017-111715-AFB-009	11/17/15	1501	L	HNO_3	2	X	X									
5	W-R2330017-111715-AFJPM-010	11/17/15	1510	L	HNO_3	2	X	X									
6	W-R2330017-111715-JPM-025	11/17/15	1545	L	HNO_3	2	X	X									
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign | Shipment Method | Turnaround Time in Business Days (BD) ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other ____ | Results Due Date:

	Date:	Time:		
Relinquished by:	11/17/15	1600	Received by: MSG Fridge	
Relinquished by:	11-23-15	1305	Received by (Laboratory):	
Logged by (Laboratory): DFS	11/24/15	0900	Checked by (Laboratory):	

Notes: Rec'd 11/24/15 0800 Field Filtered For dissolved metals

Cooler ID	Cooler Temp
	3.8 c

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Chain of Custody Form

Page ____ of ____

COC ID: 30582

ALS Project Manager: | ALS Work Order #: 1511329

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	RACER SEMI ANNUAL SAMPLING	A	Metals - Fe, Mg, Al
Work Order		Project Number	R2330017	B	Dissolved Metals, Fe, Mg, Al
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	VOCs
Send Report To		Invoice Attn	Accounts Payable	D	
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	
				F	
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	
Phone	(734) 397-3100	Phone		H	
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-R2330017-111815-APB-011	11/18/15	0931	L	HNO3	2	X	X									
2	W-R2330017-111815-APB-012		1034		HNO3	2	X	X									
3	W-R2330017-111815-JPM-013		0955		HNO3	2	X	X									
4	W-R2330017-111815-JPM-014		1100		HNO3	2	X	X									
5	W-R2330017-111815-APB-015		1221		HNO3/HCl	5	X	X	X								
6	W-R2330017-111815-JPM-016		1235		HNO3/HCl	5	X	X	X								
7	W-R2330017-111815-JPM-017		1510		HNO3	2	X	X									
8	DUP 1			L	HNO3	2	X	X									
9	W-R2330017-111815-APB-026	11/18/15	1520	L	HNO3	2	X	X									
10																	

Sampler(s) Please Print & Sign | Shipment Method | Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other ____ | Results Due Date:

Relinquished by:	Date: 11/18/15	Time: 1600	Received by: MSG Fridge	Notes: Rec'd 11/24/15 0800	
Relinquished by:	Date: 11-23-15	Time: 1302	Received by (Laboratory):	Cooler ID	Cooler Temp: 3.8c
Logged by (Laboratory): BES	Date: 11/24/15	Time: 0900	Checked by (Laboratory):		

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

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Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

Chain of Custody Form

Page ____ of ____

COC ID: 30581

ALS Project Manager: | ALS Work Order #: 1511329

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	RACER Semi Annual Sampling	A	Metals - Fe, Mg, Al
Work Order		Project Number		B	Dissolved Metals, Fe, Mg, Al
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	VOCs
Send Report To		Invoice Attn	Accounts Payable	D	
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E F	
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	
Phone	(734) 397-3100	Phone		H	
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-R233017-111915-JPM-018	11/19/15	0930	W	HNO3	2	X	X									
2	W-R233017-111915-JPM-020		1100		HNO3	2	X	X									
3	W-R233017-111915-AEP-019		1248		HNO3	2	X	X									
4	W-R233017-111915-AEP-021		1405		HNO3	2	X	X									
5	W-R233017-111915-AEP-022		1902		HNO3/HCl	5	X	X	X								
6	W-R233017-111915-JPM-023		1550		HNO3	2	X	X									
7	W-R233017-111915-AEP-027		1620		HNO3	2	X	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign | Shipment Method | Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other ____ | Results Due Date: 12-2-15

	Date	Time		Notes: Rec'd 11/24/15 0800
Relinquished by:	11/19/15	1650	Received by: MSG Fridge	
Relinquished by:	11-23-15	1305	Received by (Laboratory):	
Logged by (Laboratory):	11/24/15	0900	Checked by (Laboratory):	

Cooler ID	Cooler Temp
	3.8 ±

QC Package: (Check One Box Below)
☐ Level I Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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ALS Environmental

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Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

Chain of Custody Form

Page ____ of ____

COC ID: 30580

ALS Project Manager: | ALS Work Order #: 1511329

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	RACER Semi annual sampling	A	Metals - Fe, Mg, Al
Work Order		Project Number		B	Dissolved metals - Fe, Mg, Al
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	~~VOCs~~
Send Report To		Invoice Attn	Accounts Payable	D	
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	
				F	
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	
Phone	(734) 397-3100	Phone		H	
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-R2330017-112015-JPM-029	11/20/15	0830	L	HNO_3	2	X	X									
2	W-R2330017-112015-AFB-028		0837			2	X	X									
3	W-R2330017-112015-AFB-030		1118			2	X	X									
4	W-R2330017-112015-AJPM-031		1055			2	X	X									
5	W-R2330017-112015-AFB-032		1251			2	X	X									
6	W-R2330017-112015-AFB-DUP2					2	X	X									
7	W-R2330017-112015-AJPM-033		1307			2	X	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign | Shipment Method | Turnaround Time in Business Days (BD) ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other ____ | Results Due Date:

Relinquished by:	Date: 11/20/15	Time: 1430	Received by: MSG Fridge	Notes: Rec'd 11/24/15 0800	
Relinquished by:	Date: 11-23-15	Time: 1205	Received by (Laboratory):	Cooler ID	Cooler Temp
Logged by (Laboratory):	Date: 11/24/15	Time: 0900	Checked by (Laboratory):		3.8 c

QC Package: (Check One Box Below)
☐ Level I Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **MANNIK&SMITH** Date/Time Received: **24-Nov-15 08:00**

Work Order: **15111329** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 24-Nov-15 (Date) Reviewed by: Bill Carey (eSignature) 25-Nov-15 (Date)

Matrices: Liquid

Carrier name: ALSHN

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.8/3.8 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/24/2015 9:37:59 AM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: