



Environmental Resources Group

Assessment • Remediation • Compliance • Risk Management

ADDITIONAL INVESTIGATION REPORT

RACER TRUST

**DAVISON ROAD LANDFILL (12920)
DAVISON AND DONNEGAL ROAD
BURTON, MI**

PREPARED FOR:

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PREPARED BY:

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1.0 INTRODUCTION AND PURPOSE

1.1 INTRODUCTION

Environmental Resources Group, LLC (ERG) is pleased to present the following report for the RACER Trust (RACER) Davison Road Landfill property, located in Burton, Michigan (herein referred to as the "site"). Please refer to Figure 1 for the Site Location Map.

1.2 PURPOSE

ERG conducted additional investigation activities at the site to address the MDEQ comments on the Site Update Report dated December 20, 2013 prepared by ERG. On July 17, 2014, ERG met with the MDEQ and the following issues were discussed and agreed upon in order to further delineate and evaluate the groundwater/surface water interface (GSI) pathway in an effort to achieve site closure.

1. MDEQ requested that groundwater at the Site be further defined west of MW-3-12. ERG indicated that the terrain is difficult to navigate, but that we would attempt to install a soil boring/monitoring well in the area. Considering arsenic is the only constituent that exceeds the cleanup criteria, the MDEQ agreed that arsenic only be analyzed.
2. The MDEQ indicated that the area east of SB/MW-6-12 should be further delineated. This area is off-site, on the adjacent property to the east. ERG indicated that groundwater is flowing from east to west in that area, and therefore, impact, if any, would be coming from offsite. The MDEQ concurred and agreed that the area east of SB/MW-6-12 is not a concern.
3. It is unclear whether the MDEQ considers the intermittent creek located south of the site (parallel to the railroad tracks) "surface water" or a "drainage ditch." This will have an impact on the GSI compliance points for the site. As of the writing of this report, a determination has not been made by the MDEQ Water Division.
4. The MDEQ requested and a soil boring/monitoring well be installed between SB-MW-9-12 and TMW-6 (approximately 150' north of TMW-6) to address any potential cross gradient impact between the two sample points. Soil and groundwater will be analyzed for VOCs, mercury and SVOCs.
5. MDEQ requested that a samples be collected from the intermittent creek located south of the site, and from the Gilkey Creek to be analyzed for hardness and arsenic. This will be necessary if mixing zone calculations are to be performed.
6. The MDEQ requested that the existing monitoring wells located near the drainage ditch and the Gilkey Creek be sampled and analyzed for arsenic. These sampling points are considered GSI compliance points.

The general scope of work included the installation of additional soil boring/monitoring wells, groundwater sampling and analysis, and surface water sampling, per the above discussions.

2.0 SITE INVESTIGATION METHODOLOGY

To address the items above, two soil borings/monitoring wells (SB-MW-15-14 and SB-MW-16-14) were installed at the Site on September 22 -25, 2014 to further define the extent of impacted soil and groundwater identified in the previous investigations, and to define the GSI compliance point. Twelve groundwater samples were collected from monitoring wells located near the drainage ditch and Gilkey Creek (including newly installed SB/MW-16-14) and analyzed for arsenic only. These wells were sampled to confirm GSI compliance. In addition, one newly installed monitoring well (MW-15-14) was analyzed for volatile organic compounds (VOCs) Base Neutral Acids (BNAS), 10 Michigan Metals and Aluminum. Two surface water samples were collected from the Gilkey Creek (GC-1 up and GC-3 down) and submitted for analysis for arsenic and hardness. ERG attempted to collect samples from the drainage ditch and the mid-point from Gilkey Creek, however, due to the inadequate amount of surface water present, a sample wasn't collected. The methodology and results of this investigation is described below.

2.1 SOIL BORING INSTALLATION

ERG geologist was on-Site to observe the soil boring installation, collect soil samples, and to document soil conditions. ERG utilized a Geoprobe® direct-push drilling rig to collect samples. The soil borings were described in accordance with the Unified Soil Classification System including color, grain size, predominant soil type, odor, moisture, and visual contaminant impact. A photoionization detector (PID) was used to monitor the volatile organic vapor content in the soil. Soil description, PID readings, and other pertinent observations including any visual evidence of contamination (e.g., staining, odor, sheen, etc.) were recorded in a field logbook. Soil boring logs are included as Appendix A.

All drilling and sampling equipment was decontaminated prior to drilling each boring with a solution of non-phosphate soap and control water followed by a control water rinse.

Soil samples were collected at the interval exhibiting the highest PID readings or noticeable physical impact. Soils that did not exhibit elevated PID readings or physical impact, were sampled from the interval above the water table surface. Up to two samples were collected from each boring location.

Two soil samples were collected for laboratory analysis. Soil collected from SB/MW-15-14 (7.5-9.5') was analyzed for VOCs, BNAs, 10 MI metals and aluminum. Soil collected from SB/MW-16-14 (6-7') was analyzed for arsenic only utilizing USEPA methodology. Soil samples were submitted to Merit Laboratory under proper chain of custody procedures.

2.2 MONITORING WELL INSTALLATION

Two monitoring wells were installed in each soil boring location such that the well screen interval intersected the water table surface at the time of drilling. Two-inch diameter Schedule 40 PVC riser and 0.010-inch slotted five-foot screens were installed in the soil borings. The boring annulus was filled with

sand filter pack to approximately 0.5 foot above the screen, then with hydrated bentonite chips to one foot below the ground surface. The wells were finished with a stick-up locking protective steel well cover.

After installation, the monitoring wells were developed to establish communication between the aquifer material and the well screen interval. The entire well screen interval was developed using the “surge and purge” method through use of a submersible pump. Refer to Figure 2 for the Site Map. Well Construction Diagrams are included as Attachment A.

2.3 GROUNDWATER AND SURFACE WATER SAMPLING

Groundwater and surface water samples were collected during the recent site activities. Prior to sampling the monitoring wells, the depth to groundwater was collected with an electronic water level meter. Low flow sampling methodology was used to collect water samples from MW-15-14. Water quality parameters including pH, specific conductivity, temperature, dissolved oxygen, oxidation-reduction potential, and turbidity were recorded during purging until the readings stabilize within 10% prior to sample collection. Groundwater collected from this well was analyzed for VOCs, BNAs, 10 Michigan Metals (total metals), including total arsenic and aluminum.

ERG collected groundwater samples from 12 additional monitoring wells including: MW-3-12, MW-4-12, MW-7-12, MW-9-12, MW-11-12, MW-12-12, MW-13-12, MW-14-12, MW-16-14, TMW-1, TMW-6 and TMW-8. These samples were analyzed for total arsenic only. These samples were collected after purging three well volumes and no water quality parameters were collected, as approved by the MDEQ Project Manager.

Only two surface water samples could be collected from the established sampling points from Gilkey Creek (GC-1-up and GC-3-down). A surface water sample could not be collected from the established mid-point sampling location due to an inadequate amount of surface water present. Surface water was not observed in the drainage ditch located along the southern portion of the site and samples could not be collected. All surface water samples were analyzed for total arsenic and hardness.

Groundwater and surface water samples were submitted to Merit Laboratory for analysis in accordance with regulatory methodologies and in accordance with appropriate chain of custody protocols.

3.0 INVESTIGATION RESULTS

3.1 SOIL RESULTS

Soils encountered during drilling consisted of native silt and clay, with occasional interbedded layers of sand and silt. Soil boring logs are included as Attachment A.

Based on the potential future use and probable land use restrictions, the analytical results were compared to the MDEQ Part 201 Non-Residential Cleanup Criteria to evaluate the exposure pathways. Analytical results of soil collected from SB/MW-15-14 did not identify concentrations of VOCs or SVOCs above the laboratory detection limits. Concentrations of metals, including aluminum, cobalt, iron, and manganese were detected above the drinking water protection (DWP) criteria. Concentrations of cobalt and manganese also exceeded the Groundwater/Surface Water Interface Protection (GSIP) criteria.

ERG calculated the *Generic Facility Specific Part 201 Groundwater Surface Water Interface Protection (GSIP) Criteria for {G} Footnoted Hazardous Substance*. The GSIP criteria was calculated using the most conservative, lowest hardness value of 290 mg CaCO₃/L collected from surface water sample GC-3 (Downstream). Facility specific GSIP criteria were calculated for cadmium, copper, manganese and zinc. See Appendix C for the MDEQ calculation spreadsheet.

ERG compared previous sample results (obtained in 2012) of cadmium, copper, manganese and zinc to the calculated GSIP criteria. The revised and calculated values for GSIP criteria have been incorporated into Table 1 and Figure 3. The results indicated that cadmium, copper, manganese and zinc exceed the calculated GSIP criteria at several locations. Additionally, several metals (as discussed in the December 20, 2013 report) exceeded the Statewide Default Background Levels and GSIP in several soil borings. The soil laboratory analytical report has been included in Appendix D.

As a reference, ERG has included Table 2-Summary of Volatile Organic Carbons (VOCs) in Soil and Table 3-Summary of Polynuclear Aromatic Hydrocarbons (PNAs)/Semi (VOCs) in Soil.

3.2 GROUNDWATER AND SURFACE WATER RESULTS

As shown in the groundwater gradient Figures 5 through 9 groundwater consistently flows towards the Gilkey Creek on the southern portion of the Site and radially on the northern portion of the Site. Based on the slug test data collected the average K value was estimated to 2.4×10^{-4} cm/sec.

Laboratory analysis of groundwater collected from the newly installed monitoring well did not identify concentrations of VOCs or SVOCS above the laboratory detection limit. Laboratory analysis identified several metal concentrations in the sample collected from MW-15-14 above the laboratory detection limit total including arsenic, iron, manganese and vanadium above the non-residential drinking water criteria in several wells. Concentrations of arsenic were detected above the GSI criteria in samples collected from MW-3-12, MW-9-12, MW-12-12, MW-15-14 and MW-16-14.

As stated above, ERG calculated the *Generic Facility Specific Part 201 Groundwater Surface Water Interface (GSI) Criteria for {G} Footnoted Hazardous Substance*. The GSI criteria was calculated using the most conservative, lowest hardness value of 290 mg/CaCO₃/L collected from surface water sample GC-3 (Downstream). Facility specific GSI criteria were calculated for cadmium, copper, manganese and zinc. See Appendix C for the MDEQ calculation spreadsheet.

The calculated GSI criteria were compared to analytical results from all groundwater sampling events. Review of the results from the 2012, 2013 and 2014 sampling events, concentrations of manganese and copper exceeded the calculated facility specific GSI criteria in several monitoring wells.

The revised and calculated values for the GSI criteria have been incorporated into Table 4 and Figure 4. The results indicated that cadmium, copper, and manganese exceed the calculated GSI criteria at several locations. It is our intent to incorporate these chemicals into the mixing zone determination.

4.0 SUMMARY OF FINDINGS

The additional investigation addressed each of the items identified by the MDEQ and described in Section 1.2.

- In response Items #1 and #6, ERG installed a monitoring well MW-16-14 west of MW-3-12, closer to the Gilkey Creek, in an attempt to define the extent of arsenic in the groundwater prior to reaching the Gilkey Creek. Laboratory analysis indicated that the arsenic concentration is above non-residential GIS criteria.
- In response to items #3 & #5, The MDEQ requested that a samples be collected from the intermittent creek located south of the site, and from the Gilkey Creek to be analyzed for hardness and arsenic.

At this time the MDEQ has not determined whether the intermittent creek located south of the site (parallel to the railroad tracks) "surface water" or a "drainage ditch". Based on observations during the most recent sampling event and previous sampling events, surface water has not been present or adequately present to allow sample collection from the established sampling points. Specifically, of the five surface water sampling events conducted in August 2012, November 2012, April 2013, July 2013 and September 2014; two samples were collected from the D-3 East sampling point; one in April and one in July 2013, and only one surface water was collected from the D-1-West and D-2-Mid sampling point in April 2013. Due to the lack of surface water present throughout the majority of the year, ERG believes that the MDEQ should concur this is a drainage ditch and not surface water.

- In response to item #4, ERG installed SB/MW-15-14 between SB/MW-9-12 and TMW-6 (approximately 150' north of TMW-6) at the request of the MDEQ to address any potential cross gradient impact between the two sample points. Laboratory analysis identified concentrations of cobalt and manganese above the GSIP criteria in soil and arsenic above the GSI criteria in the groundwater sample collected. No VOCs or SVOCs were detected.
- In response to item #6, ERG collected groundwater samples from monitoring wells located near the drainage ditch and Gilkey Creek. Samples collected were analyzed for total arsenic. Concentrations of arsenic were detected above the GSI criteria in samples collected from MW-3-12, MW-9-12, MW-12-12, MW-15-14 and MW-16-14.

Results of the previous and most recent investigations conducted at the site indicate that the extent of soil impacted with VOCs, SVOC and metals have been defined.

Analytical results of groundwater did not identify concentrations of VOCs or SVOCs in any of the groundwater samples analyzed. Several total metals were identified in the groundwater at the Site above the published and calculated GSI, and the DWP criteria.

The analytical results of the soil identified several metal concentrations that exceed the State Default Background Level. However, review of the Michigan Background Soil Survey (2005) indicates that the

concentrations are within the "typical range of values" for soil. In addition, some of the highest concentrations detected are within the non-impacted and undisturbed areas of the Site. Therefore, these concentrations are believed to be naturally occurring.

Analytical results of soil identified concentrations of VOCs, SVOCs and metals above the published GSIP criteria and several metals above the calculated GSIP criteria.

5.0 CONCLUSIONS AND RECOMMENDATIONS

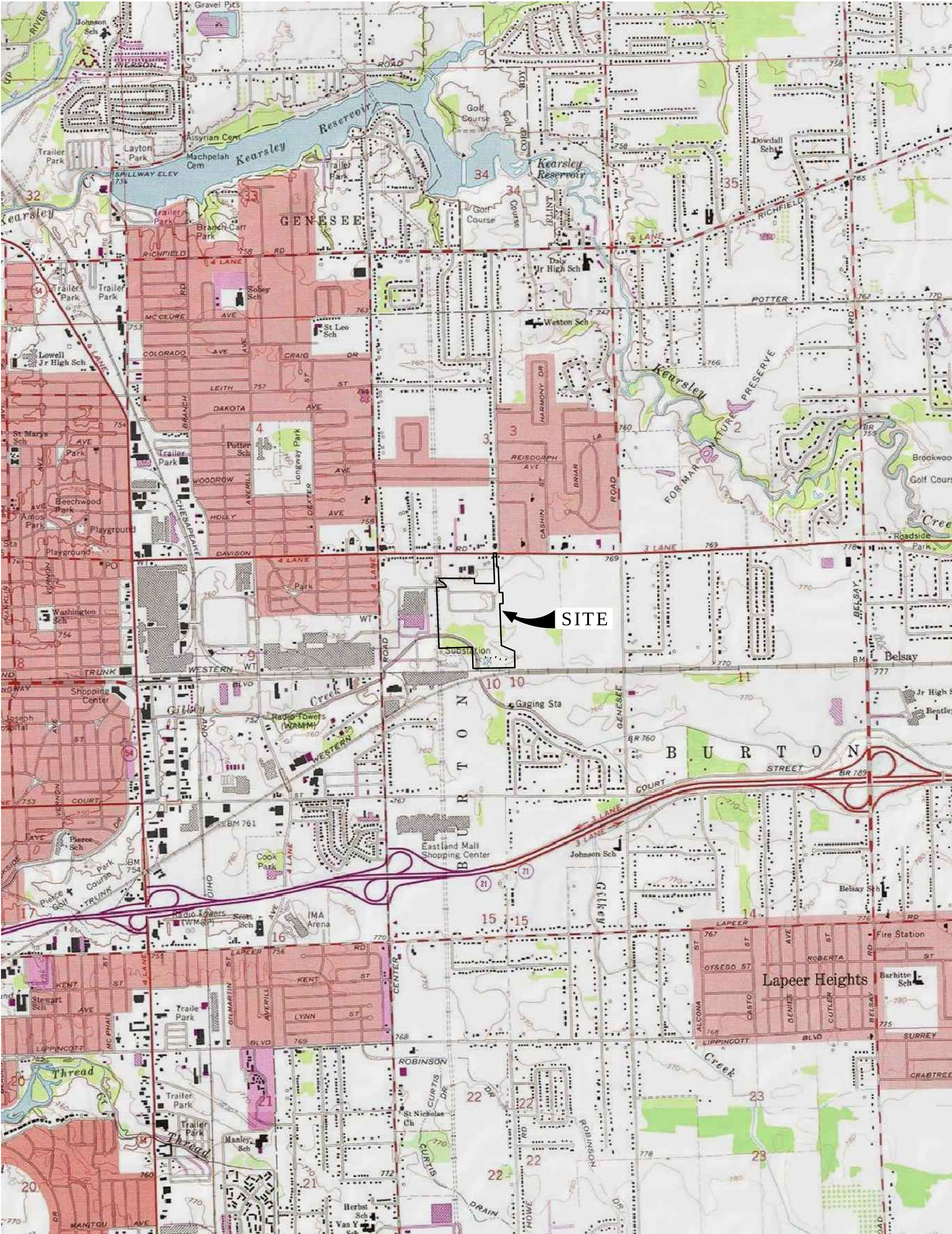
The relevant exposures at the Site include GSI, non-residential DWP and non-residential DW pathways.

ERG believes that the drinking water pathway can be eliminated by implementing a declaration of restrictive covenant (DRC) prohibiting the use of potable water and requiring that the use of the property remain non-residential.

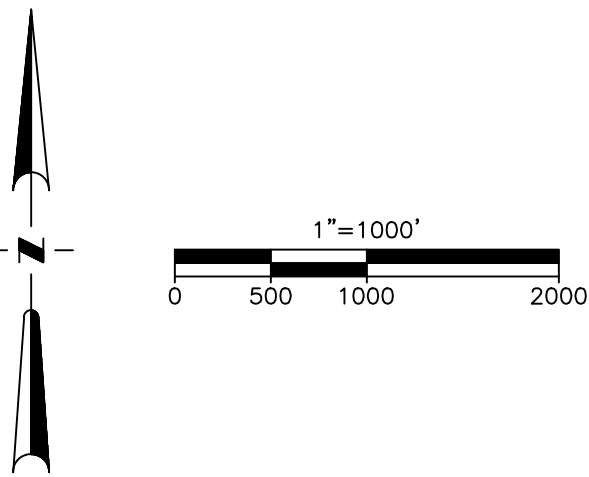
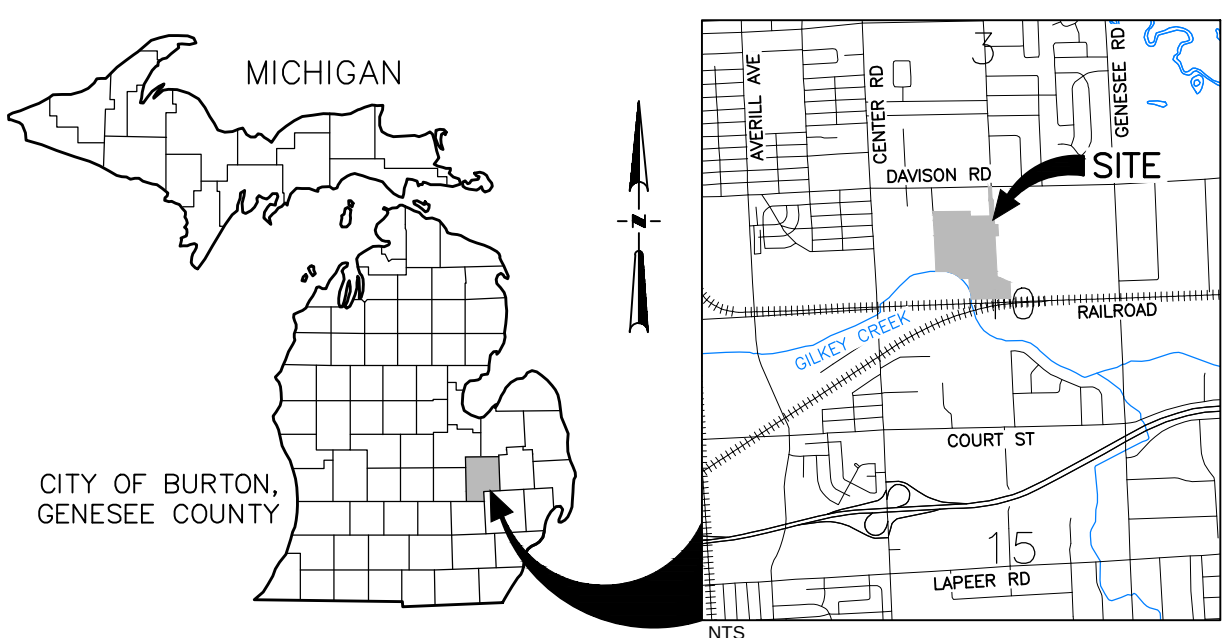
The remaining complete exposure pathway is the GSI to Gilkey Creek, which is part of the Flint River drainage basin. ERG believes that utilizing a mixing zone calculation along portions of the receiving surface water body (Gilkey Creek) will demonstrate that any discharge of venting groundwater is in compliance with current water quality standards, and no further action to address the GSI pathway will be necessary.

If the MDEQ agrees with this approach, ERG will complete a report in conjunction with the DRC with an anticipated submittal date of July, 2015. Preparation of the proposed report and DRC is included as part of the MDEQ approved 2015 budget.

FIGURES



LOCATION MAP



SITE LOCATION MAP

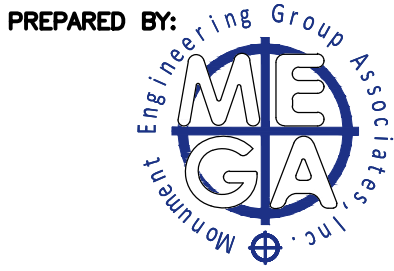
RACER TRUST
DAVISON ROAD LANDFILL – BURTON, MICHIGAN

FIGURE
1

DRWG. by : MA
CHECK :
DATE : 11/22/2013
DWG: 12-068_Figures
SHEET : 1 OF 8

CONT. INT.: N/A
FIELD : MD/SM/LB
V. SCALE : N/A
SCALE: 1"=150'
JOB#: 12-068

REVISIONS	DATE



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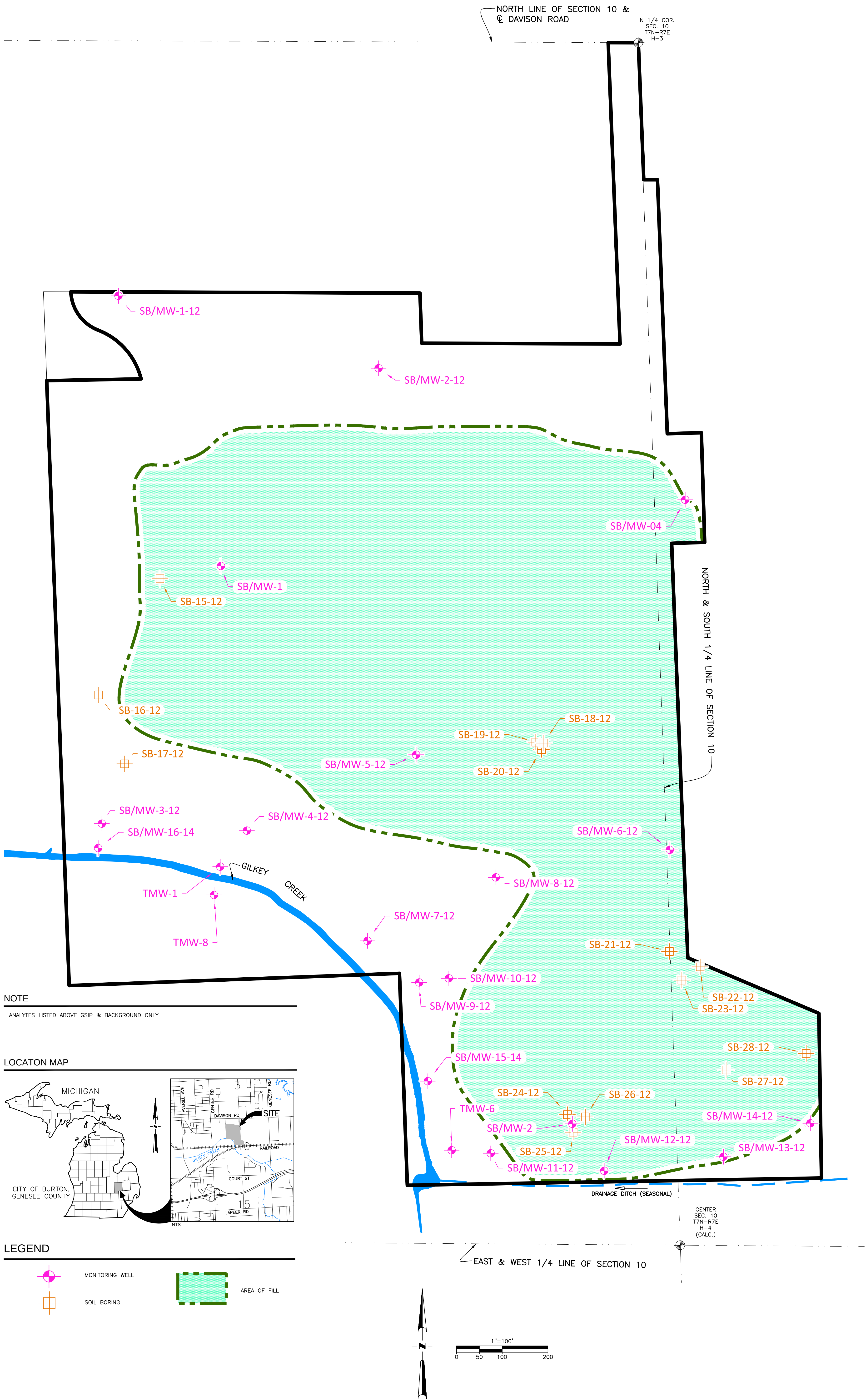


FIGURE
2

DRWG. by : MA
CHECK :
DATE : 11/22/2013
DWG: 12-068_Figures
SHEET : 2 of 9

CONT. INT.: N/A
FIELD : MD/SM/LB
V. SCALE : N/A
SCALE: 1"=150'
JOB# :12-068

REVISIONS

DATE

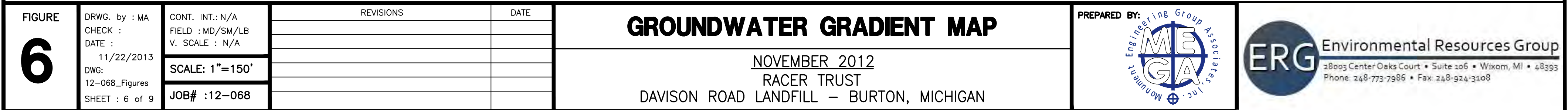
SITE MAP

RACER TRUST
DAVISON ROAD LANDFILL - BURTON, MICHIGAN

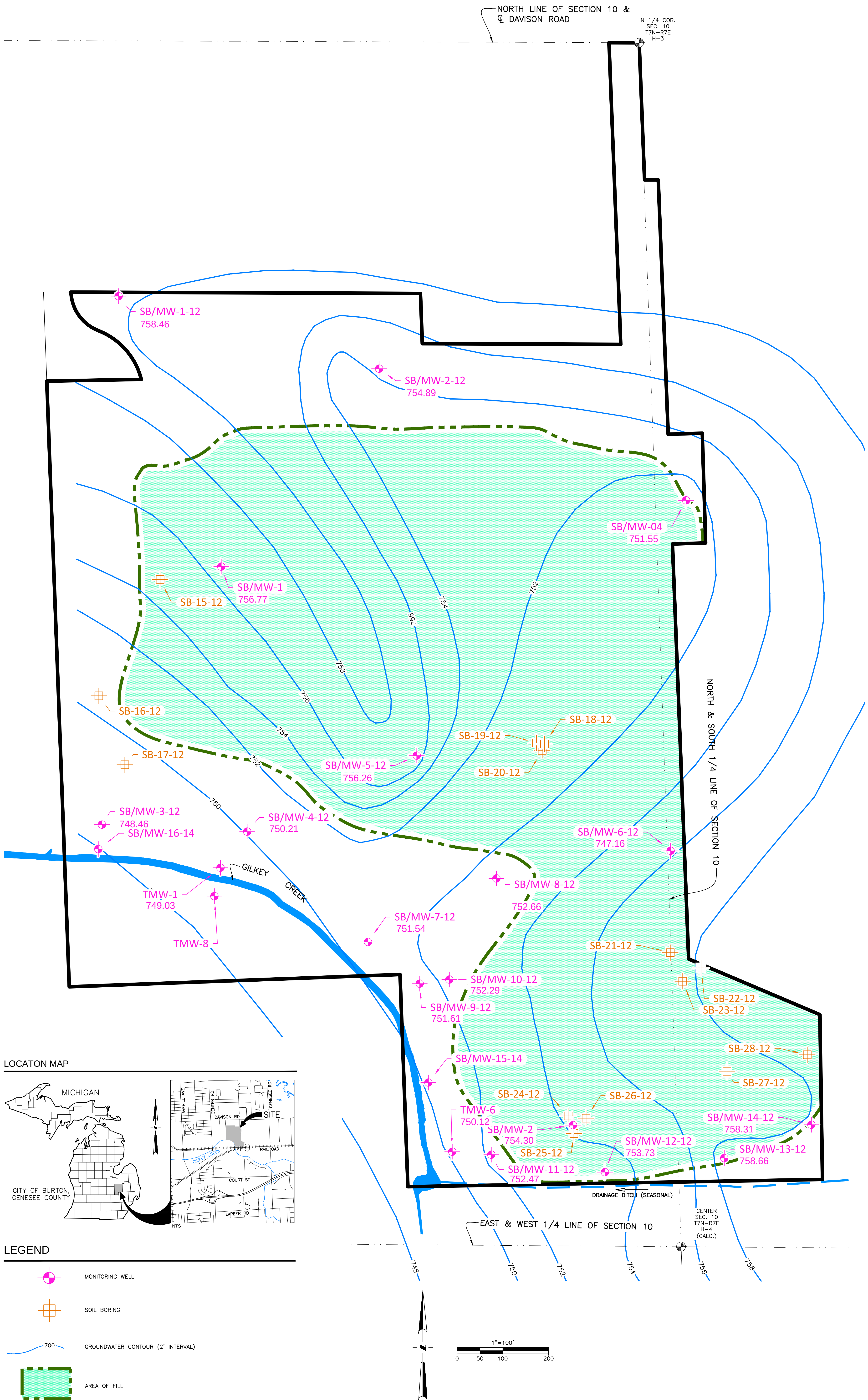
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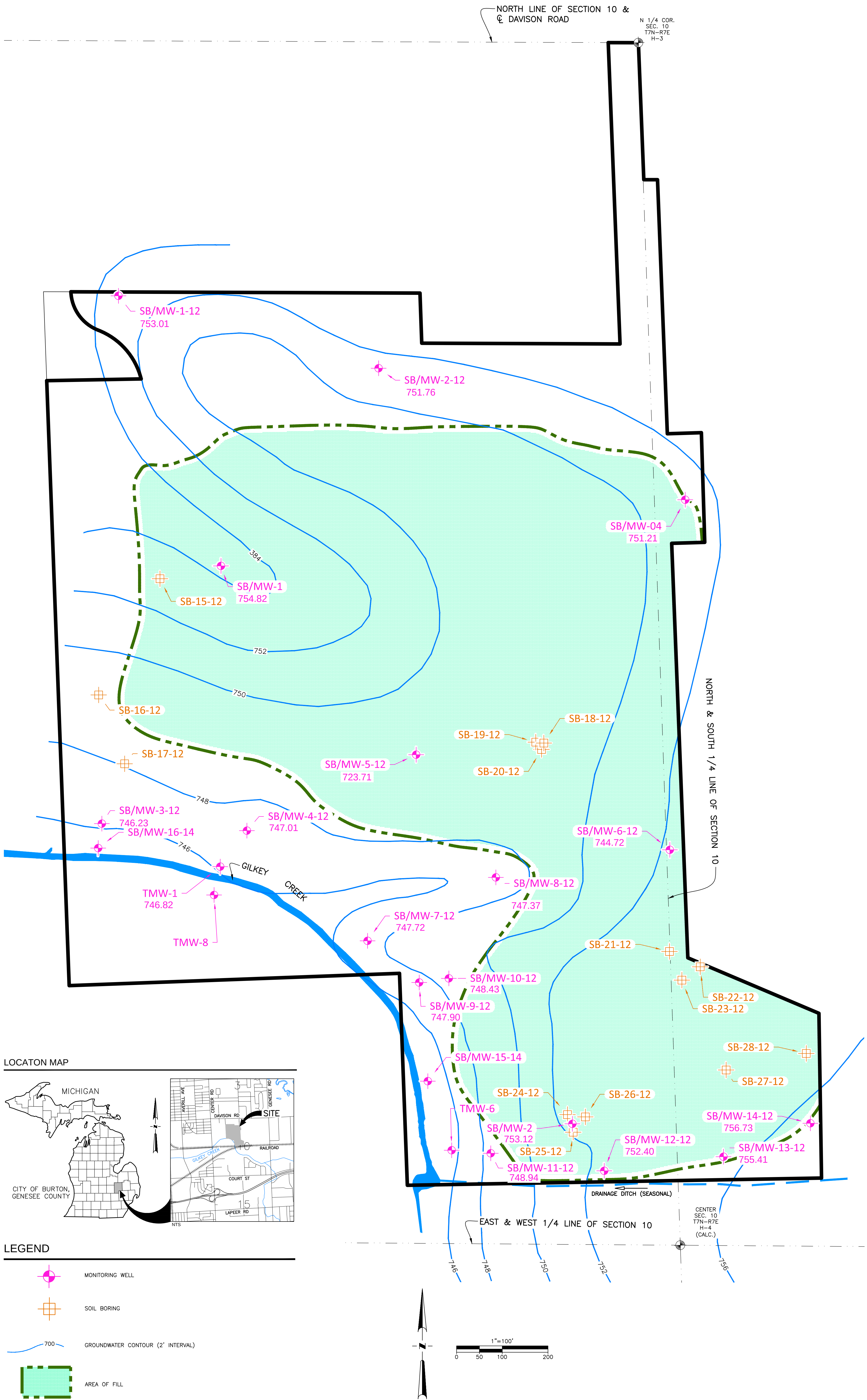
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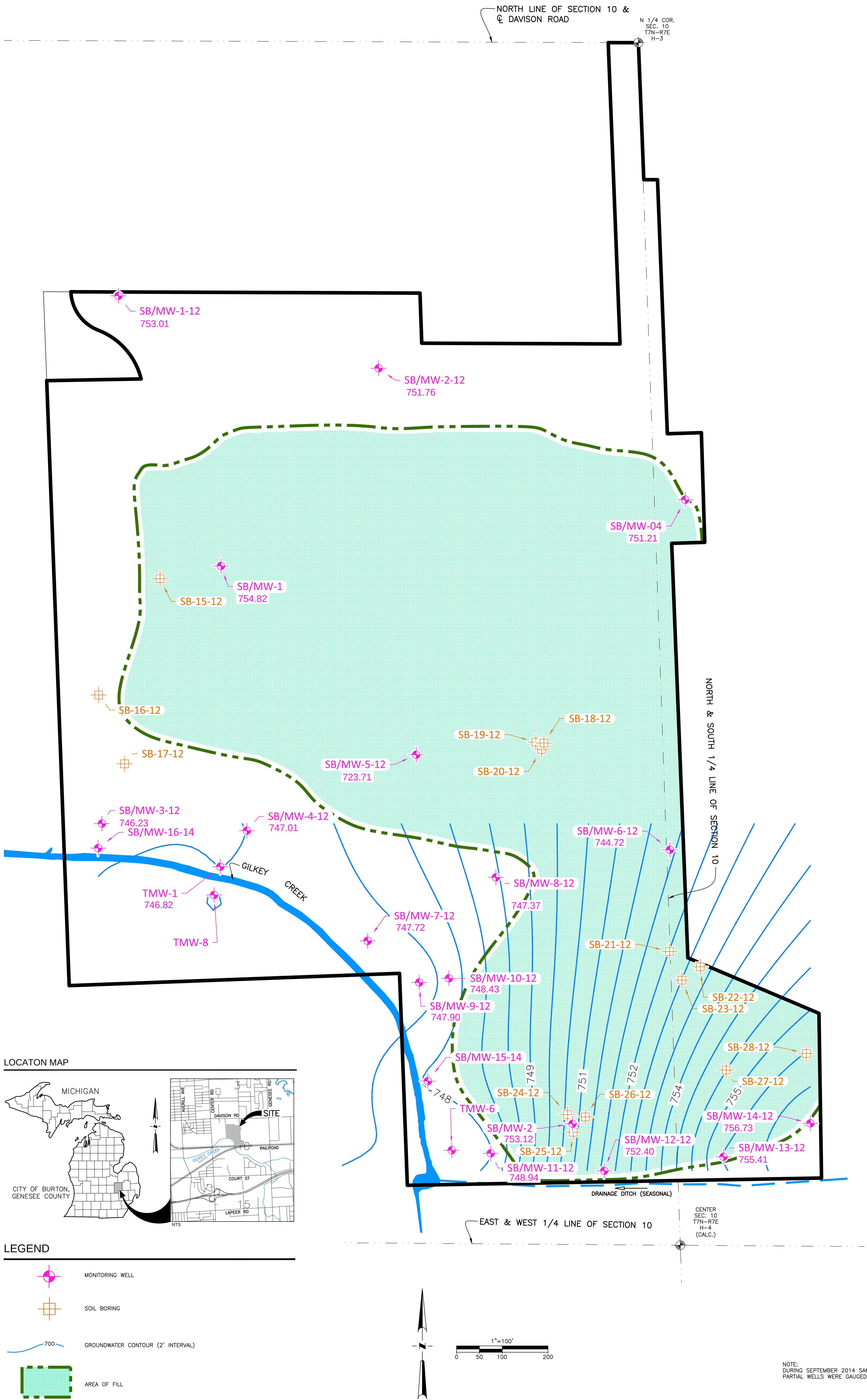
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TABLES

Table 1
Soil Analytical Results-Metals
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	<u>Statewide Default Background Levels</u>	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	<i>Non-Residential Groundwater Contact Protection Criteria and RBSLs</i>	SB/MW-1-12	SB/MW-2-12	SB/MW-3-12	SB/MW-4-12	SB/MW-4-12	SB/MW-5-12	SB/MW-6-12	SB/MW-7-12	SB/MW-8-12	SB/MW-9 -12	SB/MW-10-12
Sample Depth					(7'-7.5')	(14'-15')	(3'-4')	(2'-3')	(2'-3') DUP	(9'10')	(14'-15')	(4'-5')	(5'-6')	(6'-8')	(2'-3')
Sample Date					07/17/2012	07/16/2012	07/19/2012	07/19/2012	07/19/2012	07/20/2012	07/17/2012	07/19/2012	07/18/2012	07/18/2012	07/18/2012
<i>Metals ug/Kg</i>															
Aluminum (B)	6.9E+6	1,000	NA	1.09e+9 (D)	2,440,000	885,000	1,940,000	1,740,000	2,550,000	1,780,000	2,330,000	5,590,000	3,640,000	2,680,000	3,360,000
Arsenic	5,800	4,600	4,600	2,000,000	1,400	6,110	4,700	7,090	11,800	1,000	1,680	680	2,310	7,240	4,970
Cadmium (B)	1,200	6,000	5,900	2.30E+08	<200	<200	<200	250	350	210	260	<200	<200	<200	<200
Chromium, Total	18,000 (total)	1.09E+9(D)	(G,X)	1.09e+9(D)	3,500	2,820	3,280	3,760	5,220	<u>27,500</u>	3,300	5,180	5,140	5,940	5,070
Cobalt	6,800	2,000	2,000	4.80E+07	2,510	3,380	2,260	2,800	4,390	1,520	2,630	5,180	3,780	4,990	3,270
Copper (B)	32,000	5.8E+6	1.30E+05	1.09e+9(D)	5,490	9,300	9,240	9,130	14,400	16,400	9,550	10,200	5,290	14,300	7,080
Iron (B)	1.2E+7	6,000	NA	1.09e+9(D)	3,050,000	7,880,000	4,130,000	2,700,000	4,010,000	18,000,000	3,930,000	26,600,000	5,350,000	10,000,000	18,800,000
Manganese (B)	4.4E+5	1,000	1.0E+5 (X)	1.80E+08	109,000	390,000	131,000	215,000	245,000	343,000	115,000	894,000	232,000	333,000	268,000
Mercury, Total	130	1,700	50 (M); 1.2	47,000	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vanadium	NA	9.90E+05	4.30E+05	1.09e+9(D)	5,460	6,170	7,480	9,620	13,500	5,430	9,220	11,200	12,000	11,100	10,600
Zinc (B)	47,000	5.00E+06	2.90E+05	1.09e+9(D)	15,100	24,200	21,800	15,500	22,300	29,000	17,000	25,400	14,200	19,100	22,300

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Underlined exceeds the Statewide Default Background Levels
Italic-Exceeds Groundwater Protection Criteria
Exceeds Direct Contact

NS - Not Sampled
NA - Not Analyzed or Not Applicable

GSI Criteria was calculated pursuant to the "Calculation of Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous Substances"
Facility Specific constituents include: Cadmium, Copper, Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSIP

Table 1
Soil Analytical Results-Metals
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Protection Criteria and RBSLs	SB/MW-11-12	SB/MW-12-12	SB/MW-13-12	SB/MW-14-12	SB-15-12	SB/MW-15-14	SB-16-12	SB/MW-16-14	SB-17-12	SB-18-12	SB-18-12	SB-19-12
Sample Depth					(6'-7')	(8.5'-9.5')	(0.5'-1.5')	(6.5'-7')	(11'-12')	(7.5'-9.5')	(5'-6')	(6'-7')	(2'-2.5')	(2'-3')	(8'-9')	(3'-4')
Sample Date					07/19/2012	07/17/2012	07/17/2012	07/17/2012	07/20/2012	9/23/2014	07/19/2012	9/23/2014	07/19/2012	07/20/2012	07/20/2012	07/20/2012
Metals ug/Kg																
Aluminum (B)	6.9E+6	1,000	NA	1.09e+9 (D)	2,460,000	3,040,000	2,310,000	1,260,000	950,000	2,040,000	4,150,000	NA	2,050,000	1,170,000	4,720,000	4,040,000
Arsenic	5,800	4,600	4,600	2,000,000	3,010	2,160	1,580	1,140	840	4,570	10,500	NA	11,900	650	1,800	1,060
Cadmium (B)	1,200	6,000	5,900	2.30E+08	<200	290	<200	<200	<200	<200	<200	NA	210	<200	<200	<200
Chromium, Total	18,000 (total)	1.09E+9(D)	(G,X)	1.09e+9(D)	3,340	4,170	2,680	2,520	2,030	5,140	7,500	NA	3,420	5,570	8,870	4,040
Cobalt	6,800	2,000	2,000	4.80E+07	2,820	2,400	3,140	1,970	1,720	4,400	10,600	NA	4,130	570	4,610	4,870
Copper (B)	32,000	5.8E+6	1.30E+05	1.09e+9(D)	4,040	9,790	5,810	2,040	5,910	11,200	9,630	NA	5,780	5,500	6,810	4,280
Iron (B)	1.2E+7	6,000	NA	1.09e+9(D)	11,500,000	5,960,000	7,190,000	2,230,000	3,320,000	8,460,000	13,000,000	NA	4,890,000	3,320,000	8,840,000	5,080,000
Manganese (B)	4.4E+5	1,000	1.0E+5 (X)	1.80E+08	377,000	247,000	297,000	220,000	197,000	274,000	1,780,000	NA	343,000	120,000	231,000	411,000
Mercury, Total	130	1,700	50 (M); 1.2	47,000	<50	<50	<50	<50	<50	<50	<50	NA	<50	<50	<50	<50
Vanadium	NA	9.90E+05	4.30E+05	1.09e+9(D)	5,930	10,400	6,310	3,770	4,940	9,050	14,200	NA	13,200	1,100	14,400	6,680
Zinc (B)	47,000	5.00E+06	2.90E+05	1.09e+9(D)	17,900	21,600	22,100	7,870	12,800	14,800	34,200	NA	19,400	6,810	23,200	12,600

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Underlined exceeds the Statewide Default Background Levels
Italic-Exceeds Groundwater Protection Criteria
Exceeds Direct Contact

NS - Not Sampled
NA - Not Analyzed or Not Applicable

GSI Criteria was calculated pursuant to the "Calculation of Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous Substances"
Facility Specific constituents include: Cadmium, Copper, Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSIP

Table 1
Soil Analytical Results-Metals
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Statewide Default Background Levels	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Protection Criteria and RBSLs	SB-20-12	SB-21-12	SB-22-12	SB-23-12	SB-24-12	SB-25-12	SB-26-12	SB-27-12	SB-27-12	SB-28-12
Sample Depth					(1'-2')	(0'-2')	(2'-3')	(1.5'-2.5')	(3'-4')	(11'-12')	(7'-8')	(2'-3')	(6'-7')	(2'-3')
Sample Date					07/20/2012	07/17/2012	07/17/2012	07/17/2012	07/16/2012	07/17/2012	07/16/2012	07/20/2012	07/20/2012	07/19/2012
Metals ug/Kg														
Aluminum (B)	6.9E+6	1,000	NA	1.09e+9 (D)	2,050,000	1,910,000	2,190,000	1,470,000	3,070,000	2,070,000	809,000	2,580,000	1,600,000	3,800,000
Arsenic	5,800	4,600	4,600	2,000,000	1,730	1,270	1,830	1,680	2,570	610	1,120	6,720	2,500	1,640
Cadmium (B)	1,200	6,000	5,900	2.30E+08	<200	<200	<200	590	310	<200	<200	3,140	340	<200
Chromium, Total	18,000 (total)	1.09E+9(D)	(G,X)	1.09e+9(D)	3,600	2,730	2,760	10,600	26,800	2,210	41,500	43,800	3,350	5,320
Cobalt	6,800	2,000	2,000	4.80E+07	2,860	3,440	4,100	1,710	1,800	1,740	1,870	3,430	2,410	3,670
Copper (B)	32,000	5.8E+6	1.30E+05	1.09e+9(D)	4,800	2,680	2,340	22,600	24,600	4,920	24,400	52,500	7,700	4,910
Iron (B)	1.2E+7	6,000	NA	1.09e+9(D)	4,650,000	2,980,000	3,540,000	6,540,000	5,570,000	3,380,000	24,100,000	8,870,000	4,260,000	7,100,000
Manganese (B)	4.4E+5	1,000	1.0E+5 (X)	1.80E+08	624,000	315,000	331,000	378,000	1,260,000	101,000	302,000	866,000	168,000	302,000
Mercury, Total	130	1,700	50 (M); 1.2	47,000	<50	<50	<50	162	65	<50	<50	104	<50	<50
Vanadium	NA	9.90E+05	4.30E+05	1.09e+9(D)	6,780	5,350	6,550	3,890	10,300	6,050	4,020	7,910	5,900	9,460
Zinc (B)	47,000	5.00E+06	2.90E+05	1.09e+9(D)	8,450	8,030	9,520	94,600	57,800	15,200	11,300	505,000	26,600	9,910

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Underlined exceeds the Statewide Default Background Levels
Italic-Exceeds Groundwater Protection Criteria
Exceeds Direct Contact

NS - Not Sampled
NA - Not Analyzed or Not Applicable

GSI Criteria was calculated pursuant to the "Calculation of Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous Substances"
Facility Specific constituents include: Cadmium, Copper, Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSIP

Table 2
Soil Analytical Results-VOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Res Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Res Groundwater Contact Protection Criteria and RBSLs	Non-Residential Direct Contact Criteria and RBSLs	SB/MW-1-12	SB/MW-2-12	SB/MW-3-12	SB/MW-4-12	SB/MW-4-12	SB/MW-5-12	SB/MW-6-12	SB/MW-7	SB/MW-8	SB/MW-9
Sample Depth					(7'-7.5')	(14'-15')	(3'-4')	(2'-3')	(2'-3') DUP	(9'10')	(14'-15')	(4'-5')	(5'-6')	(6'-8')
Sample Date					07/17/2012	07/16/2012	07/19/2012	07/19/2012	07/19/2012	07/20/2012	07/17/2012	07/19/2012	07/18/2012	07/18/2012
<i>Volatiles, VOCs ug/Kg</i>														
Ethylbenzene (l)	1,500	360	1.4E+5 (C)	1.4E+5 (C)	<70	<70	<60	<70	<80	<60	<100	<80	<70	<70
Naphthalene	1.05E+05	730	2.10E+06	5.20E+07	<470	<490	<380	<460	<500	660	<880	<520	<430	<470
Styrene	2,700	2,100 (X)	270,000	520000	<70	<70	<60	<70	<80	<60	<100	<80	<70	<70
Tetrachloroethylene	100	1,200 (X)	88,000 (c)	88,000 (c)	<70	<70	<60	<70	<80	<60	<100	<80	<70	<70
Trichloroethylene	100	4,000 (X)	4.40E+05	5.0E+5 (C,DD)	<70	<70	<60	<70	<80	<60	<100	<80	<70	<70

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per kilograms (ug/kg)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water
Shaded-Exceeds Non-Residential GSI Criteria
Italic-Exceeds Groundwater Protection Criteria
Exceeds the Non-Residential Direct Contact Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 2
Soil Analytical Results-VOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Res Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Res Groundwater Contact Protection Criteria and RBSLs	Non-Residential Direct Contact Criteria and RBSLs	SB/MW-10	SB/MW-11-12	SB/MW-12-12	SB/MW-13-12	SB/MW-14-12	SB-15-12	SB/MW-15-14	SB-16-12	SB/MW-16-14	SB-17-12
Sample Depth					(2'-3')	(6'-7')	(8.5'-9.5')	(0.5'-1.5')	(6.5'-7')	(11'-12')	(7.5-9.5')	(5'-6')	(6'-7')	(2'-2.5')
Sample Date					07/18/2012	07/19/2012	07/17/2012	07/17/2012	07/17/2012	07/20/2012	9/23/2014	07/19/2012	9/23/2014	07/19/2012
Volatiles, VOCs ug/Kg														
Ethylbenzene (l)	1,500	360	1.4E+5 (C)	1.4E+5 (C)	<80	<70	<200	<200	<100	<70	<70	<80	NA	<70
Naphthalene	1.05E+05	730	2.10E+06	5.20E+07	<500	<460	<1,300	<1,100	<880	<450	<430	<530	NA	<440
Styrene	2,700	2,100 (X)	270,000	520000	<80	<70	<200	<200	<100	<70	<70	<80	NA	<70
Tetrachloroethylene	100	1,200 (X)	88,000 (c)	88,000 (c)	<80	<70	<200	<200	<100	<70	<70	<80	NA	<70
Trichloroethylene	100	4,000 (X)	4.40E+05	5.0E+5 (C,DD)	<80	<70	<200	<200	<100	<70	<70	<80	NA	<70

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per kilograms (ug/kg)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water

Shaded-Exceeds Non-Residential GSI Criteria

Italic-Exceeds Groundwater Protection Criteria

Exceeds the Non-Residential Direct Contact Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 2
Soil Analytical Results-VOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Res Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Res Groundwater Contact Protection Criteria and RBSLs	Non-Residential Direct Contact Criteria and RBSLs	SB-18-12	SB-18-12	SB-18-12	SB-19-12	SB-20-12	SB-21-12	SB-22-12	SB-23-12	SB-24-12	SB-25-12
Sample Depth					(2'-3')	(8'-9')	(8'-9') DUP	(3'-4')	(1'-2')	(0'-2')	(2'-3')	(1.5'-2.5')	(3'-4')	(11'-12')
Sample Date					07/20/2012	07/20/2012	07/20/2012	07/20/2012	07/20/2012	07/17/2012	07/17/2012	07/17/2012	07/16/2012	07/17/2012
Volatiles, VOCs ug/Kg														
Ethylbenzene (l)	1,500	360	1.4E+5 (C)	1.4E+5 (C)	<50	<70	<70	<60	<60	<200	<200	<200	<60	1,280
Naphthalene	1.05E+05	730	2.10E+06	5.20E+07	<360	<430	<460	<400	<380	<1,500	<1,200	<1,300	<400	<510
Styrene	2,700	2,100 (X)	270,000	520000	<50	<70	<70	<60	<60	<200	<200	<200	<60	9,150
Tetrachloroethylene	100	1,200 (X)	88,000 (c)	88,000 (c)	<50	<70	<70	<60	<60	<200	<200	<200	<60	<80
Trichloroethylene	100	4,000 (X)	4.40E+05	5.0E+5 (C,DD)	<50	<70	<70	<60	<60	<200	<200	<200	<60	<80

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per kilograms (ug/kg)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water

Shaded-Exceeds Non-Residential GSI Criteria

Italic-Exceeds Groundwater Protection Criteria

Exceeds the Non-Residential Direct Contact Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 2
Soil Analytical Results-VOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Res Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Res Groundwater Contact Protection Criteria and RBSLs	Non-Residential Direct Contact Criteria and RBSLs	SB-26-12	SB-27-12	SB-27-12	SB-28-12
Sample Depth					(7'-8')	(2'-3')	(6'-7')	(2'-3')
Sample Date					07/16/2012	07/20/2012	07/20/2012	07/19/2012
Volatiles, VOCs ug/Kg								
Ethylbenzene (l)	1,500	360	1.4E+5 (C)	1.4E+5 (C)	<80	70	<70	<70
Naphthalene	1.05E+05	730	2.10E+06	5.20E+07	1,890	490	<480	<430
Styrene	2,700	2,100 (X)	270,000	520000	<80	<60	<70	<70
Tetrachloroethylene	100	1,200 (X)	88,000 (c)	88,000 (c)	<80	1,710	<70	<70
Trichloroethylene	100	4,000 (X)	4.40E+05	5.0E+5 (C,DD)	<80	130	<70	<70

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per kilograms (ug/kg)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water

Shaded-Exceeds Non-Residential GSI Criteria

Italic-Exceeds Groundwater Protection Criteria

Exceeds the Non-Residential Direct Contact Criteria

NS - Not Sampled

NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 3
Soil Analytical Results-PNAs/SVOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Chemical Abstract Service Number	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Protection Criteria and RBSLs	SB/MW-1-12	SB/MW-2-12	SB/MW-3-12	SB/MW-4-12	SB/MW-4-12	SB/MW-5-12	SB/MW-6-12	SB/MW-7-12	SB/MW-8-12	SB/MW-9-12	SB/MW-10-12
Sample Depth					(7'-7.5')	(14'-15')	(3'-4')	(2'-3')	(2'-3') DUP	(9'10')	(14'-15')	(4'-5')	(5'-6')	(6-8')	
Sample Date					07/17/2012	07/16/2012	07/19/2012	07/19/2012	07/19/2012	07/20/2012	07/17/2012	07/19/2012	07/18/2012	07/18/2012	07/18/2012
<i>Semi volatiles, PNAs ug/Kg</i>															
Fluoranthene	206-44-0	7.3E+5	5,500	7.3E+5	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
Phenanthrene	85-01-8	56,000	2,100	1.1E+6	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Italic-Exceeds Groundwater Protection Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 3
Soil Analytical Results-PNAs/SVOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Chemical Abstract Service Number	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Protection Criteria and RBSLs	Duplicate 1	SB/MW-11-12	SB/MW-12-12	SB/MW-13-12	SB/MW-14-12	SB-15-12	SB/MW-15-14	SB-16-12	SB/MW-16-14	SB-17-12	Duplicate 2
Sample Depth						(6'-7')	(8.5'-9.5')	(0.5'-1.5')	(6.5'-7')	(11-12')	(7.5-9.5')	(5'-6')	(6'-7')	(2'-2.5')	
Sample Date					07/16/2012	07/19/2012	07/17/2012	07/17/2012	07/17/2012	07/20/2012	9/23/2014	07/19/2012	9/23/2014	07/19/2012	07/17/2012
<i>Semi volatiles, PNAs ug/Kg</i>															
Fluoranthene	206-44-0	7.3E+5	5,500	7.3E+5	<300	<330	<330	<330	<330	<300	<330	<300	NA	<300	493
Phenanthrene	85-01-8	56,000	2,100	1.1E+6	<300	<330	<330	<330	<330	<300	<330	<300	NA	<300	<330

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Italic-Exceeds Groundwater Protection Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 3
Soil Analytical Results-PNAs/SVOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Chemical Abstract Service Number	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Protection Criteria and RBSLs	SB-18-12	SB-18-12	SB-18-12	SB-19-12	SB-20-12	SB-21-12
Sample Depth					(2'-3')	(8'-9')	(8'-9') DUP	(3'-4')	(1'-2')	(0'-2')
Sample Date					07/20/2012	07/20/2012	07/20/2012	07/20/2012	07/20/2012	07/17/2012
<i>Semi volatiles, PNAs ug/Kg</i>										
Fluoranthene	206-44-0	7.3E+5	5,500	7.3E+5	<300	<300	<300	<300	<300	<300
Phenanthrene	85-01-8	56,000	2,100	1.1E+6	<300	<300	<300	<300	<300	<300

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Italic-Exceeds Groundwater Protection Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 3
Soil Analytical Results-PNAs/SVOCs
RACER Trust - Davison Road Landfill
Burton, MI
Revised 12/14

Sample ID	Chemical Abstract Service Number	Non-Residential Drinking Water Protection Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Protection Criteria and RBSLs	SB-22-12	SB-23-12	SB-24-12	SB-25-12	SB-26-12	SB-27-12	SB-27-12	SB-28-12
Sample Depth					(2'-3')	(1.5'-2.5')	(3'-4')	(11'-12')	(7'-8')	(2'-3')	(6'-7')	(2'-3')
Sample Date					07/17/2012	07/17/2012	07/16/2012	07/17/2012	07/16/2012	07/20/2012	07/20/2012	07/19/2012
<i>Semi volatiles, PNAs ug/Kg</i>												
Fluoranthene	206-44-0	7.3E+5	5,500	7.3E+5	<300	<300	1,200	<300	<300	5,730	675	<330
Phenanthrene	85-01-8	56,000	2,100	1.1E+6	<300	<300	<500	<300	<300	3,389	434	<330

Analytical results compared to the MDEQ Part 201 Non-Residential Cleanup Criteria
Results in parts per billion (ppb)/micrograms per liter (ug/l)

Bold-exceeds the MDEQ Part 201 Non Residential Drinking Water Criteria
Shaded-Exceeds Non-Residential GSI Criteria
Italic-Exceeds Groundwater Protection Criteria

NS - Not Sampled
NA - Not Analyzed or Not Applicable

Note: Includes analytes with concentrations above the Non Residential cleanup criteria only.

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	MW-1					MW-1-12					MW-2				
				8/8/12	11/6/12	4/23/13	7/24/13	9/23/14	8/8/12	11/6/12	4/23/13	7/25/13	9/23/14	8/10/12	11/8/12	4/22/13	7/24/13	9/23/14
Aluminum (B)	4,100	NA	6.4E+7	12	17	14	7	NS	194	14	11	349	NS	8	35	9	12	NS
Arsenic	10 (A)	10	4,300	6	6	4	5	NS	<2	<2	<2	51	NS	102	104	15	26	NS
Cadmium (B)	5.0 (A)	4.9	1.9E+5	<0.5	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	NS
Chromium, Total	100 (A)	11	4.6E+5	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS
Cobalt	100	100	2.4E+6	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS
Copper (B)	1,000 (E)	22	7.4E+6	<4	<4	<5	<4	NS	<4	<4	<5	5	NS	<4	<4	<5	<4	NS
Iron (B)	5,600(E)	NA	5.8E+7	1,270	1,040	1,590	1,360	NS	490	50	270	380	NS	25,800	25,100	16,600	20,500	NS
Manganese (B)	2,500 (E)	5,000	9.1E+6	1,590	582	1860	1,480	NS	226	27	<5	18	NS	3120	3270	577	1,190	NS
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	<0.2	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	NS
Vanadium	62	12	9.7E+5	<4	<4	<2	<4	NS	<4	<4	<4	<4	NS	6	6	<2	<4	NS
Zinc (B)	5,000 (E)	290	1.1E+8	<5	6	<5	<5	NS	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS
Hardness				NA	NA	NA	NA	NS	NA	NA	NA	NA	NS	NA	NA	NA	NA	NS

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	MW-2-12					MW-3-12					MW-4-12				
				8/8/12	11/6/12	4/23/13	7/25/13	9/23/14	8/9/12	11/6/12	4/17/13	7/24/13	9/23/14	8/9/12	11/6/12	4/17/13	7/24/13	9/23/14
Aluminum (B)	4,100	NA	6.4E+7	21	19	199	8	NS	37	26	56	15	NA	44	18	19	23	NS
Arsenic	10 (A)	10	4,300	2	<2	<2	<2	NS	25	19	2	13	25	5	12	<2	3	4
Cadmium (B)	5.0 (A)	4.9	1.9E+5	<0.5	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5	NS
Chromium, Total	100 (A)	11	4.6E+5	<5	<5	<5	<5	NS	<5	<5	<5	<5	NA	<5	<5	<5	<5	NS
Cobalt	100	100	2.4E+6	<5	<5	<5	<5	NS	<5	<5	<5	<5	NA	<5	<5	<5	<5	NS
Copper (B)	1,000 (E)	22	7.4E+6	<4	<4	<5	<4	NS	<4	<4	<5	<4	NA	<4	<4	6	<4	NS
Iron (B)	5,600(E)	NA	5.8E+7	180	20	2,100	470	NS	6,170	5,000	410	3,480	NA	330	5,310	640	410	NS
Manganese (B)	2,500 (E)	5,000	9.1E+6	347	8	30	69	NS	823	523	73	855	NA	417	351	164	1680	NS
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	<0.2	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	NS
Vanadium	62	12	9.7E+5	<4	<4	<2	<4	NS	<4	<4	<2	<4	NA	<4	<4	<2	<4	NS
Zinc (B)	5,000 (E)	290	1.1E+8	<5	<5	10	<5	NS	10	<5	<5	<5	NA	<5	6	<5	<5	NS
Hardness				NA	NA	NA	NA	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	MW-4-04					MW-5-12					MW-6-12				
				8/9/12	11/6/12	4/23/13	7/25/13	9/23/14	8/10/12	11/8/12	4/23/13	7/24/13	9/23/14	8/10/12	11/6/12	4/23/13	7/25/13	9/23/14
Aluminum (B)	4,100	NA	6.4E+7	509	NS-I H2O	30	6	NS	8	13	38	11	NS	32	73	32	11	NS
Arsenic	10 (A)	10	4,300	8	NS-I H2O	<2	<2	NS	3	<2	<2	<2	NS	19	29	2	10	NS
Cadmium (B)	5.0 (A)	4.9	1.9E+5	1.1	NS-I H2O	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	NS
Chromium, Total	100 (A)	11	4.6E+5	<5	NS-I H2O	<5	<5	NS	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS
Cobalt	100	100	2.4E+6	23	NS-I H2O	<5	<5	NS	<5	<5	<5	<5	NS	<5	<5	<5	7	NS
Copper (B)	1,000 (E)	22	7.4E+6	22	NS-I H2O	100	<4	NS	<4	<4	<5	17	NS	<4	<4	<5	<4	NS
Iron (B)	5,600(E)	NA	5.8E+7	9,360	NS-I H2O	2,310	320	NS	16,600	5,320	770	5,550	NS	10,200	11,200	3,570	7,420	NS
Manganese (B)	2,500 (E)	5,000	9.1E+6	4740	NS-I H2O	140	252	NS	1,540	1830	596	1100	NS	1,020	878	2,270	3,880	NS
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	NS-I H2O	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	NS
Vanadium	62	12	9.7E+5	5	NS-I H2O	<2	<4	NS	<4	<4	<2	<4	NS	<4	<4	<2	<4	NS
Zinc (B)	5,000 (E)	290	1.1E+8	65	NS-I H2O	9	<5	NS	<5	<5	<5	<5	NS	<5	<5	<5	<5	NS
Hardness				NA	NS-I H2O	NA	NA	NS	NA	NA	NA	NA	NS	NA	NA	NA	NA	NS

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	MW-7-12					MW-8-12					MW-9-12				
				8/9/12	11/6/12	4/17/13	7/24/13	9/24/14	8/9/13	11/6/13	4/17/13	7/25/13	9/23/14	8/9/12	11/8/12	4/16/13	7/23/13	9/24/14
Aluminum (B)	4,100	NA	6.4E+7	25	17	45	11	NA	13	NS-I H2O	14	144	NS	31	<5	14	30	NA
Arsenic	10 (A)	10	4,300	3	2	<2	<2	<2	39	NS-I H2O	<2	<2	NS	3	22	<2	6	23
Cadmium (B)	5.0 (A)	4.9	1.9E+5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	NS-I H2O	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	NA
Chromium, Total	100 (A)	11	4.6E+5	<5	<5	<5	<5	NA	<5	NS-I H2O	<5	<5	NS	<5	<5	<5	<5	NA
Cobalt	100	100	2.4E+6	<5	<5	<5	<5	NA	<5	NS-I H2O	<5	<5	NS	<5	<5	<5	<5	NA
Copper (B)	1,000 (E)	22	7.4E+6	<4	<4	10	<4	NA	<4	NS-I H2O	<5	<4	NS	<4	<4	<5	<4	NA
Iron (B)	5,600(E)	NA	5.8E+7	120	180	910	100	NA	23,700	NS-I H2O	440	700	NS	90	3,640	100	2,040	NA
Manganese (B)	2,500 (E)	5,000	9.1E+6	29	128	<5	266	NA	4,600	NS-I H2O	47	269	NS	162	219	256	376	NA
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	<0.2	<0.2	<0.2	NA	<0.2	NS-I H2O	<0.2	<0.2	NS	<0.2	<0.2	<0.2	<0.2	NA
Vanadium	62	12	9.7E+5	<4	<4	<2	<4	NA	<4	NS-I H2O	<2	<4	NS	<4	<4	<2	<4	NA
Zinc (B)	5,000 (E)	290	1.1E+8	<5	<5	<5	<5	NA	<5	NS-I H2O	<5	9	NS	<5	<5	<5	<5	NA
Hardness				NA	NA	NA	NA	NA	NA	NS-I H2O	NA	NA	NS	NA	NA	NA	NA	NA

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	MW-10-12					MW-11-12					MW-12-12				
				8/10/12	11/8/12	4/16/13	7/25/13	9/23/14	8/19/12	11/6/12	4/18/13	7/23/13	9/25/14	8/9/12	11/8/12	4/22/13	7/23/13	9/24/14
Aluminum (B)	4,100	NA	6.4E+7	19	NS-I H2O	12	11	NS	NS-I H2O	NS-I H2O	13	11	NA	13	13	44	12	NA
Arsenic	10 (A)	10	4,300	166	NS-I H2O	19	51	NS	NS-I H2O	NS-I H2O	<2	<2	3	39	31	29	26	53
Cadmium (B)	5.0 (A)	4.9	1.9E+5	<0.5	NS-I H2O	<0.5	<0.5	NS	NS-I H2O	NS-I H2O	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5	NA
Chromium, Total	100 (A)	11	4.6E+5	<5	NS-I H2O	<5	<5	NS	NS-I H2O	NS-I H2O	<5	<5	NA	<5	<5	<5	<5	NA
Cobalt	100	100	2.4E+6	<5	NS-I H2O	<5	<5	NS	NS-I H2O	NS-I H2O	<5	<5	NA	<5	<5	<5	<5	NA
Copper (B)	1,000 (E)	22	7.4E+6	<4	NS-I H2O	<5	<4	NS	NS-I H2O	NS-I H2O	<5	<4	NA	<4	<4	<5	<4	NA
Iron (B)	5,600(E)	NA	5.8E+7	21,700	NS-I H2O	11,600	11,200	NS	NS-I H2O	NS-I H2O	700	160	NA	23,700	25,100	34,200	27,700	NA
Manganese (B)	2,500 (E)	5,000	9.1E+6	1,570	NS-I H2O	2,170	1,640	NS	NS-I H2O	NS-I H2O	247	1,040	NA	4,600	4,610	5,180	4,940	NA
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	NS-I H2O	<0.2	<0.2	NS	NS-I H2O	NS-I H2O	<0.2	<0.2	NA	<0.2	<0.2 *	<0.2	<0.2	NA
Vanadium	62	12	9.7E+5	<4	NS-I H2O	<2	<4	NS	NS-I H2O	NS-I H2O	<2	<4	NA	<4	<4	<4	<4	NA
Zinc (B)	5,000 (E)	290	1.1E+8	14	NS-I H2O	<5	<5	NS	NS-I H2O	NS-I H2O	<5	<5	NA	<5	<5	<5	<5	NA
Hardness				NA	NS-I H2O	NA	NA	NS	NS-I H2O	NS-I H2O	NA	NA	NA	NA	NA	NA	NA	NA

VOC-All concentrations below laboratory detection limit
SVOC/PNAS-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	MW-13-12					MW-14-12					SB/MW-15-14	SB/MW-16-14
				8/9/12	11/6/12	4/22/13	7/23/13	9/24/14	8/9/12	11/6/12	4/22/13	7/23/13	9/24/14	9/25/14	9/25/14
Aluminum (B)	4,100	NA	6.4E+7	12	7	13	27	NA	38	16	8	22	NA	44	NA
Arsenic	10 (A)	10	4,300	<2	3	<2	<2	7	<2	<2	<2	<2	<2	30	15
Cadmium (B)	5.0 (A)	4.9	1.9E+5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5	NA	<2	NA
Chromium, Total	100 (A)	11	4.6E+5	<5	<5	<5	<5	NA	<5	<5	<5	<5	NA	<5	NA
Cobalt	100	100	2.4E+6	<5	<5	<5	<5	NA	<5	<5	<5	<5	NA	<5	NA
Copper (B)	1,000 (E)	22	7.4E+6	<4	<4	<5	<4	NA	<4	<4	<4	<4	NA	54	NA
Iron (B)	5,600(E)	NA	5.8E+7	70	1,360	440	360	NA	60	40	330	20	NA	2,960	NA
Manganese (B)	2,500 (E)	5,000	9.1E+6	304	626	<5	291	NA	184	92	110	22	NA	57	NA
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2 *	<0.2	<0.2	NA	<0.2	NA
Vanadium	62	12	9.7E+5	<4	<4	<2	<4	NA	<4	<4	<2.0	<4	NA	<4	NA
Zinc (B)	5,000 (E)	290	1.1E+8	<5	<5	<5	<5	NA	<5	11	<5.0	<5	NA	<5	NA
Hardness				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	GC-1 (Upstream)					GC-2 (Mid)					GC-3 (Downstream)				
				8/12/13	11/6/12	4/22/13	7/22/13	9/25/14	8/12/12	11/6/12	4/17/13	7/22/13	9/25/14	8/12/12	11/6/12	4/17/13	7/22/13	9/23/14
Aluminum (B)	4,100	NA	6.4E+7	NS-I H20	92	251	65	NA	NS-I H20	437	178	14	NS-I H20	NS-I H20	67	312	19	NA
Arsenic	10 (A)	10	4,300	NS-I H20	3	2	6	5	NS-I H20	3	<2	6	NS-I H20	NS-I H20	2	3	7	4
Cadmium (B)	5.0 (A)	4.9	1.9E+5	NS-I H20	<0.5	<0.5	<0.5	NA	NS-I H20	<0.5	<0.5	<0.5	NS-I H20	NS-I H20	<0.5	<0.5	<0.5	NA
Chromium, Total	100 (A)	11	4.6E+5	NS-I H20	<5	<5	<5	NA	NS-I H20	<5	<5	<5	NS-I H20	NS-I H20	<5	<5	<5	NA
Cobalt	100	100	2.4E+6	NS-I H20	<5	<5	<5	NA	NS-I H20	<5	<5	<5	NS-I H20	NS-I H20	<5	<5	<5	NA
Copper (B)	1,000 (E)	22	7.4E+6	NS-I H20	<4	<5	<4	NA	NS-I H20	<4	<5	<4	NS-I H20	NS-I H20	<4	<5	<4	NA
Iron (B)	5,600(E)	NA	5.8E+7	NS-I H20	780	780	400	NA	NS-I H20	1,520	800	290	NS-I H20	NS-I H20	650	1,230	280	NA
Manganese (B)	2,500 (E)	5,000	9.1E+6	NS-I H20	95	52	57	NA	NS-I H20	125	50	38	NS-I H20	NS-I H20	72	76	32	NA
Mercury, Total	2.0 (A)	0.0013	56 (S)	NS-I H20	<0.2	<0.2	<0.2	NA	NS-I H20	<0.2	<0.2	<0.2	NS-I H20	NS-I H20	<0.2	<0.2	<0.2	NA
Vanadium	62	12	9.7E+5	NS-I H20	<4	<2	<4	NA	NS-I H20	<4	<2	<4	NS-I H20	NS-I H20	<4	<2	<4	NA
Zinc (B)	5,000 (E)	290	1.1E+8	NS-I H20	7	8	<5	NA	NS-I H20	16	8	<5	NS-I H20	NS-I H20	6	21	<5	NA
Hardness				NS-I H20	NA	NA	NA	372,000	NS-I H20	NA	NA	NA	NS-I H20	NS-I H20	NA	NA	NA	290,000

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H20-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"
Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	TMW-1					TMW-6					TMW-8				
				8/9/12	11/8/12	4/17/13	7/24/13	9/24/14	8/10/12	11/8/12	4/18/13	7/23/13	9/25/14	8/10/12	11/8/12	4/18/13	7/23/13	9/24/14
Aluminum (B)	4,100	NA	6.4E+7	29	20	14	15	NA	211	59	59	33	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Arsenic	10 (A)	10	4,300	3	<2	<2	4	5	9	<2	<2	2	8	NS-CNL	NS-CNL	NS-CNL	NS-CNL	8
Cadmium (B)	5.0 (A)	4.9	1.9E+5	<0.5	<0.5	<0.5	<0.5	NA	0.6	0.6	<0.5	<0.5	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Chromium, Total	100 (A)	11	4.6E+5	<5	<5	<5	<5	NA	7	<5	<5	<5	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Cobalt	100	100	2.4E+6	<5	<5	<5	<5	NA	<5	<5	<5	<5	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Copper (B)	1,000 (E)	22	7.4E+6	<4	6	5	<4	NA	4	<4	<5	<4	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Iron (B)	5,600(E)	NA	5.8E+7	840	630	960	2,200	NA	4,920	100	1,170	1,880	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Manganese (B)	2,500 (E)	5,000	9.1E+6	325	277	5	260	NA	308	316	462	1,090	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Mercury, Total	2.0 (A)	0.0013	56 (S)	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Vanadium	62	12	9.7E+5	<4	<4	<2	<4	NA	<4	<4	<2	<4	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Zinc (B)	5,000 (E)	290	1.1E+8	<5	<5	<5	<5	NA	11	21	360	<5	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA
Hardness				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS-CNL	NS-CNL	NS-CNL	NS-CNL	NA

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
Concentrations compared to the MDEQ Part 201 Non-Residential
Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
Shaded-Exceeds Non-Residential GSI Criteria

NS-Not Sampled
NA-Not Analyzed or Not Applicable
NS I H2O-Not Sampled Due to Insufficient Amount of Water
NS-CNL-Not Sampled Could Not Locate Well.

GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
Substances"

Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

Table 4
Groundwater Analytical Results
Metals
Davison Road Landfill
Burton, MI
Revised 12/14

Metals ug/L	Non-Residential Drinking Water Criteria and RBSLs	Non-Residential Groundwater Surface Water Interface Protection Criteria and RBSLs	Non-Residential Groundwater Contact Criteria and RBSLs	D-3 East					D-2 Mid					D-1 West				
				8/10/12	11/8/12	4/22/13	7/22/13	9/24/14	8/10/12	11/8/12	4/22/13	7/22/13	9/24/14	8/10/12	11/8/12	4/22/13	7/22/13	9/24/14
Aluminum (B)	4,100	NA	6.4E+7	NS-I H20	NS-I H20	82	24	NS-I H20	NS-I H20	NS-I H20	64	NS-I H20	NS-I H20	NS-I H20	NS-I H20	68	NS-I H20	NS-I H20
Arsenic	10 (A)	10	4,300	NS-I H20	NS-I H20	<2	18	NS-I H20	NS-I H20	NS-I H20	<2	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<2	NS-I H20	NS-I H20
Cadmium (B)	5.0 (A)	4.9	1.9E+5	NS-I H20	NS-I H20	<0.5	<0.5	NS-I H20	NS-I H20	NS-I H20	<0.5	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<0.5	NS-I H20	NS-I H20
Chromium, Total	100 (A)	11	4.6E+5	NS-I H20	NS-I H20	<5	<5	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20
Cobalt	100	100	2.4E+6	NS-I H20	NS-I H20	<5	<5	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20
Copper (B)	1,000 (E)	22	7.4E+6	NS-I H20	NS-I H20	<5	<4	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20
Iron (B)	5,600(E)	NA	5.8E+7	NS-I H20	NS-I H20	350	19,000	NS-I H20	NS-I H20	NS-I H20	350	NS-I H20	NS-I H20	NS-I H20	NS-I H20	410	NS-I H20	NS-I H20
Manganese (B)	2,500 (E)	5,000	9.1E+6	NS-I H20	NS-I H20	30	10,400	NS-I H20	NS-I H20	NS-I H20	55	NS-I H20	NS-I H20	NS-I H20	NS-I H20	48	NS-I H20	NS-I H20
Mercury, Total	2.0 (A)	0.0013	56 (S)	NS-I H20	NS-I H20	<0.2	<0.2	NS-I H20	NS-I H20	NS-I H20	<0.2	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<0.2	NS-I H20	NS-I H20
Vanadium	62	12	9.7E+5	NS-I H20	NS-I H20	<2	<4	NS-I H20	NS-I H20	NS-I H20	<2	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<2	NS-I H20	NS-I H20
Zinc (B)	5,000 (E)	290	1.1E+8	NS-I H20	NS-I H20	8	<5	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20	NS-I H20	NS-I H20	<5	NS-I H20	NS-I H20
Hardness				NS-I H20	NS-I H20	NA	NA	NS-I H20	NS-I H20	NS-I H20	NA	NS-I H20	NS-I H20	NS-I H20	NS-I H20	NA	NS-I H20	NS-I H20

VOC-All concentrations below laboratory detection limit
SVOC/PNAs-All concentrations below laboratory detection

Results in parts per billion (ppb)/micrograms per liter (ug/l)
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Cleanup Criteria

Bold-exceeds the MDEQ Part 201 Non Residential Drinking
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GSI Criteria was calculated pursuant to the "Calculation of
Generic Facility-Specific Part 201 GSI Criteria for (G) Hazardous
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Facility Specific constituents include: Cadmium, Copper,
Manganese and Zinc.

290 mg/CaCO3/L was used to calculate Facility Specific GSI

APPENDIX A:

Soil Boring Logs and Monitoring Well Construction Diagrams

[illegible]

Project: Davison Road Landfill				Project Number: 1119.001		Client: Racer Trust		Boring No.: SB/MW-16-14																																																																																																																																																																						
Address, City, State: Davison Rd and Donegal, Burton, Michigan						Drilling Contractor: FiberTec		Drill Rig Type: 7822 DT																																																																																																																																																																						
Logged By: C. Badgerow				Date	Started: 9/23/2014		Bit Type: N/A		Hole Diameter: 4"																																																																																																																																																																					
Drill Crew: Ryan/Josh					Completed: 9/23/2014		Hammer Type: N/A		Well Diameter: 2"																																																																																																																																																																					
Comments: sampled soil @ 14:28					Backfilled: Sand & bentonite chips		Hammer Weight: N/A		Hammer Drop: N/A																																																																																																																																																																					
				Groundwater Depth: N/A		Elevation: N/A		Total Depth of Boring: 15 Feet																																																																																																																																																																						
<table><tr><td rowspan="2">Depth (feet)</td><td rowspan="2">Sample Type</td><td rowspan="2">Blow Counts (blows/foot)</td><td rowspan="2">% Recovery</td><td rowspan="2">Graphic Log</td><td colspan="2">Lithology</td><td rowspan="2">PID</td><td rowspan="2">Well Construction</td><td rowspan="2">Well Construction Details</td></tr><tr><td colspan="2"><u>Soil Group Name:</u> modifier, color, moisture, density/consistency, grain size, other descriptors <u>Rock Description:</u> modifier, color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.</td></tr><tr><td>2</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">70</td><td rowspan="5"></td><td colspan="2">Brown, Fine to Medium Sand, Some Gravel, Damp</td><td rowspan="5">0.5</td><td rowspan="5"></td><td rowspan="5">Protector/ Concrete</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>4</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">70</td><td rowspan="5"></td><td colspan="2">Brown, Fine Sand and Clay, Moist</td><td rowspan="5">0.5</td><td rowspan="5"></td><td rowspan="5">Bentonite</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>6</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">70</td><td rowspan="5"></td><td colspan="2">Brown, Fine to Coarse Sand, Some Gravel, Saturated</td><td rowspan="5">0.7</td><td rowspan="5"></td><td rowspan="5">Sand</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>8</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">80</td><td rowspan="5"></td><td colspan="2">Brown, Medium to Coarse Sand, Some Gravel, Very Moist</td><td rowspan="5">1.4</td><td rowspan="5"></td><td rowspan="5">2"x5"x#10 slot PVC well screen</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>10</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">80</td><td rowspan="5"></td><td colspan="2">Gray, Clay, Moist</td><td rowspan="5">0.8</td><td rowspan="5"></td><td rowspan="5">Sand</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>12</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">80</td><td rowspan="5"></td><td colspan="2">S.A.A Very Moist</td><td rowspan="5">0.8</td><td rowspan="5"></td><td rowspan="5">Sand</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>14</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">80</td><td rowspan="5"></td><td colspan="2">S.A.A. Moist</td><td rowspan="5">1</td><td rowspan="5"></td><td rowspan="5">Sand</td></tr><tr><td colspan="2"></td><td rowspan="4">Sand</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr><tr><td>16</td><td colspan="9">EOB</td></tr><tr><td colspan="10">  Soil Gas Sample Screen Interval  Stabilized Ground water  Groundwater At time of Drilling S.A.A Same As Above </td></tr></table>										Depth (feet)	Sample Type	Blow Counts (blows/foot)	% Recovery	Graphic Log	Lithology		PID	Well Construction	Well Construction Details	<u>Soil Group Name:</u> modifier, color, moisture, density/consistency, grain size, other descriptors <u>Rock Description:</u> modifier, color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.		2			70		Brown, Fine to Medium Sand, Some Gravel, Damp		0.5		Protector/ Concrete			Sand							4			70		Brown, Fine Sand and Clay, Moist		0.5		Bentonite			Sand							6			70		Brown, Fine to Coarse Sand, Some Gravel, Saturated		0.7		Sand			Sand							8			80		Brown, Medium to Coarse Sand, Some Gravel, Very Moist		1.4		2"x5"x#10 slot PVC well screen			Sand							10			80		Gray, Clay, Moist		0.8		Sand			Sand							12			80		S.A.A Very Moist		0.8		Sand			Sand							14			80		S.A.A. Moist		1		Sand			Sand							16	EOB									 Soil Gas Sample Screen Interval  Stabilized Ground water  Groundwater At time of Drilling S.A.A Same As Above									
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APPENDIX B:

Static Groundwater Elevation Data

Static Water Level Table
Tuesday, September 23, 2014
DAVISON ROAD LANDFILL
DAVISON AND DONEGAL ROAD, BURTON, MI.

Date	Well	Ground Elevation at Well (ft.)	Well Depth to Bottom (ft.)	Well Top of Casing Elevation (ft.)	Depth to Water (ft.)	Static Water Level Elevation (ft.)
NM	MW-1-12	759.28	--	--	--	--
NM	MW-2-12	756.29	--	--	--	--
9/23/2014	MW-3-12	750.37	10.21	753.62	7.31	746.31
9/24/2014	MW-4-12	750.87	11.26	753.89	7.39	746.5
NM	MW-5-12	760.91	--	764.37	--	--
NM	MW-6-12	757.97	--	761.11	--	--
9/24/2014	MW-7-12	752.35	13.95	755.48	8.65	746.83
NM	MW-8-12	754.99	--	758.47	--	--
9/24/2014	MW-9-12	752.23	15.35	755.52	8.89	746.63
NM	MW-10-12	751.93	--	755.33	--	--
9/25/2014	MW-11-12	754.66	13.96	758.02	10.6	747.42
9/24/2014	MW-12-12	761.07	19.37	764.44	12.8	751.64
9/24/2014	MW-13-12	761.89	13.83	765.27	9.71	755.56
9/24/2014	MW-14-12	761.84	13.16	765.11	8.65	756.46
9/25/2014	MW-15-14		21.74		6.88	
9/25/2014	MW-16-14		13.17		8.57	
NM	MW-1	760.37	--	762.58	--	--
NM	MW-2	763.82	--	766.11	--	--
NM	MW-04	761.14	--	763.55	--	--
9/24/2014	TW-1	753.09	15.23	756.01	9.54	753.04
9/25/2014	TW-6	754.17	12.9	756.43	9.44	746.99
9/24/2014	TW-8		17.5		10.86	

NM-Not Measured

APPENDIX C:

Calculation Spreadsheets-Generic Facility Part 201
Groundwater/ Surface Water Interface and Protection Criteria
for {G} Footnoted Hazardous Substance

Calculation of Generic Facility-Specific Part 201 Groundwater Surface Water Interface (GSI) Criteria for {G} Footnoted Hazardous Substances

Directions for calculating generic facility-specific GSI criteria:

1. Enter "**hardness**" (Column C) or "**pH**" (Column D). Click the green check mark to the left of the Excel formula bar or press the "Enter" key.
2. The GSI criteria for surface water **not** protected as a source of drinking water are the lower of the final chronic value (FCV), wildlife value (WV), and the surface water human non-drinking water value (HNDV). These criteria are presented in Column L.
3. The GSI criteria for surface water protected as a source of drinking water are the lower of the FCV, WV, and surface water human drinking water value (HDV). Surface water protected as a source of drinking water includes the Great Lakes and their connecting waters, and inland surface water in close proximity to a water supply intake. These criteria are presented in Column M. Refer to Part 201 Criteria Application Guidesheet #3 for further guidance on selecting the applicable GSI criterion.
4. The final acute values (FAV) protective of aquatic life are presented in column E. The calculation of the FAV is provided to allow the identification of any exceedance of an acute GSI criterion. Where an exceedance of an acute GSI criterion exists, an evaluation must be done to determine appropriate action in accordance with provisions of R 299.5716, R 299.5526(4) and RRD Operational Memorandum No. 5.

Calculate GSI in ug/L (ppb)												
Hazardous Substance	Chemical Abstract Service Number (CAS #)	* ENTER Hardness in mg CaCO3/L	* ENTER pH	Final Acute Value (FAV)	FAV Conversion Factor	Final Chronic Value (FCV)	FCV Conversion Factor	Wildlife Value (WV)	Surface Water Human Non-Drinking Water Value (HNDV)	Surface Water Human Drinking Water Value (HDV)	GSI Criteria for Surface Water Not Protected for Drinking Water Use	GSI Criteria for Surface Water Protected for Drinking Water Use
Cadmium	7440439	290	NA	27.00695917	0.899444182	4.9E+0	0.864444182	NA	130	3	4.9E+0	2.5E+0
Chromium (III)	16065831	290	NA	2725.389387	NA	1.8E+2	0.86	NA	9,400	120	1.8E+2	1.2E+2
Copper	7440508	290	NA	73.29460406	NA	2.2E+1	0.96	NA	38,000	470	2.2E+1	2.2E+1
Lead	7439921	hardness	NA	Calculated	Calculated	Calculated	Calculated	NA	190	14	Calculated	Calculated
Manganese	7439965	290	NA	21612.41945	NA	5.0E+3	NA	NA	59,000	1,300	5.0E+3	1.3E+3
Nickel	7440020	hardness	NA	Calculated	NA	Calculated	0.997	NA	2.1E+5	2,600	Calculated	Calculated
Zinc	7440666	290	NA	577.6635915	NA	2.9E+2	0.986	NA	16,000	3,300	2.9E+2	2.9E+2

NA = Criterion or value is not available or not applicable.

* The formulas in this spreadsheet depend upon appropriate entries in these cells. Do not leave these cells blank. If numeric hardness or pH values are not available, enter the word "hardness" or "pH" in the appropriate cell.

Calculation of Generic Facility-Specific Part 201 Soil GSI Protection Criteria (GSI PC)

Directions for calculating a generic facility-specific soil GSI PC:

1. Manually type in the "**GSI**" criterion calculated on the previous page, rounded to 2 significant figures. DO NOT CUT AND PASTE as this will enter the unrounded value and generate a different value. Click the green check mark to the left of the Excel formula bar or press the "Enter" key.
2. The GSI PC will calculate and appear in Column W. The GSI PC are the higher of the Soil-Water Partition Value for GSI (Column U) and the 20 X GSI value (Column V).

Calculate Soil GSI PC in ug/Kg (ppb)								
Hazardous Substance	Chemical Abstract Service Number (CAS #)	* ENTER GSI	Soil-Water Distribution Coefficients (Kd) L/Kg	Henry's Law Constant (HLC) atm-m3/mol	Soil Organic Carbon-Water Partition Coefficient (Koc) L/Kg	Soil-Water Partition Value for GSI ug/Kg	20 X GSI ug/Kg	Soil GSI PC ug/Kg
Cadmium	7440439	4.9	75	NA	NA	5.9E+3	9.8E+1	5.9E+3
Chromium (III)	16065831	690	1.8E+6	NA	NA	2.0E+10	1.4E+4	2.0E+10
Copper	7440508	22	360	NA	NA	1.3E+5	4.4E+2	1.3E+5
Lead	7439921	GSI	11,000	NA	NA	Calculated	Calculated	Calculated
Manganese	7439965	5000	NA	NA	NA	NA	1.0E+5	1.0E+5
Nickel	7440020	GSI	65	NA	NA	Calculated	Calculated	Calculated
Zinc	7440666	290	62	NA	NA	2.9E+5	5.8E+3	2.9E+5

NA = Criterion or value is not available or not applicable.

* The formulas in this spreadsheet depend upon appropriate entries in these cells. Do not leave these cells blank. If numeric GSI values are not available, enter "GSI" in the appropriate cell.

APPENDIX D:

Laboratory Reports



Analytical Laboratory Report

Report ID: S62942.01(01)

Generated on 10/03/2014

Report to

Attention: Sue Graves
ERG
28003 Center Oaks Dr
Wixom, MI 48393

Phone: 248-773-7986 FAX: 248-924-3108

Email: sue.graves@ergrp.net

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Kevin George (kgeorge@meritlabs.com)

Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S62942.01-S62942.19

Project: RACER Davison Rd. Landfill

Collected Date: 09/23/2014 - 09/25/2014

Submitted Date/Time: 09/25/2014 15:45

Sampled by: Laura Lambert

P.O. #:

A handwritten signature in black ink, appearing to read "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Results relate only to items tested as received by laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis were applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
N/A	Not Applicable
SM2340C	Standard Method 2340 C 20th Edition
SM2540B	Standard Method 2540 B 20th Edition
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW3550C	SW 846 Method 3550C Revision 3 February 2007
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8260C	SW 846 Method 8260C Revision 3 August 2006
SW8260C/5035A	SW 846 Method 8260C Revision 3 August 2006 / 5035A
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (19 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S62942.01	GC-3 Down	Groundwater	09/23/2014 15:00
S62942.02	SB/MW-3-12	Groundwater	09/23/2014 16:06
S62942.03	SB/MW-15-14 (7.5'-9.5')	Soil	09/23/2014 12:00
S62942.04	SB/MW-16-14 (6'-7')	Soil	09/23/2014 14:28
S62942.05	MW-4-12	Groundwater	09/24/2014 11:02
S62942.06	TMW-1	Groundwater	09/24/2014 11:53
S62942.07	SB/MW-7-12	Groundwater	09/24/2014 12:50
S62942.08	TMW-8	Groundwater	09/24/2014 13:01
S62942.09	SB/MW-9-12	Groundwater	09/24/2014 14:26
S62942.10	SB/MW-13-12	Groundwater	09/24/2014 15:30
S62942.11	SB/MW-14-12	Groundwater	09/24/2014 15:35
S62942.12	SB/MW-12-12	Groundwater	09/24/2014 16:15
S62942.13	SB/MW-16-14	Groundwater	09/25/2014 11:25
S62942.14	TMW-6	Groundwater	09/25/2014 13:00
S62942.15	SB/MW-15-14	Groundwater	09/25/2014 13:10
S62942.16	GC-1 UP	Groundwater	09/25/2014 13:53
S62942.17	SB/MW-11-12	Groundwater	09/25/2014 14:25
S62942.18	Field Blank	Methanol	09/23/2014 00:01
S62942.19	Trip Blank	Liquid	09/23/2014 00:01



Analytical Laboratory Report

Lab Sample ID: S62942.01
Sample Tag: GC-3 Down
Collected Date/Time: 09/23/2014 15:00
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Inorganics								
Hardness	290	mg/L	2	SM2340C	10/03/14 12:20	JKB		
Metals								
Arsenic	0.004	mg/L	0.002	E200.8	09/26/14 12:22	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.02
Sample Tag: SB/MW-3-12
Collected Date/Time: 09/23/2014 16:06
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	0.025	mg/L	0.002	E200.8	09/26/14 12:23	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.03
Sample Tag: SB/MW-15-14 (7.5'-9.5')
Collected Date/Time: 09/23/2014 12:00
Matrix: Soil
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	4oz Glass	None	Yes	5.3	IR
1	40ml Glass	MeOH	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

BNA Extraction	Completed			SW3550C	09/26/14 13:36	EMR		
Mercury Digestion	Completed			SW7471B	10/01/14 11:10	CCM		
Metal Digestion	Completed			SW3050B	10/03/14 09:30	PER		

Inorganics

Total Solids	87	%	1	SM2540B	09/29/14 11:10	WAR		
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Metals

Aluminum	2,040	mg/kg	1.0	SW6020A	10/03/14 13:01	PER	7429-90-5	
Arsenic	4.57	mg/kg	0.20	SW6020A	10/03/14 12:52	PER	7440-38-2	
Cadmium	Not detected	mg/kg	0.20	SW6020A	10/03/14 12:52	PER	7440-43-9	
Chromium	5.14	mg/kg	0.50	SW6020A	10/03/14 12:52	PER	7440-47-3	
Cobalt	4.40	mg/kg	0.50	SW6020A	10/03/14 12:52	PER	7440-48-4	
Copper	11.2	mg/kg	0.50	SW6020A	10/03/14 12:52	PER	7440-50-8	
Iron	8,460	mg/kg	5.0	SW6020A	10/03/14 13:01	PER	7439-89-6	
Manganese	274	mg/kg	0.5	SW6020A	10/03/14 12:52	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	10/01/14 14:31	CCM	7439-97-6	
Vanadium	9.05	mg/kg	0.50	SW6020A	10/03/14 12:52	PER	7440-62-2	
Zinc	14.8	mg/kg	0.50	SW6020A	10/03/14 12:52	PER	7440-66-6	

Organics - Semi-Volatiles

Semi-Volatile Organics - MDEQ

Acenaphthene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	85-68-7	
4-Chloroaniline	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/kg	280	SW8270D	09/27/14 02:35	PL	59-50-7	
2-Chlorophenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	7005-72-3	
Chrysene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	218-01-9	



Analytical Laboratory Report

Lab Sample ID: S62942.03 (continued)

Sample Tag: SB/MW-15-14 (7.5'-9.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
p,m-Cresol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	3/4-Cresol	
o-Cresol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	53-70-3	
Dibenzofuran	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	SW8270D	09/27/14 02:35	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	120-83-2	
Diethyl phthalate	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	830	SW8270D	09/27/14 02:35	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/kg	830	SW8270D	09/27/14 02:35	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	117-84-0	
Fluoranthene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	77-47-4	
Hexachloroethane	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	193-39-5	
Isophorone	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	91-20-3	
2-Nitroaniline	Not detected	ug/kg	830	SW8270D	09/27/14 02:35	PL	88-74-4	
3-Nitroaniline	Not detected	ug/kg	830	SW8270D	09/27/14 02:35	PL	99-09-2	
4-Nitroaniline	Not detected	ug/kg	830	SW8270D	09/27/14 02:35	PL	100-01-6	
Nitrobenzene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	98-95-3	
2-Nitrophenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	88-75-5	
4-Nitrophenol	Not detected	ug/kg	830	SW8270D	09/27/14 02:35	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	621-64-7	
Pentachlorophenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	87-86-5	
Phenanthrene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	85-01-8	
Phenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	108-95-2	
Pyrene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/kg	330	SW8270D	09/27/14 02:35	PL	88-06-2	
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	60-29-7	
Acetone	Not detected	ug/kg	1,000	SW8260C/5035A	10/01/14 14:25	WAT	67-64-1	



Analytical Laboratory Report

Lab Sample ID: S62942.03 (continued)

Sample Tag: SB/MW-15-14 (7.5'-9.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Methyl iodide	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	980	SW8260C/5035A	10/01/14 14:25	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	SW8260C/5035A	10/01/14 14:25	WAT	109-99-9	
Chloroform	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW8260C/5035A	10/01/14 14:25	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW8260C/5035A	10/01/14 14:25	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	56-23-5	
Benzene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	75-27-4	
Dibromomethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	10061-01-5	
Toluene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	30	SW8260C/5035A	10/01/14 14:25	WAT	106-93-4	M
Chlorobenzene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	630-20-6	
Ethylbenzene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT		
o-Xylene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	95-47-6	
Styrene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	98-82-8	
Bromoform	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	103-65-1	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S62942.03 (continued)

Sample Tag: SB/MW-15-14 (7.5'-9.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Bromobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:25	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/kg	70	SW8260C/5035A	10/01/14 14:25	WAT	104-51-8	
Hexachloroethane	Not detected	ug/kg	400	SW8260C/5035A	10/01/14 14:25	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:25	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	430	SW8260C/5035A	10/01/14 14:25	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	430	SW8260C/5035A	10/01/14 14:25	WAT	87-61-6	
Naphthalene	Not detected	ug/kg	430	SW8260C/5035A	10/01/14 14:25	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	430	SW8260C/5035A	10/01/14 14:25	WAT	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S62942.04
Sample Tag: SB/MW-16-14 (6'-7')
Collected Date/Time: 09/23/2014 14:28
Matrix: Soil
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Other / Misc.								
Hold until notified	Completed				09/26/14 13:15	KAG		



Analytical Laboratory Report

Lab Sample ID: S62942.05
Sample Tag: MW-4-12
Collected Date/Time: 09/24/2014 11:02
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	0.004	mg/L	0.002	E200.8	09/26/14 12:24	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.06
Sample Tag: TMW-1
Collected Date/Time: 09/24/2014 11:53
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Metals								
Arsenic	0.005	mg/L	0.002	E200.8	09/26/14 12:26	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.07
Sample Tag: SB/MW-7-12
Collected Date/Time: 09/24/2014 12:50
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	Not detected	mg/L	0.002	E200.8	09/26/14 12:27	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.08
Sample Tag: TMW-8
Collected Date/Time: 09/24/2014 13:01
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	0.008	mg/L	0.002	E200.8	09/26/14 12:28	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.09
Sample Tag: SB/MW-9-12
Collected Date/Time: 09/24/2014 14:26
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	0.023	mg/L	0.002	E200.8	09/26/14 12:32	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.10
Sample Tag: SB/MW-13-12
Collected Date/Time: 09/24/2014 15:30
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Metals								
Arsenic	0.007	mg/L	0.002	E200.8	09/26/14 12:34	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.11
Sample Tag: SB/MW-14-12
Collected Date/Time: 09/24/2014 15:35
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	Not detected	mg/L	0.002	E200.8	09/26/14 12:35	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.12
Sample Tag: SB/MW-12-12
Collected Date/Time: 09/24/2014 16:15
Matrix: Groundwater
COC Reference: 87022

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Metals								
Arsenic	0.053	mg/L	0.002	E200.8	09/26/14 12:37	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.13
Sample Tag: SB/MW-16-14
Collected Date/Time: 09/25/2014 11:25
Matrix: Groundwater
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Metals								
Arsenic	0.015	mg/L	0.002	E200.8	09/26/14 12:38	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.14
Sample Tag: TMW-6
Collected Date/Time: 09/25/2014 13:00
Matrix: Groundwater
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Metals								
Arsenic	0.008	mg/L	0.002	E200.8	09/26/14 12:39	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.15
Sample Tag: SB/MW-15-14
Collected Date/Time: 09/25/2014 13:10
Matrix: Groundwater
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR
2	1L Amber	None	Yes	5.3	IR
3	40ml Glass	HCL	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	09/26/14 11:08	EMR		
Mercury Digestion	Completed			E245.1	09/26/14 10:40	CCM		
Metal Digestion	Completed			SW3015A	10/01/14 09:15	JRH		
pH check for VOCs	<2	STD Units		N/A	09/30/14 10:56	LBR		

Metals

Aluminum	0.044	mg/L	0.005	E200.8	10/01/14 13:39	JRH	7429-90-5
Arsenic	0.030	mg/L	0.002	E200.8	10/01/14 13:39	JRH	7440-38-2
Cadmium	Not detected	mg/L	0.0005	E200.8	10/01/14 13:39	JRH	7440-43-9
Chromium	Not detected	mg/L	0.005	E200.8	10/01/14 13:39	JRH	7440-47-3
Cobalt	Not detected	mg/L	0.005	E200.8	10/01/14 13:39	JRH	7440-48-4
Copper	Not detected	mg/L	0.005	E200.8	10/01/14 13:39	JRH	7440-50-8
Iron	2.96	mg/L	0.02	E200.8	10/01/14 13:39	JRH	7439-89-6
Manganese	0.057	mg/L	0.005	E200.8	10/01/14 13:39	JRH	7439-96-5
Mercury	Not detected	mg/L	0.0002	E245.1	09/26/14 15:10	CCM	7439-97-6
Vanadium	Not detected	mg/L	0.004	E200.8	10/01/14 13:39	JRH	7440-62-2
Zinc	Not detected	mg/L	0.005	E200.8	10/01/14 13:39	JRH	7440-66-6

Organics - Semi-Volatiles

Semi-Volatile Organics - MDEQ

Acenaphthene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	83-32-9
Acenaphthylene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	208-96-8
Anthracene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	120-12-7
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	56-55-3
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	205-99-2
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	207-08-9
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	191-24-2
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	50-32-8
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	111-91-1
bis(2-Chloroethyl)ether	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	111-44-4
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	108-60-1
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	117-81-7
4-Bromophenyl phenyl ether	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	101-55-3
Butyl benzyl phthalate	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	85-68-7
4-Chloroaniline	Not detected	ug/L	10	SW8270D	09/27/14 06:15	PL	106-47-8
2-Chloronaphthalene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	91-58-7
4-Chloro-3-methylphenol	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	59-50-7
2-Chlorophenol	Not detected	ug/L	10	SW8270D	09/27/14 06:15	PL	95-57-8
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	7005-72-3
Chrysene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	218-01-9
p,m-Cresol	Not detected	ug/L	20	SW8270D	09/27/14 06:15	PL	3/4-Cresol



Analytical Laboratory Report

Lab Sample ID: S62942.15 (continued)

Sample Tag: SB/MW-15-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
o-Cresol	Not detected	ug/L	10	SW8270D	09/27/14 06:15	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	09/27/14 06:15	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	4	SW8270D	09/27/14 06:15	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/L	10	SW8270D	09/27/14 06:15	PL	120-83-2	
Diethyl phthalate	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	SW8270D	09/27/14 06:15	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/L	25	SW8270D	09/27/14 06:15	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	117-84-0	
Fluoranthene	Not detected	ug/L	1	SW8270D	09/27/14 06:15	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	10	SW8270D	09/27/14 06:15	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	09/27/14 06:15	PL	193-39-5	
Isophorone	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	91-57-6	
Naphthalene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	91-20-3	
2-Nitroaniline	Not detected	ug/L	25	SW8270D	09/27/14 06:15	PL	88-74-4	
3-Nitroaniline	Not detected	ug/L	25	SW8270D	09/27/14 06:15	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	25	SW8270D	09/27/14 06:15	PL	100-01-6	
Nitrobenzene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	98-95-3	
2-Nitrophenol	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	88-75-5	
4-Nitrophenol	Not detected	ug/L	25	SW8270D	09/27/14 06:15	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	621-64-7	
Pentachlorophenol	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	87-86-5	
Phenanthrene	Not detected	ug/L	2	SW8270D	09/27/14 06:15	PL	85-01-8	
Phenol	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	108-95-2	
Pyrene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/L	5	SW8270D	09/27/14 06:15	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	4	SW8270D	09/27/14 06:15	PL	88-06-2	
Organics - Volatiles								
Volatile Organics - DEQ List								
Diethyl ether	Not detected	ug/L	10	SW8260C	10/01/14 16:58	WAT	60-29-7	
Acetone	Not detected	ug/L	50	SW8260C	10/01/14 16:58	WAT	67-64-1	
Methyl iodide	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	74-88-4	



Analytical Laboratory Report

Lab Sample ID: S62942.15 (continued)

Sample Tag: SB/MW-15-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	SW8260C	10/01/14 16:58	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	25	SW8260C	10/01/14 16:58	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	75-71-8	
Chloromethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	75-01-4	
Bromomethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	74-83-9	
Chloroethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	SW8260C	10/01/14 16:58	WAT	109-99-9	
Chloroform	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	67-66-3	
Bromochloromethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260C	10/01/14 16:58	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/01/14 16:58	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	75-27-4	
Dibromomethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	106-93-4	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	630-20-6	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/01/14 16:58	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	103-65-1	
Bromobenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	108-67-8	



Analytical Laboratory Report

Lab Sample ID: S62942.15 (continued)

Sample Tag: SB/MW-15-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
tert-Butylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 16:58	WAT	104-51-8	
Hexachloroethane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	87-61-6	
Naphthalene	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	SW8260C	10/01/14 16:58	WAT	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S62942.16
Sample Tag: GC-1 UP
Collected Date/Time: 09/25/2014 13:53
Matrix: Groundwater
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
Inorganics								
Hardness	372	mg/L	2	SM2340C	10/03/14 12:30	JKB		
Metals								
Arsenic	0.005	mg/L	0.002	E200.8	09/26/14 12:41	PER	7440-38-2	



Analytical Laboratory Report

Lab Sample ID: S62942.17
Sample Tag: SB/MW-11-12
Collected Date/Time: 09/25/2014 14:25
Matrix: Groundwater
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Metal Digestion	Completed			SW3015A	09/26/14 12:00	PER		
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Metals

Arsenic	0.003	mg/L	0.002	E200.8	09/26/14 12:42	PER	7440-38-2	
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Analytical Laboratory Report

Lab Sample ID: S62942.18
Sample Tag: Field Blank
Collected Date/Time: 09/23/2014 00:01
Matrix: Methanol
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Organics - Volatiles

Volatile Organics 5035

Diethyl ether	Not detected	ug/kg	200	SW8260C/5035A	10/01/14 14:43	WAT	60-29-7	
Acetone	Not detected	ug/kg	1,000	SW8260C/5035A	10/01/14 14:43	WAT	67-64-1	
Methyl iodide	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	74-88-4	
Carbon disulfide	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	200	SW8260C/5035A	10/01/14 14:43	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/kg	750	SW8260C/5035A	10/01/14 14:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	200	SW8260C/5035A	10/01/14 14:43	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/kg	1,000	SW8260C/5035A	10/01/14 14:43	WAT	109-99-9	
Chloroform	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	67-66-3	
Bromochloromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW8260C/5035A	10/01/14 14:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW8260C/5035A	10/01/14 14:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	56-23-5	
Benzene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	75-27-4	
Dibromomethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	10061-01-5	
Toluene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	20	SW8260C/5035A	10/01/14 14:43	WAT	106-93-4	M
Chlorobenzene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	630-20-6	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S62942.18 (continued)

Sample Tag: Field Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Ethylbenzene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT		
o-Xylene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	95-47-6	
Styrene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	98-82-8	
Bromoform	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	103-65-1	
Bromobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	SW8260C/5035A	10/01/14 14:43	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/kg	50	SW8260C/5035A	10/01/14 14:43	WAT	104-51-8	
Hexachloroethane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	SW8260C/5035A	10/01/14 14:43	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	SW8260C/5035A	10/01/14 14:43	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/kg	330	SW8260C/5035A	10/01/14 14:43	WAT	87-61-6	
Naphthalene	Not detected	ug/kg	330	SW8260C/5035A	10/01/14 14:43	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8260C/5035A	10/01/14 14:43	WAT	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S62942.19
Sample Tag: Trip Blank
Collected Date/Time: 09/23/2014 00:01
Matrix: Liquid
COC Reference: 87023

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

pH check for VOCs	<2	STD Units		N/A	09/30/14 10:56	LBR		
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Organics - Volatiles

Volatile Organics - DEQ List

Diethyl ether	Not detected	ug/L	10	SW8260C	10/01/14 17:21	WAT	60-29-7	
Acetone	Not detected	ug/L	50	SW8260C	10/01/14 17:21	WAT	67-64-1	
Methyl iodide	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	74-88-4	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	SW8260C	10/01/14 17:21	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	25	SW8260C	10/01/14 17:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	SW8260C	10/01/14 17:21	WAT	109-99-9	
Chloroform	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	67-66-3	
Bromochloromethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260C	10/01/14 17:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/01/14 17:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	75-27-4	
Dibromomethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S62942.19 (continued)

Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	630-20-6	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/01/14 17:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	103-65-1	
Bromobenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	SW8260C	10/01/14 17:21	WAT	104-51-8	
Hexachloroethane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	87-61-6	
Naphthalene	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	SW8260C	10/01/14 17:21	WAT	91-57-6	



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www.meritlabs.com

C.O.C. PAGE # _____ OF _____

87022

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME SUE GRAVES			
COMPANY ERG			
ADDRESS 28003 CENTER OAKS CT SUITE 106			
CITY WIXOM		STATE MI	ZIP CODE 48393
PHONE NO. 248-773-7986	FAX NO. 248-924-3108	P.O. NO.	
E-MAIL ADDRESS sue.graves@erg.jp.net		QUOTE NO.	

CONTACT NAME DAVID FAVERO		☐ SAME	
COMPANY RACER			
ADDRESS 2930 ECORSE RD			
CITY YPSILANTI		STATE MI	ZIP CODE 48198
PHONE NO. 247-741-6235	E-MAIL ADDRESS d.favero@racertrust.org		
ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)			

PROJECT NO./NAME RACER DAVIS RD LANDFILL	SAMPLER(S) - PLEASE PRINT/SIGN NAME
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID	
	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WIFE	A=AIR	W=WASTE

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives										Certifications			
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOC	BNA	Al, As, Hg, Mn	As, As	As	☐ Other _____	Special Instructions
62942.01	9/23/14	15:00	GC-3 DOWN	SW	1			1								1			TASK#4
.02	9/23/14	16:06	SB/MW-3-12	GW	1			1									1		SITE# 12920
.03	9/23/14	12:00	SB/MW-15-14 (7.5'-9.5')	S	3	2					1		1	1	1				PO# 209991
.04	9/23/14	14:28	SB/MW-16-14 (6'-7')	S	1	1							HOLD			1			
.05	9/24/14	11:02	MW-4-12	GW	1			1									1		ALL SAMPLES STORED ON ICE.
.06	9/24/14	11:53	TMW-1	GW	1			1									1		
.07	9/24/14	12:50	SB/MW-7-12	GW	1			1									1		
.08	9/24/14	13:01	TMW-8	GW	1			1									1		
.09	9/24/14	14:26	SB/MW-9-12	GW	1			1									1		
.10	9/24/14	15:30	SB/MW-13-12	GW	1			1									1		
.11	9/24/14	15:35	SB/MW-14-12	GW	1			1									1		
.12	9/24/14	16:15	SB/MW-12-12	GW	1			1									1		

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Chad B. Brown / ERG</i>	DATE 9/24/14 TIME 14:45
RECEIVED BY: SIGNATURE/ORGANIZATION <i>[Signature]</i>	DATE 9-25-14 TIME 14:45
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>[Signature]</i>	DATE 9-25-14 TIME 15:45			
RECEIVED BY: SIGNATURE/ORGANIZATION <i>[Signature]</i>	DATE 9/25/14 TIME 15:45			
SEAL NO.	SEAL INTACT	INITIALS	NOTES:	TEMP. ON ARRIVAL
	YES ☐ NO ☐			5.3
SEAL NO.	SEAL INTACT	INITIALS		
	YES ☐ NO ☐			

