Mr. Peter Quackenbush
Senior Environmental Engineer
Hazardous Waste Section
Office of Waste Management & Radiological Protection
Michigan Department of Environmental Quality
525 West Allegan Street
Constitution Hall, Atrium North
Lansing, Michigan 48909

Arcadis of Michigan, LLC
28550 Cabot Drive
Suite 500
Novi
Michigan 48377
Tel 248 994 2240
Fax 248 994 2241
www.arcadis.com

ENVIRONMENT

Subject:
Third Quarter 2016 Groundwater Monitoring Report - RACER Lansing - Plants 2, 3 & 6, Lansing, Michigan

Date:
January 10, 2017

Contact:
Patrick Curry

Phone:
810.225.1926

Email:
Patrick.Curry@arcadis.com

Our ref:
B0064479.2016
B0064480.2016
B0064481.2016

Dear Mr. Quackenbush:

The following provides a summary of the third quarter 2016 groundwater monitoring activities completed at RACER Lansing – Plants 2, 3 & 6 (Site). Arcadis of Michigan, LLC (Arcadis) completed the third quarter 2016 groundwater monitoring activities as part of the on-going Resource Conservation and Recovery Act (RCRA) Corrective Action, between September 19 and September 23, 2016. The third quarter 2016 event represents a quarterly sampling event for the Site and included:

- Gauging LNAPL wells
- LNAPL recovery
- Quarterly groundwater sampling activities

All monitoring activities were completed in accordance with the approved Revised Interim Groundwater Monitoring Work Plan (IGMP), dated November 14, 2014, and incorporated the changes to the IGMP Matrix approved by the MDEQ on August 18, 2015. Deviations from the approved sampling plan include the following:

- MW-13-42 contained insufficient water to collect a sample. This well has been replaced by MW-15-73 and will not be included in the monitoring plan beginning 4th quarter 2016.

- New monitoring well MW-16-83 purged dry and did not recharge sufficiently to collect a sample. During future sampling events, if necessary this well will be sampled with a bailer post-purge to get the necessary volume for 1,4-dioxane/VOC analysis.

Monitoring well locations for Plants 2 and 6, and Plant 3 are included on **Figures 1** and **2**, respectively. The current extent of the lower 1,4-dioxane plume included on the figures has been updated based on the lower 1,4-dioxane toe investigations (Arcadis 2016a, 2016b). The most recent phase of the toe investigation was completed in December and a summary report will be provided to the MDEQ in January 2017.

SITE ACTIVITIES

Site activities were completed consistent with the revised IGMP sampling matrix dated August 18, 2015 (**Attachment 1**). Groundwater elevation measurements were collected from a total of 67 wells on September 19 and 20, 2016. Monitoring well gauging included the light non-aqueous phase liquid (LNAPL) monitoring wells, the wells to be sampled as part of the third quarter 2016 event, and additional weathered bedrock wells completed as part of the lower 1,4-dioxane toe investigation. Prior to gauging, each well was screened for the presence of vapor phase VOCs using a photoionization detector (PID). Light non-aqueous phase liquid (LNAPL) gauging was completed at a total of 24 LNAPL monitoring wells at Plants 2 and 3. The groundwater elevations and LNAPL thicknesses are summarized **Table 1** and **Table 2**, respectively. LNAPL removal was completed as outlined below and summarized on **Table 3.** Groundwater samples were collected from a total of 23 monitoring wells. Analytical parameters for each monitoring well are listed on the IGMP matrix included as **Attachment 1**. Groundwater analytical results are summarized on **Table 4** with exceedances of Part 201 Criteria summarized on **Figures 3** and **4**.

LNAPL Removal

As outlined in the Summary of LNAPL Transmissivity Results memorandum provided to MDEQ on March 30, 2015, LNAPL transmissivity estimates for the deeper LNAPL wells installed in the deeper, confined LNAPL zone at Plant 2 are two to three orders of magnitude below the criterion established by MDEQ to define LNAPL that can be recovered in a cost effective and efficient manner. However, given that PCBs are present in the deeper LNAPL zone at elevated concentrations, and the LNAPL accumulates at significant thickness at several wells, LNAPL is manually recovered from these wells on a quarterly basis.

During the third quarter event, three of the seven deeper LNAPL monitoring wells (LMW-14-12D, LMW-14-15D and LMW-14-16D) had LNAPL thickness greater than 10 feet, and a fourth LNAPL monitoring well (LMW-12-03D) contained over 7 feet of LNAPL. The thickness of the LNAPL measured in the deeper monitoring wells during the third quarter 2016 is consistent with previous monitoring events. A summary of the LNAPL recovered from these wells is provided as **Table 3**. Approximately 11 gallons of total liquid, containing an estimated 8.5 gallons of LNAPL, was recovered from the wells during the third quarter 2016.

As discussed in the Second Quarter 2016 Groundwater Monitoring Report, LNAPL monitoring well LMW-12-10 located on the north-central portion of Plant 3 has shown an increasing LNAPL thickness trend

since installation in fall 2012. The measured thickness has increased from no measurable LNAPL at the time of installation, to 12.20 feet during the third quarter 2016. Similar to the deeper LNAPL zone at Plant 2, LNAPL at LMW-12-10 is encountered under confined conditions and enters the well from a thin sand seam located at a depth of 19.5 feet below grade. LNAPL mobility testing at this location indicated a transmissivity too low to measure using standard baildown testing. However, given the tendency for LNAPL to accumulate at this location, RACER recommends removing LNAPL quarterly using an approach similar to the LNAPL removal activities at Plant 2. Recovery will begin the first sampling event after waste profiling is completed.

Groundwater Sampling

Between September 20 and September 23, 2016, a total of 23 monitoring wells were sampled and analyzed for one or more of the following parameters.

- Target compound list (TCL) volatile organic compounds (VOCs) using USEPA Method SW8260B.
- 1,4-Dioxane using Method SW8260B-SIM.
- Semi-volatile organic compounds (SVOCs) using Method SW8270D.
- Short metal list - arsenic, nickel, lead, vanadium, chromium, and copper - utilizing Method SW6020A. Samples were submitted for dissolved and total metals analysis if turbidity could not be stabilized below 10 nephelometric turbidity units (NTUs), or
- Long metals list - antimony, arsenic, barium, boron, cadmium, chromium, cobalt, copper, lead, manganese, mercury (Method 7471B), nickel, selenium, silver, vanadium, and zinc - using Method SW6020A. Samples were submitted for both dissolved and total metals analysis if turbidity could not be stabilized below 10 NTUs.

Groundwater samples were collected utilizing low-flow groundwater sampling methods with a submersible bladder pump. Samples were submitted under chain of custody protocol to Merit Laboratories (Merit) located in Lansing, Michigan. Groundwater analytical results are summarized on **Table 4**. Groundwater low-flow sampling logs are included as **Attachment 2.**

RESULTS

Results of the third quarter groundwater sampling event are generally consistent with previous groundwater sampling events. Of the 25 wells scheduled to be sampled, two wells (MW-13-42 and MW-16-83) contained insufficient groundwater and could not be sampled.

Exceedances of the Part 201 Residential Drinking Water (DW) Criteria are highlighted on **Table 4** and summarized on **Figures 3** and **4**. Results of the third quarter 2016 sampling event are summarized below.

- The only VOC exceeding DW Criteria during the third quarter 2016 sampling event was 1,4-dioxane. This is a result of the quarterly events focus on the lower 1,4-dioxane plume and is consistent with previous groundwater investigation and monitoring results from the weathered bedrock wells.
- No SVOCs exceeded DW Criteria during the third quarter 2016 event.

- Metals exceeding DW Criteria in at least one monitoring well during this event include arsenic, cobalt, manganese, nickel and vanadium. The metals results are consistent with previous sampling events. Manganese has been shown to be elevated regionally in groundwater relative to aesthetic DW Criteria and is not shown on **Figures 3** and **4**.

There were several detections of COCs observed in the perched zone or weathered bedrock near the property boundary. The following outlines these detections and notes the potential reasons for the occurrence:

- MW-14-56 - A weathered bedrock well located near the western Plant 2 property boundary. 1,4-dioxane was detected at a concentration of 8 micrograms per liter (µg/L), exceeding the Part 201 DW Criteria of 7.2 micrograms per liter (µg/L). 1,4-Dioxane has been detected at concentrations ranging from 7 to 9 µg/L during the past four quarterly sampling events. Based on the updated plume stability analysis included in the 2015-2016 Annual Groundwater Monitoring Report (Arcadis 2016c) the lower 1,4-dioxane plume at this location appears to be stable. In addition, as summarized in the Lower 1,4-Dioxane Plume Toe Investigation Report (Arcadis 2016a), groundwater sampling along W. Genesee St. suggest weathered bedrock impacts near the western property boundary could be related to the former Adams Plating Company (APC) operations.
- MW-13-32 - A well located in the southeastern corner of Plant 3 within Area 16. Total nickel was detected at a concentration of 0.842 milligrams per liter (mg/L; DW criterion: 0.10 mg/L) at well MW-13-32; lower than the second quarter 2016 result of 1.02 mg/L. Groundwater elevation in this area has indicated that a component of the groundwater flow is westerly, onto the Site. A detailed summary of the nickel occurrence at Plant 3 has been provided to the MDEQ for both soil and groundwater (Arcadis 2014, 2015a, 2015b).
- MW-16-80 - A new weathered bedrock well located along the western boundary of Plant 2. 1,4-dioxane was detected at 46 µg/L, exceeding the DW criterion of 7.2 µg/L, during the third quarter sampling event. Monitoring well MW-16-80 is located across the street from former APC and the detected 1,4-dioxane could be related to former APC operations. This well will continue to be monitored on a semi-annual basis. (Note: 1,4-dioxane was detected at a lower concentration (21 µg/L) during the 4th quarter 2016 event).

Ten new weathered bedrock wells installed on Plant 2, including MW-16-80, were added to the IGMP and sampled during the third quarter 2016 event. Observations for the new wells are summarized as follows:

- MW-16-74 thru MW-16-79 - Located around the toe of the lower 1,4-dioxane plume. These wells were non-detect for 1,4-dioxane and other VOCs and will continue to act as sentinel well locations.
- MW-16-81 and MW-16-84 - Monitoring wells installed near the perched LNAPL to monitor possible flux from the perched zone. 1,4-Dioxane was detected at these locations at concentrations of 230 µg/L and 29 µg/L, respectively.
- MW-16-82 - Located north of the Plant 2 LNAPL area and initially installed to monitor potential contribution of 1,4-dioxane from the lower 1,4-dioxane plume migrating south from Plant 3. 1,4-Dioxane was not detected in this well following installation or during a follow-up sampling event; however, 1,4-dioxane was detected at a concentration of 52 µg/L during the third quarter event. The

detected concentration seems anomalous and is being further evaluated. This well will continue to be monitored on a semi-annual basis. (Note: 1,4-dioxane was not detected at this well during the 4th quarter 2016 event)

- Several metals submitted for total metals analysis including arsenic, cobalt, nickel, and vanadium, exceeded DW criteria at several of the new weathered bedrock wells. Metals exceedances were not noted in the corresponding dissolved (field filtered) metals samples, and suggest elevated metals were the result of elevated turbidity in the new wells.

CONCLUSIONS

The third quarter 2016 monitoring results are generally consistent with previous events, with exception of results from some of the newly installed wells, and do not suggest any marked changes to the Site groundwater conditions. The groundwater sampling was also completed during the 4th quarter 2016 and incorporated revisions to the Interim Groundwater Monitoring Plan as discussed with the MDEQ. Arcadis will submit a fully updated Interim Groundwater Monitoring Plan to the MDEQ in the first quarter 2017. The 4th quarter results will be incorporated into the annual report also prepared for the MDEQ during the first quarter 2017.

REFERENCES

Arcadis. 2014. Memorandum, Re: Area 16 Metals Summary. RACER Trust Plant 3, Lansing, Michigan. June 24.

Arcadis. 2015a. Memorandum, Re: Area 16 Soil Risk Evaluation. RACER Trust Plant 3, Lansing, Michigan. February 4.

Arcadis. 2015b. Memorandum, Re: Area 16 Evaluation of Nickel in Groundwater. RACER Trust Plant 3, Lansing, Michigan. May 1.

Arcadis. 2016a. Lower 1,4-Dioxane Plume Toe Investigation Report. RACER Trust Plant 2, Lansing, Michigan. March 11.

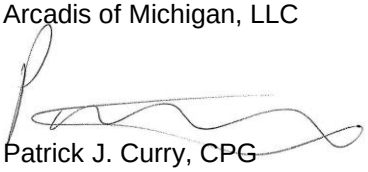
Arcadis. 2016b. Supplemental Lower 1,4-Dioxane Plume Toe Investigation Report. RACER Trust Plant 2, Lansing, Michigan. September 22.

Arcadis. 2016c. 2015-2016 Annual Groundwater Monitoring Report. RACER Trust Plants 2, 3, and 6, Lansing, Michigan. June 25.

If you should have any questions regarding the enclosed data, please do not hesitate to contact me at 810.225.1926 or via email at patrick.curry@arcadis.com.

Sincerely,

Arcadis of Michigan, LLC



Patrick J. Curry, CPG
Principal Geologist

Copies:

John McCabe, MDEQ
Joe Rogers, MDEQ
Debra MacKenzie-Taylor, MDEQ
Dave Favero, RACER Trust
Grant Trigger, RACER Trust
Randy Seida, Westside Water
Alec Malvetis, City of Lansing
Angie Goodman, LBWL
Cheryl Louden, LBWL
David Love, Ingham County Drain Commission
Steve Haywood, Lansing Township
Lansing Public Library

Enclosures:

Tables

1 Summary of Groundwater Elevations – September 2016
2 Summary of LNAPL Thicknesses – September 2016
3 Summary of LNAPL Recovery – September 2016
4 Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016

Figures

1 Third Quarter 2016 Sampling Locations Plant 2 and W. Plant 6
2 Third Quarter 2016 Sampling Locations Plant 3
3 Third Quarter 2016 Drinking Water Exceedances Plant 2 and W. Plant 6
4 Third Quarter 2016 Drinking Water Exceedances Plant 3

Attachments

1 Revised IGMP Sampling Matrix
2 Third Quarter 2016 Groundwater Sampling Logs

TABLES

Table 1
Summary of Groundwater Elevation Measurements
September 2016
Third Quarter 2016 Groundwater Monitoring Report
RACER Trust Plants 2 and 3 - Lansing, Michigan

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date Collected	Screened Interval Top (ft bgs)	Screened Interval Bottom (ft bgs)	Reference Elevation (ft toc)	Ground Surface Elevation (ft msl)	Total Well Depth (ft toc)	Depth to Water (ft toc)	Groundwater Elevation (ft msl)
Plant 2								
LMW-12-01	9/19/2016	7	12	864.91	862.14	14.76	10.92	853.99
LMW-12-02	9/19/2016	5	10	865.25	862.17	12.89	7.82	857.43
LMW-12-03D	9/19/2016	17.3	22.3	864.99	862.08	NM	17.97	853.37*
LMW-12-03S	9/19/2016	4	9	864.93	862.06	12.75	8.18	856.75
LMW-12-04	9/19/2016	16	21	864.94	862.12	23.68	11.19	853.75
LMW-12-05	9/19/2016	7	12	865.03	862.17	NM	12.09	853.03*
LMW-12-06	9/19/2016	4	9	865.02	862.15	11.96	7.12	857.90
LMW-12-07	9/19/2016	4	9	864.13	861.50	11.94	5.98	858.15
LMW-12-08	9/19/2016	8	13	864.40	861.56	NM	9.81	855.52*
LMW-14-12D	9/19/2016	18	23	864.59	862.11	NM	24.77	853.61*
LMW-14-13D	9/19/2016	17.5	22.5	865.03	862.06	24.3	11.42	853.61
LMW-14-14D	9/19/2016	18	23	864.89	861.90	25.05	12.62	852.27
LMW-14-15D	9/19/2016	18	23	865.11	861.66	NM	22.66	852.89*
LMW-15-16D	9/19/2016	19.5	24.5	865.20	862.24	NM	24.47	851.34*
LMW-15-17D	9/19/2016	20	25	865.21	862.24	27.29	11.43	853.78
MW-12-05	9/20/2016	75	99	865.19	862.23	102.86	76.43	788.76
MW-13-42	9/20/2016	70	75	861.61	860.03	77	76.29	785.32
MW-13-43	9/20/2016	72	77	863.82	860.97	79.71	71.01	792.81
MW-13-44	9/20/2016	96	115	864.24	861.03	122.6	80.21	784.03
MW-13-45	9/20/2016	72	77	863.80	861.54	78.7	70.17	793.63
MW-13-51	9/20/2016	77	87	875.34	872.51	89.72	75.47	799.87
MW-14-56	9/20/2016	71	76	863.27	860.56	79.02	75.22	788.05
MW-14-61	9/20/2016	70	75	865.51	862.30	77.48	72.96	792.55
MW-14-63	9/20/2016	68	73	854.64	851.68	76.71	70.39	784.25
MW-15-72	9/20/2016	63	68	865.09	862.35	70.53	60.52	804.57
MW-15-73	9/20/2016	78	83	861.56	859.12	81.03	76.05	785.51
MW-16-74	9/20/2016	66	71	864.81	862.10	73.7	69.32	795.49
MW-16-75	9/20/2016	66	71	864.87	862.13	74.09	64.49	800.38
MW-16-76	9/20/2016	70	75	867.76	865.12	82.09	69	798.76
MW-16-77	9/20/2016	66	71	866.17	863.42	73.62	66.38	799.79
MW-16-78	9/20/2016	68	73	864.98	862.09	76.18	69.34	795.64
MW-16-79	9/20/2016	68	73	864.80	862.07	75.68	71.22	793.58
MW-16-80	9/20/2016	68	73	853.03	853.41	73.51	68.45	784.58
MW-16-81	9/20/2016	70	75	864.68	862.04	77.34	70.75	793.93
MW-16-82	9/20/2016	70	75	864.79	862.10	77.72	70.9	793.89
MW-16-83	9/20/2016	71	76	862.97	860.17	79.08	76.52	786.45
MW-16-84	9/20/2016	72	77	NS	NS	78.17	75.54	NS
P2-SB-37	9/19/2016	5	10	865.90	861.90	NM	7.12	862.51*
PMW-01	9/19/2016	2.59	7.59	860.85	861.33	NM	4.14	857.81*
PMW-02	9/19/2016	2.59	7.59	861.12	861.50	NM	1.99	859.22*
PMW-03	9/19/2016	1.2	6.2	861.59	862.12	6.1	2.44	859.15
PW-14-01	9/20/2016	71.6	76.8	864.97	862.38	81.88	67.97	797.00
PW-14-02	9/20/2016	75	80	863.91	861.17	91.53	70.55	793.36
TW-14-02	9/20/2016	67	72	865.01	862.13	74.12	68.35	796.66

See Notes on last page.

Table 1
Summary of Groundwater Elevation Measurements
September 2016
Third Quarter 2016 Groundwater Monitoring Report
RACER Trust Plants 2 and 3 - Lansing, Michigan

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date Collected	Screened Interval Top (ft bgs)	Screened Interval Bottom (ft bgs)	Reference Elevation (ft toc)	Ground Surface Elevation (ft msl)	Total Well Depth (ft toc)	Depth to Water (ft toc)	Groundwater Elevation (ft msl)
Plant 3								
LMW-12-09	9/19/2016	3	8	863.22	860.40	10.76	4.74	858.48
LMW-12-10	9/19/2016	14	19	866.82	863.60	21.4	21.36	856.27*
LMW-12-11	9/19/2016	15	20	866.53	863.53	22.85	12.54	853.99
MW-12-20	9/20/2016	75	80	864.20	861.45	79.5	69.88	794.32
MW-12-21	9/20/2016	70	75	864.50	861.45	78.04	69.44	795.06
MW-13-22	9/20/2016	89	94	864.37	861.50	96.13	72.19	792.18
MW-13-23	9/20/2016	69	74	864.31	861.45	77.53	73.46	790.85
MW-13-24	9/20/2016	69	74	864.35	861.48	77.37	69.16	795.19
MW-13-25	9/20/2016	67	72	863.77	860.49	76.54	70.2	793.57
MW-13-26	9/20/2016	72	77	863.95	861.67	79.18	68.83	795.12
MW-13-27	9/20/2016	67	72	864.50	861.54	76.68	71.86	792.64
MW-13-29	9/20/2016	68	73	862.81	859.81	77.58	70.29	792.52
MW-13-30	9/20/2016	72	77	864.53	861.66	79.78	72.52	792.01
MW-13-31	9/20/2016	5	10	861.27	858.36	12.8	9.97	851.30
MW-13-32	9/20/2016	5	10	860.11	857.32	12.64	8.19	851.92
MW-13-34	9/20/2016	74	79	853.92	851.82	73	62.05	791.87
MW-13-46	9/20/2016	68	73	854.54	852.12	71.64	67.28	787.26
MW-13-48	9/20/2016	65	70	854.83	852.17	79.85	68.43	786.40
MW-13-49	9/20/2016	73	78	853.01	850.55	81.63	68.77	784.24
MW-14-64	9/20/2016	98.6	103.6	864.56	861.77	106.27	72.61	791.95
MW-15-71	9/20/2016	110	115	864.56	861.58	118.28	70.42	794.14
UNK-13	9/19/2016	11	16	859.11	859.91	14.95	4.13	854.98
UNK-14	9/19/2016	10.4	15.4	859.32	859.70	NM	5.22	855.63*

Acronyms and Abbreviations:
ft bgs - feet below ground surface
ft msl - feet above mean sea level
ft toc - feet below top of casing
NM - not measured
NS - not surveyed

Footnote:
* Groundwater elevation corrected for LNAPL thickness

Table 2
Summary of LNAPL Thickness
September 2016
Third Quarter 2016 Groundwater Report
RACER Trust Plants 2 and 3 - Lansing, Michigan

Well ID	Date Collected	Reference Elevation (TOC [ft. msl])	Ground Surface Elevation (ft. msl)	Total Well Depth (ft. below TOC)	Depth to Water (ft. below TOC)	Depth to LNAPL (ft. below TOC)	Calc. Thickness NAPL (ft.)	Groundwater Elevation (ft. msl)
LMW-12-01	9/19/2016	864.91	862.14	14.76	10.92	NP	NP	853.99
LMW-12-02	9/19/2016	865.25	862.17	12.89	7.82	NP	NP	857.43
LMW-12-03D	9/19/2016	864.99	862.08	NM	17.97	10.91	7.06	853.37*
LMW-12-03S	9/19/2016	864.93	862.06	12.75	8.18	NP	NP	856.75
LMW-12-04	9/19/2016	864.94	862.12	23.68	11.19	NP	NP	853.75
LMW-12-05	9/19/2016	865.03	862.17	NM	12.09	11.99	0.1	853.03*
LMW-12-06	9/19/2016	865.02	862.15	11.96	7.12	NP	NP	857.90
LMW-12-07	9/19/2016	864.13	861.50	11.94	5.98	NP	NP	858.15
LMW-12-08	9/19/2016	864.40	861.56	NM	9.81	8.78	1.03	855.52*
LMW-14-12D	9/19/2016	864.59	862.11	NM	24.77	9.44	15.33	853.61*
LMW-14-13D	9/19/2016	865.03	862.06	24.3	11.42	NP	NP	853.61
LMW-14-14D	9/19/2016	864.89	861.90	25.05	12.62	NP	NP	852.27
LMW-14-15D	9/19/2016	865.11	861.66	NM	22.66	11.05	11.61	852.89*
LMW-15-16D	9/19/2016	865.20	862.24	NM	24.47	12.68	11.79	851.34*
LMW-15-17D	9/19/2016	865.21	862.24	27.29	11.43	NP	NP	853.78
P2-SB-37	9/19/2016	865.90	861.90	NM	7.12	2.97	4.15	862.51*
PMW-01	9/19/2016	860.85	861.33	NM	4.14	2.71	1.43	857.99*
PMW-02	9/19/2016	861.12	861.50	NM	1.99	1.89	0.1	859.22*
PMW-03	9/19/2016	861.59	862.12	6.1	2.44	NP	NP	859.15
LMW-12-09	9/19/2016	863.22	860.40	10.76	4.74	NP	NP	858.48
LMW-12-10	9/19/2016	866.82	863.60	21.4	21.36	9.34	12.02	856.27*
LMW-12-11	9/19/2016	866.53	863.53	22.85	12.54	NP	NP	853.99
UNK-13	9/19/2016	859.11	859.91	14.95	4.13	NP	NP	854.98
UNK-14	9/19/2016	859.32	859.70	NM	5.22	3.52	1.7	855.63*

Acronyms and Abbreviations:
ft. - feet
ft. msl - feet above mean sea level
ID - Identification
NM - Not Measured
NP - No Product
TOC - Top of Casing

Footnote:
* Groundwater elevations have been corrected for the presence of LNAPL using a measured LNAPL density of 0.8995 g/mL

Table 3
Summary of LNAPL Recovery
September 2016
Third Quarter 2016 Groundwater Monitoring Report
RACER Trust Plant 2 - Lansing, Michigan

ARCADIS Design & Consultancy for natural and built assets

Well ID	Recovery Date	Reference Elevation (TOC)	Ground Surface Elevation	Total Well Depth (ft. below TOC)	Depth to Water (ft. below TOC)	Depth to LNAPL (ft. below TOC)	Starting LNAPL Thickness (ft)	Groundwater Elevation (ft msl)	Estimated LNAPL Volume Recovered (gallons)	Liquid Recovered (gallons)**
LMW-12-03D	9/20/2016	864.99	862.08	NM	17.97	10.91	7.06	853.37*	1.25	2.00
LMW-14-12D	9/20/2016	864.59	862.11	NM	24.77	9.44	15.33	853.61*	3.00	4.00
LMW-14-13D	9/20/2016	865.03	862.06	24.3	11.42	NP	NP	853.61	NP	NP
LMW-14-14D	9/20/2016	864.89	861.90	25.05	12.62	NP	NP	852.27	NP	NP
LMW-14-15D	9/20/2016	865.11	861.66	NM	22.66	11.05	11.61	852.89*	2.00	2.50
LMW-15-16D	9/20/2016	865.20	862.24	NM	24.47	12.68	11.79	851.34*	2.00	2.50
LMW-15-17D	9/20/2016	865.21	862.24	27.29	11.43	NP	NP	853.78	NP	NP
								Total:	**8.25**	**11.00**

Acronyms and Abbreviations:
ft. - feet
ID - Identification
msl - mean sea level
NM - Not Measured
NP - No Product
TOC - Top of Casing

Footnotes:
* Groundwater elevations have been corrected for the presence of LNAPL using a measured LNAPL density of 0.8995 g/mL.
** Recovery performed via 1.5 inch diameter weighted PVC bailers. Volume includes groundwater and LNAPL recovered.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-12-05 09/22/16 MW-12-05_092216	MW-13-22 09/21/16 MW-13-22_092116	MW-13-31 09/22/16 MW-13-31_092216	MW-13-32 09/22/16 MW-13-32_092216	MW-13-43 09/21/16 MW-13-43_092116	MW-13-44 09/21/16 MW-13-44_092116	MW-13-45 09/21/16 MW-13-45_092116	MW-13-48 09/21/16 MW-13-48_092116
Field											
Conductance, specific	umhos/cm	- -	- -	2,998	1,634	737	1,279	2,161	996	951	1,823
Dissolved oxygen (DO)	mg/L	- -	- -	0.57	0.28	0.04	0.35	0.31	0.62	1.05	0.24
Oxidation reduction potential (ORP), field	millivolts	- -	- -	-63.90	-111.80	35.4	-14.0	14.7	-5.50	-64.90	-83.50
pH	s.u.	- -	- -	7.6	6.76	6.61	6.6	7.22	9.49	7.91	6.73
Temperature, field	Deg C	- -	- -	18.4	16.68	16.59	15.28	17.4	18.75	16.49	17.81
Turbidity (field)	NTU	- -	- -	1.36	0.82	1.75	3.71	1.76	13.3	14.9	0.39
Volatile Organics											
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05	5.7	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,2-Dichlorobenzene	ug/L	600	13	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,4-Dichlorobenzene	ug/L	75	17	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,4-Dioxane	ug/L	7.2*	2,800	**15** [a]	**171** [a]	NA	NA	**310 Y** [a]	5	**47 [46]** [a]	**230 Y** [a]
1,1,1-Trichloroethane	ug/L	200	89	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
2-Hexanone	ug/L	1,000	- -	<10	<10	NA	NA	<10	<10	<10 [<10]	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Acetone	ug/L	730	1,700	<10	<10	NA	NA	<10	<10	<10 [<10]	<10
1,1,2-Trichloroethane	ug/L	5	330	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Bromodichloromethane	ug/L	80	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,1-Dichloroethane	ug/L	880	740	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Bromoform	ug/L	80	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,1-Dichloroethene	ug/L	7	130	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Bromomethane (Methyl bromide)	ug/L	10	35	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,2-Dichloroethane	ug/L	5	360	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Carbon disulfide	ug/L	800	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Carbon tetrachloride	ug/L	5	45	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
cis-1,2-Dichloroethene	ug/L	70	620	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Chlorobenzene	ug/L	100	25	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
trans-1,2-Dichloroethene	ug/L	100	1,500	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Chloroform (Trichloromethane)	ug/L	80	350	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Trichloroethene	ug/L	5	200	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Chloromethane (Methyl chloride)	ug/L	260	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Tetrachloroethene	ug/L	5	60	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
cis-1,3-Dichloropropene	ug/L	- -	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Vinyl chloride	ug/L	2	13	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Chloroethane	ug/L	430	1,100	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Benzene	ug/L	5	200	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Methyl acetate	ug/L	- -	- -	<10	<10	NA	NA	<10	<10	<10 [<10]	<10
Ethylbenzene	ug/L	74	18	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Methylene chloride	ug/L	5	1,500	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Styrene	ug/L	100	80	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Toluene	ug/L	790	270	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
trans-1,3-Dichloropropene	ug/L	- -	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Methyl tert butyl ether (MTBE)	ug/L	40	7,100	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Trifluorotrichloroethane (Freon 113)	ug/L	170,000	32	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	<10	<10	NA	NA	<10	<10	<10 [<10]	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	- -	<10	<10	NA	NA	<10	<10	<10 [<10]	<10
1,2,4-Trichlorobenzene	ug/L	70	99	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,2-Dichloropropane	ug/L	5	230	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
1,3-Dichlorobenzene	ug/L	6.6	28	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Cyclohexane	ug/L	- -	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Methyl cyclohexane	ug/L	- -	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-12-05 09/22/16 MW-12-05_092216	MW-13-22 09/21/16 MW-13-22_092116	MW-13-31 09/22/16 MW-13-31_092216	MW-13-32 09/22/16 MW-13-32_092216	MW-13-43 09/21/16 MW-13-43_092116	MW-13-44 09/21/16 MW-13-44_092116	MW-13-45 09/21/16 MW-13-45_092116	MW-13-48 09/21/16 MW-13-48_092116
Dibromochloromethane	ug/L	80	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
Isopropyl benzene	ug/L	800	28	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
o-Xylene	ug/L	- -	- -	<1	<1	NA	NA	<1	<1	<1 [<1]	<1
m&p-Xylene	ug/L	- -	- -	<2	<2	NA	NA	<2	<2	<2 [<2]	<2
Total Xylenes	ug/L	280	41	<3	<3	NA	NA	<3	<3	<3 [<3]	<3
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	- -	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	ug/L	1.1	0.3	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43	- -	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	- -	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	- -	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3	7.3	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1	- -	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6	25	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	- -	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	- -	4	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-12-05 09/22/16 MW-12-05_092216	MW-13-22 09/21/16 MW-13-22_092116	MW-13-31 09/22/16 MW-13-31_092216	MW-13-32 09/22/16 MW-13-32_092216	MW-13-43 09/21/16 MW-13-43_092116	MW-13-44 09/21/16 MW-13-44_092116	MW-13-45 09/21/16 MW-13-45_092116	MW-13-48 09/21/16 MW-13-48_092116
Di-n-octyl phthalate (DnOP)	ug/L	130	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210	1.6	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	ug/L	1	0.2	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50	- -	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2	- -	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5	- -	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1	2.8	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140	- -	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics											
Antimony	mg/L	0.006	0.13	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01	0.01	NA	NA	<0.002	0.006 [0.005]	NA	NA	NA	NA
Barium	mg/L	2	1.2	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5	7.2	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005	0.0045	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	- -	0.16	NA	NA	<0.005	<0.005 [<0.005]	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	1	0.02	NA	NA	0.013	<0.005 [<0.005]	NA	NA	NA	NA
Lead	mg/L	0.004	0.044	NA	NA	<0.003	<0.003 [<0.003]	NA	NA	NA	NA
Manganese	mg/L	0.05	4.5	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002	0.0000013	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1	0.12	NA	NA	0.060	**0.842 [0.691]** [ab]	NA	NA	NA	NA
Selenium	mg/L	0.05	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NA	NA	<0.005	<0.005 [<0.005]	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered											
Antimony (dissolved)	mg/L	0.006	0.13	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01	0.01	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2	1.2	NA	NA	NA	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	0.5	7.2	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	- -	0.16	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1	0.02	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004	0.044	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05	4.5	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1	0.12	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-14-56 09/22/16 MW-14-56_092216	MW-15-71 09/21/16 MW-15-71_092116	MW-15-72 09/22/16 MW-15-72_092216	MW-15-72 09/23/16 MW-15-72_092316	MW-15-73 09/22/16 MW-15-73_092216	MW-16-74 09/22/16 MW-16-74_092316	MW-16-75 09/21/16 MW-16-75_092116	MW-16-76 09/21/16 MW-16-76_092116
Field											
Conductance, specific	umhos/cm	- -	- -	4,599	884	1,858	1,775	2,326	2,094	1,524	1,856
Dissolved oxygen (DO)	mg/L	- -	- -	3.72	1.02	0.38	0.37	0.58	1.93	0.39	0.38
Oxidation reduction potential (ORP), field	millivolts	- -	- -	36.9	75.6	-67.0	-59.70	-85.70	-77.90	-83.90	-64.40
pH	s.u.	- -	- -	6.82	7.12	7.5	7.31	6.89	7.18	7.12	7.2
Temperature, field	Deg C	- -	- -	17.81	14.83	18.92	17.1	17.63	20.56	15.09	15.05
Turbidity (field)	NTU	- -	- -	39.9	2.09	10.1	8.74	6.22	NA	5.67	8.88
Volatile Organics											
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2	- -	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05	5.7	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600	13	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75	17	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	7.2*	2,800	**8** [a]	<3	**300 Y** [a]	**260 Y** [a]	5	<3	<3	3
1,1,1-Trichloroethane	ug/L	200	89	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	- -	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5	330	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80	- -	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80	- -	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7	130	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	360	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	- -	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	45	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70	620	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100	25	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	1,500	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80	350	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	200	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	- -	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	60	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2	13	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	- -	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5	200	<1	<1	<1	<1	<1	<1	2	<1
Methyl acetate	ug/L	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74	18	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	1,500	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100	80	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790	270	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40	7,100	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	- -	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	170,000	32	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	- -	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70	99	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5	230	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-14-56 09/22/16 MW-14-56_092216	MW-15-71 09/21/16 MW-15-71_092116	MW-15-72 09/22/16 MW-15-72_092216	MW-15-72 09/23/16 MW-15-72_092316	MW-15-73 09/22/16 MW-15-73_092216	MW-16-74 09/22/16 MW-16-74_092316	MW-16-75 09/21/16 MW-16-75_092116	MW-16-76 09/21/16 MW-16-76_092116
Dibromochloromethane	ug/L	80	- -	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	- -	- -	<2	<2	<2	<2	<2	<2	<2	<2
Total Xylenes	ug/L	280	41	<3	<3	<3	<3	<3	<3	<3	<3
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NA	<1	<1	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NA	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	- -	NA	<1	<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NA	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	- -	NA	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	- -	NA	<1	<1	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	NA	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	NA	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	- -	NA	<1	<1	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
3,3'-Dichlorobenzidine	ug/L	1.1	0.3	NA	<1	<1	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	NA	<1	<1	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NA	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
Anthracene	ug/L	43	- -	NA	<1	<1	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	NA	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	- -	NA	<1	<1	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	- -	NA	<1	<1	<1	<1	<1	<1	<1
Atrazine	ug/L	3	7.3	NA	<1	<1	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	- -	NA	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5	- -	NA	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5	- -	NA	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1	- -	NA	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1	- -	NA	<1	<1	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	NA	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1	NA	<1	<1	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6	25	NA	<2	<2	5	<2	<2	<2	<2
Butyl benzylphthalate (BBP)	ug/L	1,200	67	NA	<1	<1	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	- -	NA	<1	<1	<1	<1	<1	<1	<1
Carbazole	ug/L	85	10	NA	<1	<1	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6	- -	NA	<1	<1	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2	- -	NA	<2	<2	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	- -	4	NA	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NA	<1	<1	<1	<1	<1	<1	<1
Dimethyl phthalate	ug/L	73,000	- -	NA	<2	<2	<2	<2	<2	<2	<2
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NA	<1	<1	2	<1	1	<1	<1

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-14-56 09/22/16 MW-14-56_092216	MW-15-71 09/21/16 MW-15-71_092116	MW-15-72 09/22/16 MW-15-72_092216	MW-15-72 09/23/16 MW-15-72_092316	MW-15-73 09/22/16 MW-15-73_092216	MW-16-74 09/22/16 MW-16-74_092316	MW-16-75 09/21/16 MW-16-75_092116	MW-16-76 09/21/16 MW-16-76_092116
Di-n-octyl phthalate (DnOP)	ug/L	130	- -	NA	<1	<1	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210	1.6	NA	<1	<1	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	NA	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1	0.2	NA	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	NA	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50	- -	NA	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7	NA	<1	<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2	- -	NA	<1	<1	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300	NA	<1	<1	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180	NA	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5	- -	NA	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	- -	NA	<1	<1	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1	2.8	NA	<1	<1	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2	NA	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NA	<1	<1	<1	<1	<1	<1	<1
Pyrene	ug/L	140	- -	NA	<1	<1	<1	<1	<1	<1	<1
Inorganics											
Antimony	mg/L	0.006	0.13	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	NA	<0.002	NA	<0.002	<0.002	0.004	<0.002	<0.002
Barium	mg/L	2	1.2	NA	0.169	NA	0.017	0.067	0.241	0.312	0.108
Boron	mg/L	0.5	7.2	NA	0.12	NA	0.19	0.06	0.05	0.06	0.20
Cadmium	mg/L	0.005	0.0045	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium	mg/L	- -	0.16	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt	mg/L	0.04	0.1	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	mg/L	1	0.02	NA	<0.005	NA	<0.005	<0.005	0.010	<0.005	<0.005
Lead	mg/L	0.004	0.044	NA	<0.003	NA	<0.003	<0.003	<0.003	<0.003	<0.003
Manganese	mg/L	0.05	4.5	NA	**0.108** [a]	NA	**0.160** [a]	**0.194** [a]	**0.101** [a]	**0.096** [a]	**0.073** [a]
Mercury	mg/L	0.002	0.0000013	NA	<0.0002	NA	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	mg/L	0.1	0.12	NA	<0.005	NA	0.006	<0.005	**0.177** [ab]	<0.005	<0.005
Selenium	mg/L	0.05	- -	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	2.4	0.26	NA	<0.005	NA	<0.005	<0.005	0.021	<0.005	<0.005
Inorganics-Filtered											
Antimony (dissolved)	mg/L	0.006	0.13	NA	NA	NA	NA	NA	<0.005	NA	NA
Arsenic (dissolved)	mg/L	0.01	0.01	NA	NA	NA	NA	NA	<0.002	NA	NA
Barium (dissolved)	mg/L	2	1.2	NA	NA	NA	NA	NA	0.239	NA	NA
Boron (Dissolved)	mg/L	0.5	7.2	NA	NA	NA	NA	NA	0.05	NA	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	NA	NA	NA	NA	NA	<0.0005	NA	NA
Chromium (dissolved)	mg/L	- -	0.16	NA	NA	NA	NA	NA	<0.005	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NA	NA	NA	NA	NA	<0.005	NA	NA
Copper (dissolved)	mg/L	1	0.02	NA	NA	NA	NA	NA	<0.005	NA	NA
Lead (dissolved)	mg/L	0.004	0.044	NA	NA	NA	NA	NA	<0.003	NA	NA
Manganese (dissolved)	mg/L	0.05	4.5	NA	NA	NA	NA	NA	**0.084** [a]	NA	NA
Mercury (dissolved)	mg/L	- -	- -	NA	NA	NA	NA	NA	<0.0002	NA	NA
Nickel (dissolved)	mg/L	0.1	0.12	NA	NA	NA	NA	NA	0.096	NA	NA
Selenium (dissolved)	mg/L	0.05	- -	NA	NA	NA	NA	NA	<0.005	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002	NA	NA	NA	NA	NA	<0.0005	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NA	NA	NA	NA	NA	<0.005	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26	NA	NA	NA	NA	NA	0.015	NA	NA

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-16-77 09/21/16 MW-16-77_092316	MW-16-78 09/22/16 MW-16-78_092216	MW-16-79 09/21/16 MW-16-79_092316	MW-16-80 09/23/16 MW-16-80_092316	MW-16-81 09/22/16 MW-16-81_092216	MW-16-82 09/22/16 MW-16-82_092216	MW-16-84 09/23/16 MW-16-84_092316	TW-14-02 09/22/16 TW-14-02_092216
Field											
Conductance, specific	umhos/cm	- -	- -	1,314	1,326	771	1,262	2,634	NA	NA	3,111
Dissolved oxygen (DO)	mg/L	- -	- -	1.37	0.55	0.68	0.42	0.39	231.00	NA	0.75
Oxidation reduction potential (ORP), field	millivolts	- -	- -	176	-64.40	-125.20	-100.10	-79.30	-106.80	NA	-100.80
pH	s.u.	- -	- -	7.19	6.79	7.39	6.79	6.85	7.81	NA	6.98
Temperature, field	Deg C	- -	- -	16.02	15.85	19.18	14.04	17.2	24.66	NA	15.98
Turbidity (field)	NTU	- -	- -	70.9	7.23	185	5.75	8.9	13.50	NA	25.7
Volatile Organics											
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05	5.7	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,2-Dichlorobenzene	ug/L	600	13	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,4-Dichlorobenzene	ug/L	75	17	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,4-Dioxane	ug/L	7.2*	2,800	<3	<3	<3	**46** [a]	**230 Y** [a]	**52** [a]	**29** [a]	**2,700 Y [2,700 Y]** [a]
1,1,1-Trichloroethane	ug/L	200	89	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Hexanone	ug/L	1,000	- -	<10	<10	<10	<10	<10	<10	<10	<10 [<10]
1,1,2,2-Tetrachloroethane	ug/L	8.5	78	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Acetone	ug/L	730	1,700	<10	<10	14	<10	<10	<10	<10	<10 [<10]
1,1,2-Trichloroethane	ug/L	5	330	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Bromodichloromethane	ug/L	80	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,1-Dichloroethane	ug/L	880	740	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Bromoform	ug/L	80	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,1-Dichloroethene	ug/L	7	130	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Bromomethane (Methyl bromide)	ug/L	10	35	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,2-Dichloroethane	ug/L	5	360	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Carbon disulfide	ug/L	800	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Carbon tetrachloride	ug/L	5	45	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
cis-1,2-Dichloroethene	ug/L	70	620	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Chlorobenzene	ug/L	100	25	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
trans-1,2-Dichloroethene	ug/L	100	1,500	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Chloroform (Trichloromethane)	ug/L	80	350	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Trichloroethene	ug/L	5	200	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Chloromethane (Methyl chloride)	ug/L	260	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Tetrachloroethene	ug/L	5	60	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
cis-1,3-Dichloropropene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Vinyl chloride	ug/L	2	13	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Chloroethane	ug/L	430	1,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzene	ug/L	5	200	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Methyl acetate	ug/L	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10 [<10]
Ethylbenzene	ug/L	74	18	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Methylene chloride	ug/L	5	1,500	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Styrene	ug/L	100	80	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Toluene	ug/L	790	270	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
trans-1,3-Dichloropropene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Methyl tert butyl ether (MTBE)	ug/L	40	7,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Trichlorofluoromethane (CFC-11)	ug/L	2,600	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Trifluorotrichloroethane (Freon 113)	ug/L	170,000	32	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	<10	<10	<10	<10	<10	<10	<10	<10 [<10]
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	- -	<10	<10	<10	<10	<10	<10	<10	<10 [<10]
1,2,4-Trichlorobenzene	ug/L	70	99	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,2-Dichloropropane	ug/L	5	230	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
1,3-Dichlorobenzene	ug/L	6.6	28	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Cyclohexane	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Methyl cyclohexane	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-16-77 09/21/16 MW-16-77_092316	MW-16-78 09/22/16 MW-16-78_092216	MW-16-79 09/21/16 MW-16-79_092316	MW-16-80 09/23/16 MW-16-80_092316	MW-16-81 09/22/16 MW-16-81_092216	MW-16-82 09/22/16 MW-16-82_092216	MW-16-84 09/23/16 MW-16-84_092316	TW-14-02 09/22/16 TW-14-02_092216
Dibromochloromethane	ug/L	80	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Isopropyl benzene	ug/L	800	28	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
o-Xylene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
m&p-Xylene	ug/L	- -	- -	<2	<2	<2	<2	<2	<2	<2	<2 [<2]
Total Xylenes	ug/L	280	41	<3	<3	<3	<3	<3	<3	<3	<3 [<3]
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2,4,6-Trichlorophenol	ug/L	120	5	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2,4-Dichlorophenol	ug/L	73	11	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2,4,5-Trichlorophenol	ug/L	730	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2,4-Dimethylphenol	ug/L	370	380	<1	<1	<1	<1	<1	1	<1	<1 [<1]
2,4-Dinitrophenol	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2,4-Dinitrotoluene	ug/L	7.7	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2,6-Dinitrotoluene	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Chloronaphthalene	ug/L	1,800	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Chlorophenol	ug/L	45	18	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Methylnaphthalene	ug/L	260	19	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Methylphenol	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Nitroaniline	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
2-Nitrophenol	ug/L	20	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
3&4-Methylphenol	ug/L	- -	- -	<1	<1	<1	<1	<1	1	<1	<1 [<1]
3,3'-Dichlorobenzidine	ug/L	1.1	0.3	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Naphthalene	ug/L	520	11	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
3-Nitroaniline	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4,6-Dinitro-2-methylphenol	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4-Bromophenyl phenyl ether	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4-Chloro-3-methylphenol	ug/L	150	7.4	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4-Chloroaniline	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4-Chlorophenyl phenyl ether	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4-Nitroaniline	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
4-Nitrophenol	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Anthracene	ug/L	43	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Acenaphthene	ug/L	1,300	38	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Acenaphthylene	ug/L	52	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Acetophenone	ug/L	1,500	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Atrazine	ug/L	3	7.3	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzaldehyde	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzo(a)anthracene	ug/L	2.1	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzo(a)pyrene	ug/L	5	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzo(b)fluoranthene	ug/L	1.5	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzo(g,h,i)perylene	ug/L	1	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Benzo(k)fluoranthene	ug/L	1	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
bis(2-Chloroethoxy)methane	ug/L	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
bis(2-Chloroethyl)ether	ug/L	2	1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6	25	<2	<2	<2	<2	<2	<2	<3	<2 [<2]
Butyl benzylphthalate (BBP)	ug/L	1,200	67	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Caprolactam	ug/L	5,800	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Carbazole	ug/L	85	10	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Chrysene	ug/L	1.6	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Dibenz(a,h)anthracene	ug/L	2	- -	<2	<2	<2	<2	<2	<2	<2	<2 [<2]
Dibenzofuran	ug/L	- -	4	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Diethyl phthalate	ug/L	5,500	110	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Dimethyl phthalate	ug/L	73,000	- -	<2	<2	<2	<2	<2	<2	<2	<2 [<2]
Di-n-butylphthalate (DBP)	ug/L	880	9.7	1	<1	<1	1	<1	1	2	<1 [1]

See Notes on last page.

Table 4
Summary of Third Quarter 2016 Groundwater Analytical Data – September 2016
RACER Trust Plants 2 and 3 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	MW-16-77 09/21/16 MW-16-77_092316	MW-16-78 09/22/16 MW-16-78_092216	MW-16-79 09/21/16 MW-16-79_092316	MW-16-80 09/23/16 MW-16-80_092316	MW-16-81 09/22/16 MW-16-81_092216	MW-16-82 09/22/16 MW-16-82_092216	MW-16-84 09/23/16 MW-16-84_092316	TW-14-02 09/22/16 TW-14-02_092216
Di-n-octyl phthalate (DnOP)	ug/L	130	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Fluoranthene	ug/L	210	1.6	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Fluorene	ug/L	880	12	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Hexachlorobenzene	ug/L	1	0.2	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Hexachlorobutadiene	ug/L	15	0.053	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Hexachlorocyclopentadiene	ug/L	50	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Hexachloroethane	ug/L	7.3	6.7	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Indeno(1,2,3-cd)pyrene	ug/L	2	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Isophorone	ug/L	770	1,300	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Nitrobenzene	ug/L	3.4	180	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
N-Nitrosodi-n-propylamine	ug/L	5	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
N-Nitrosodiphenylamine	ug/L	270	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Pentachlorophenol	ug/L	1	2.8	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Phenanthrene	ug/L	52	2	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Phenol	ug/L	4,400	450	<1	<1	<1	<1	<1	1	<1	<1 [<1]
Pyrene	ug/L	140	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]
Inorganics											
Antimony	mg/L	0.006	0.13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]
Arsenic	mg/L	0.01	0.01	<0.002	0.010	<0.002	0.002	<0.002	0.003	**0.016** [ab]	0.009 [0.006]
Barium	mg/L	2	1.2	0.263	0.416	0.093	0.152	0.070	0.173	0.338	**1.21 [1.21]** [b]
Boron	mg/L	0.5	7.2	0.06	<0.04	0.20	0.10	0.08	0.04	0.11	0.04 [<0.04]
Cadmium	mg/L	0.005	0.0045	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]
Chromium	mg/L	- -	0.16	<0.005	<0.005	0.010	<0.005	<0.005	<0.005	0.012	<0.005 [<0.005]
Cobalt	mg/L	0.04	0.1	**0.042** [a]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]
Copper	mg/L	1	0.02	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	0.005	<0.005 [<0.005]
Lead	mg/L	0.004	0.044	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003 [<0.003]
Manganese	mg/L	0.05	4.5	**0.151** [a]	**0.105** [a]	**0.218** [a]	**0.371** [a]	**0.157** [a]	**0.084** [a]	**0.085** [a]	**0.066 [0.068]** [a]
Mercury	mg/L	0.002	0.0000013	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002 [<0.0002]
Nickel	mg/L	0.1	0.12	0.062	0.016	0.073	0.034	0.013	0.017	0.010	0.008 [0.01]
Selenium	mg/L	0.05	- -	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]
Silver	mg/L	0.034	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]
Vanadium	mg/L	0.0045	0.027	<0.005	<0.005	**0.005** [a]	<0.005	<0.005	<0.005	<0.005	<0.005 [<0.005]
Zinc	mg/L	2.4	0.26	0.010	<0.005	0.018	<0.005	0.006	<0.005	0.022	<0.005 [<0.005]
Inorganics-Filtered											
Antimony (dissolved)	mg/L	0.006	0.13	<0.005	NA	<0.005	NA	NA	<0.005	<0.005	<0.005 [<0.005]
Arsenic (dissolved)	mg/L	0.01	0.01	<0.002	NA	<0.002	NA	NA	0.003	0.005	0.007 [0.008]
Barium (dissolved)	mg/L	2	1.2	0.258	NA	0.081	NA	NA	0.162	0.186	**1.23 [1.19]** [b]
Boron (Dissolved)	mg/L	0.5	7.2	0.06	NA	0.19	NA	NA	0.04	0.10	<0.04 [<0.04]
Cadmium (dissolved)	mg/L	0.005	0.0045	<0.0005	NA	<0.0005	NA	NA	<0.0005	<0.0005	<0.0005 [<0.0005]
Chromium (dissolved)	mg/L	- -	0.16	<0.005	NA	<0.005	NA	NA	<0.005	<0.005	<0.005 [<0.005]
Cobalt (dissolved)	mg/L	0.04	0.1	0.040	NA	<0.005	NA	NA	<0.005	<0.005	<0.005 [<0.005]
Copper (dissolved)	mg/L	1	0.02	<0.005	NA	<0.005	NA	NA	<0.005	<0.005	<0.005 [<0.005]
Lead (dissolved)	mg/L	0.004	0.044	<0.003	NA	<0.003	NA	NA	<0.003	<0.003	<0.003 [<0.003]
Manganese (dissolved)	mg/L	0.05	4.5	**0.152** [a]	NA	**0.104** [a]	NA	NA	**0.068** [a]	0.035	**0.066 [0.058]** [a]
Mercury (dissolved)	mg/L	- -	- -	<0.0002	NA	<0.0002	NA	NA	<0.0002	<0.0002	<0.0002 [<0.0002]
Nickel (dissolved)	mg/L	0.1	0.12	0.056	NA	0.050	NA	NA	0.011	<0.005	0.010 [0.009]
Selenium (dissolved)	mg/L	0.05	- -	<0.005	NA	<0.005	NA	NA	<0.005	<0.005	<0.005 [<0.005]
Silver (dissolved)	mg/L	0.034	0.0002	<0.0005	NA	<0.0005	NA	NA	<0.0005	<0.0005	<0.0005 [<0.0005]
Vanadium (dissolved)	mg/L	0.0045	0.027	<0.005	NA	<0.005	NA	NA	<0.005	<0.005	<0.005 [<0.005]
Zinc (dissolved)	mg/L	2.4	0.26	0.008	NA	<0.005	NA	NA	<0.005	0.071	<0.005 [<0.005]

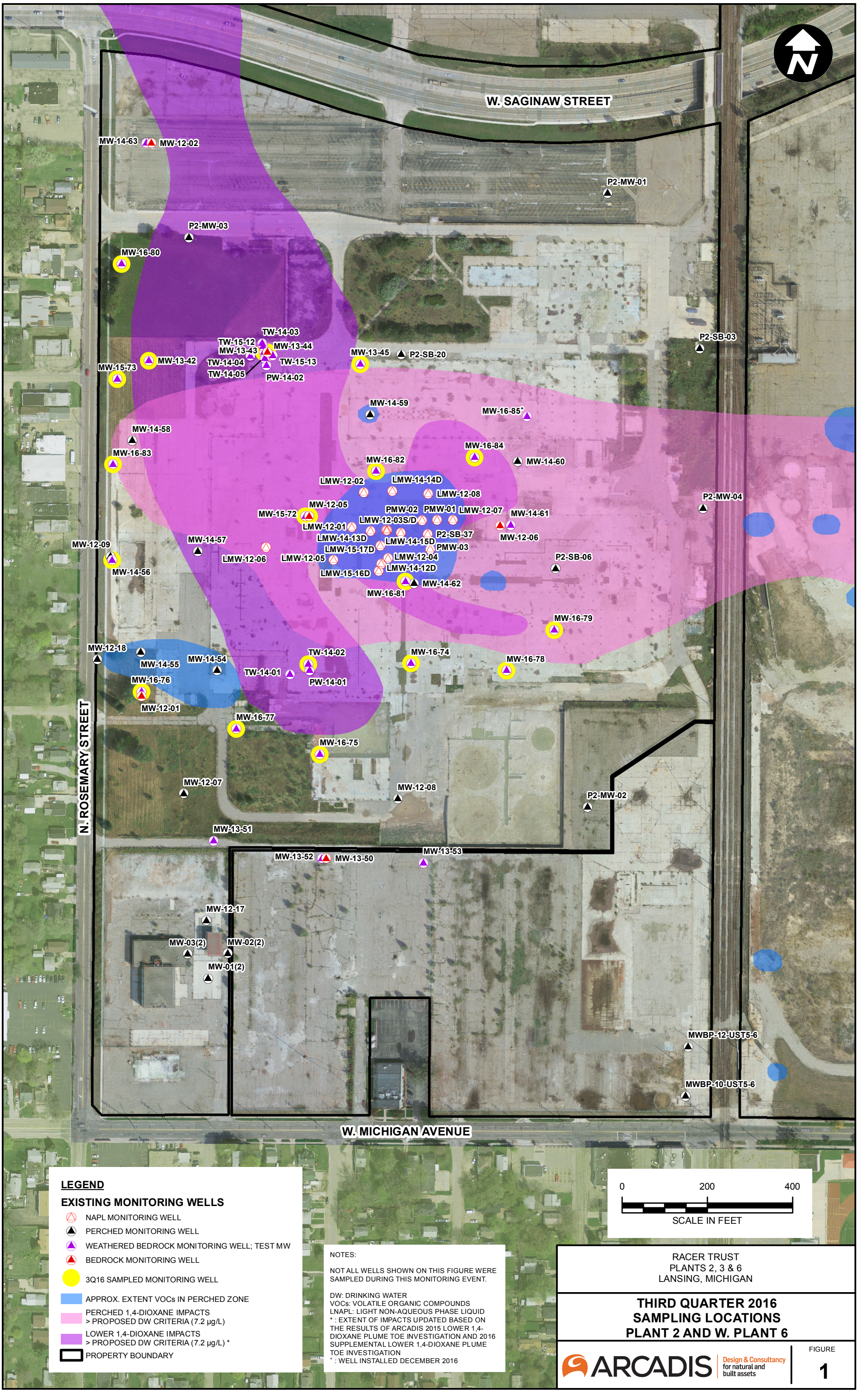
See Notes on last page.

Notes:
Bold result denotes detection is above the laboratory reporting limit but below MDEQ Part 201 Generic Cleanup Criteria.
Data shown in brackets [ ] represent duplicate sample analytical results.
- - = Not listed in the MDEQ Criteria Tables.

Footnotes:
[a] - Sample exceeds Residential Drinking Water Criteria. 1,4-Dioxane includes the emergency drinking water criteria of 7.2 ug/L.
[b] - Sample exceeds Groundwater Surface Water Interface Criteria
* - The drinking water criteria for 1,4-dioxane reflects the MDEQ Emergency Rules for 1,4-dioxane issued on October 27, 2016.

Acronyms and Abbreviations:
B = Compounds also found in associated method blank.
Deg. C. - degrees Celsius
mg/L - milligrams per liter
mS/cm - milli Siemens per centimeter
NA - Not Analyzed during the 3rd Quarter 2016 Sampling Event
NTU - Nephelometric Turbidity Unit
s.u. - standard unit
ug/L - micrograms per liter
X = Elevated reporting limit due to matrix interference.
Y = Elevated reporting limit due to high target concentration.

FIGURES



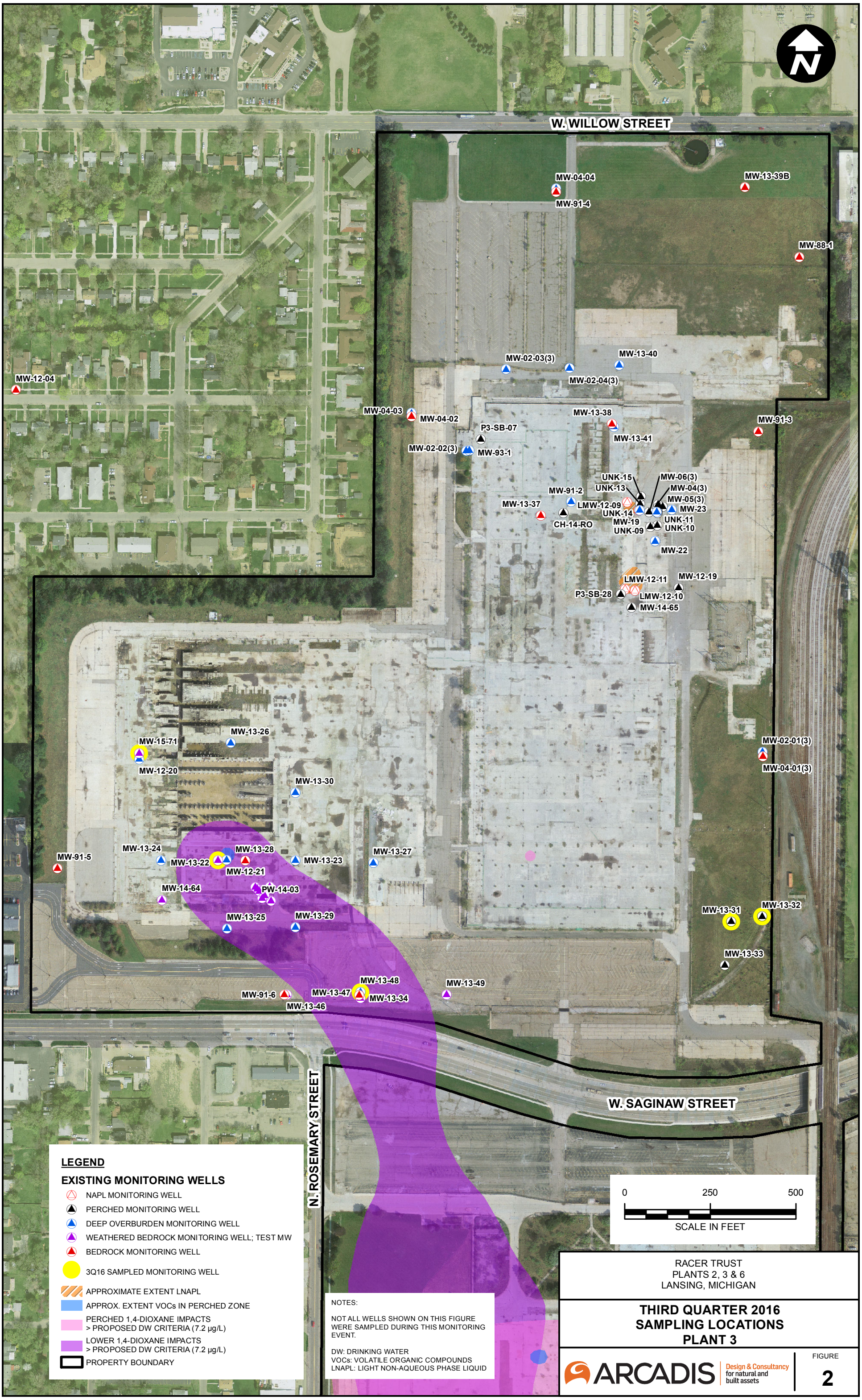
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

THIRD QUARTER 2016 SAMPLING LOCATIONS PLANT 2 AND W. PLANT 6

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: Novi DIV: ENV DB: D. OLEXA PIC: D. KAIDING PM: C. KIKER TM: K. PADRON TR: P. CURRY PROJECT NUMBER: B0064479.2016 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\Quarterly Report Figures\1 - Quarterly Sample Locations - P2 and 6.mxd PLOTTED: 1/4/2017 10:58:20 AM BY: dolexa



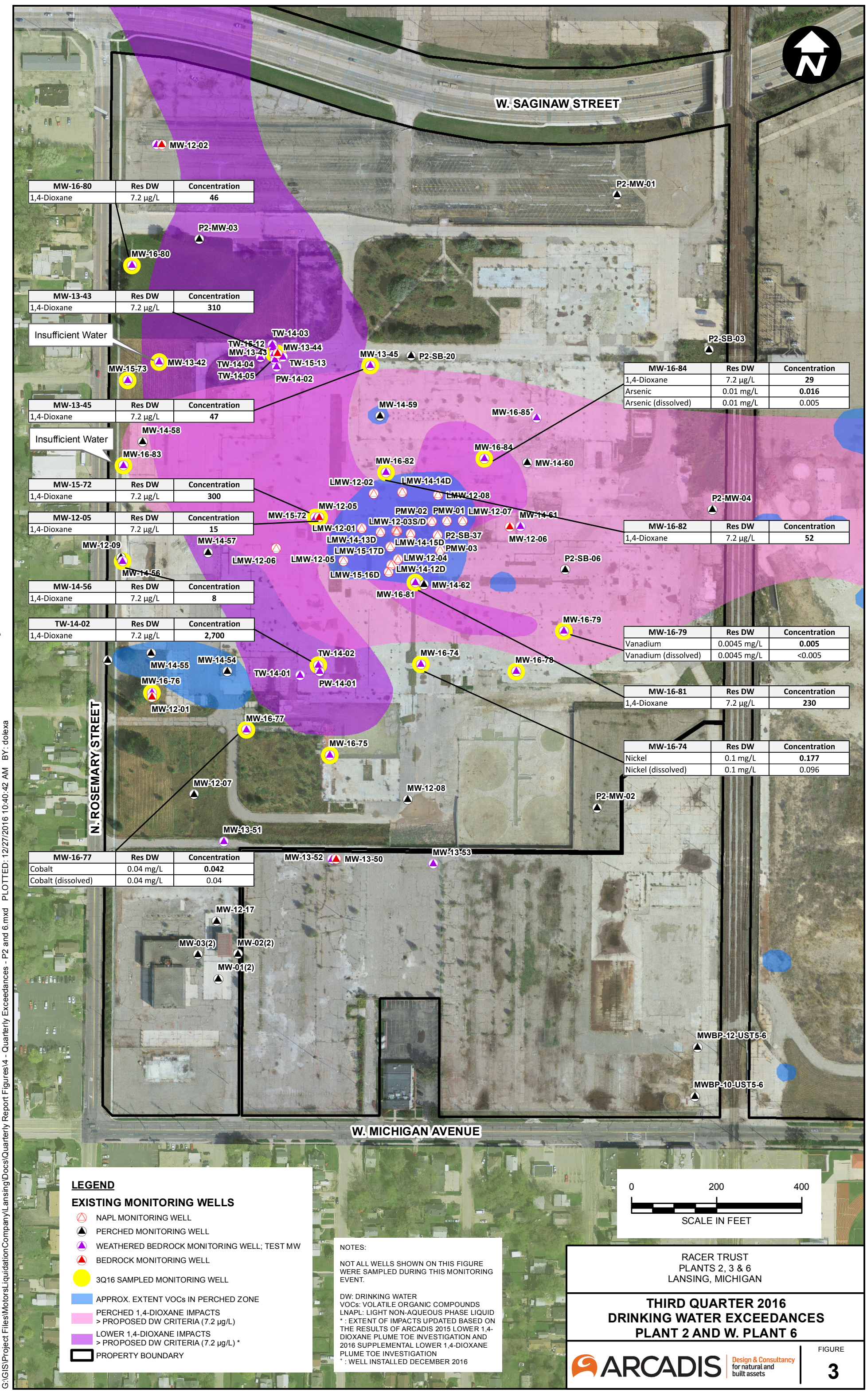
CITY: Novi DIV: ENV DB: D. OLEXA PIC: D. KAIDING PM: C. KIKER TM: K. PADRON TR: P. CURRY PROJECT NUMBER: B0064479.2016 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\Quarterly Report Figures\2 - Quarterly Sample Locations - P3.mxd PLOTTED: 12/27/2016 10:27:54 AM BY: dolexa

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

THIRD QUARTER 2016 SAMPLING LOCATIONS PLANT 3

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2



RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

THIRD QUARTER 2016
DRINKING WATER EXCEEDANCES
PLANT 2 AND W. PLANT 6

ARCADIS Design & Consultancy for natural and built assets

FIGURE
3

CITY: Novi DIV: ENV DB: D. OLEXA PIC: D. KAIDING PM: C. KIKER TM: K. PADRON TR: P. CURRY PROJECT NUMBER: B0064479.2016 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\Quarterly Report Figures\4 - Quarterly Exceedances - P2 and 6.mxd PLOTTED: 12/27/2016 10:40:42 AM BY: dolexa

W. WILLOW STREET

MW-04-04
MW-91-4
MW-13-39B
MW-88-1
MW-02-03(3)
MW-13-40
MW-02-04(3)
MW-12-04
MW-04-03
MW-04-02
MW-13-38
MW-91-3
P3-SB-07
MW-13-41
MW-02-02(3)
MW-93-1
UNK-15
MW-06(3)
UNK-13
MW-04(3)
MW-91-2
MW-05(3)
MW-13-37
LMW-12-09
MW-23
UNK-14
CH-14-RO
MW-19
UNK-11
UNK-09
UNK-10
MW-22
LMW-12-11
MW-12-19
P3-SB-28
LMW-12-10
MW-14-65
MW-13-26
MW-15-71
MW-02-01(3)
MW-12-20
MW-04-01(3)
MW-13-30

MW-13-22	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**171**

MW-13-32	Res DW	Concentration
Nickel	0.1 mg/L	**0.842**

MW-91-5
MW-13-24
MW-13-28
MW-13-22
MW-13-23
MW-13-27
MW-12-21
MW-14-64
PW-14-03
MW-13-25
MW-13-29
MW-13-31
MW-13-32
MW-13-33

MW-13-48	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**230**

MW-91-6
MW-13-46
MW-13-47
MW-13-48
MW-13-34
MW-13-49

N. ROSEMARY STREET

W. SAGINAW STREET

LEGEND

EXISTING MONITORING WELLS

- NAPL MONITORING WELL
- PERCHED MONITORING WELL
- DEEP OVERBURDEN MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL; TEST MW
- BEDROCK MONITORING WELL
- 3Q16 SAMPLED MONITORING WELL
- APPROXIMATE EXTENT LNAPL
- APPROX. EXTENT VOCs IN PERCHED ZONE
- PERCHED 1,4-DIOXANE IMPACTS > PROPOSED DW CRITERIA (7.2 µg/L)
- LOWER 1,4-DIOXANE IMPACTS > PROPOSED DW CRITERIA (7.2 µg/L)
- PROPERTY BOUNDARY

NOTES:

NOT ALL WELLS SHOWN ON THIS FIGURE WERE SAMPLED DURING THIS MONITORING EVENT.

DW: DRINKING WATER
VOCs: VOLATILE ORGANIC COMPOUNDS
LNAPL: LIGHT NON-AQUEOUS PHASE LIQUID

0 250 500
SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

THIRD QUARTER 2016 DRINKING WATER EXCEEDANCES PLANT 3

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

CITY: Novi DIV: ENV DB: D. OLEXA PIC: D. KAIDING PM: C. KIKER TM: K. PADRON TR: P. CURRY PROJECT NUMBER: B0064479.2016 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\Quarterly Report Figures\5 - Quarterly Exceedances - P3.mxd PLOTTED: 12/27/2016 11:03:35 AM BY: dolexa

ATTACHMENT 1

Revised IGMP Sampling Matrix

Table 1
Revised Interim Groundwater Monitoring Summary

Revised August 20, 2015
RACER Trust Plants 2, 3, and 6 - Lansing, Michigan

Well	Frequency	Analyte							Annual Geochem Sampling****	Biannual Sampling*****	Function
		VOCs	1,4-Dioxane	SVOCs	Select Metals*	Hexavalent Chromium	Metals**	TAL Metals***			
Plant 2											
Perched											
MW-01(2)	SA	X			X				X	X	VOC sentinel
MW-03(2)	SA	X			X				X	X	boundary
MW-12-09	SA	X	X							X	perched 1,4-dioxane sentinel
MW-12-18	SA	X								X	VOC sentinel
P2-MW-04	SA	X	X		X				X		perched 1,4-dioxane
P2-SB-20	SA	X	X								perched 1,4-dioxane sentinel
LMW-12-01	Q	Gauge only									LNAPL Monitoring
LMW-12-02	Q	Gauge only									LNAPL Monitoring
LMW-12-03D	Q	Gauge only									LNAPL Monitoring
LMW-12-03S	Q	Gauge only									LNAPL Monitoring
LMW-12-04	Q	Gauge only									LNAPL Monitoring
LMW-12-05	Q	Gauge only									LNAPL Monitoring
LMW-12-06	Q	Gauge only									LNAPL Monitoring
LMW-12-07	Q	Gauge only									LNAPL Monitoring
LMW-12-08	Q	Gauge only									LNAPL Monitoring
LMW-14-12D	Q	Gauge only									LNAPL Monitoring
LMW-14-13D	Q	Gauge only									LNAPL Monitoring
LMW-14-14D	Q	Gauge only									LNAPL Monitoring
LMW-14-15D	Q	Gauge only									LNAPL Monitoring
LMW-15-16D	Q	Gauge only									LNAPL Monitoring
LMW-15-17D	Q	Gauge only									LNAPL Monitoring
PMW-01	Q	Gauge only									LNAPL Monitoring
PMW-02	Q	Gauge only									LNAPL Monitoring
PMW-03	Q	Gauge only									LNAPL Monitoring
P2-SB-37	Q	Gauge only									LNAPL Monitoring
MW-02(2)	SA	Gauge only									groundwater elevation monitoring
MW-12-07	SA	Gauge only								X	groundwater elevation monitoring
MW-12-08	SA	Gauge only								X	groundwater elevation monitoring
MW-12-17	SA	Gauge only							X		groundwater elevation monitoring
P2-MW-01	SA	Gauge only								X	groundwater elevation monitoring
P2-MW-02	SA	Gauge only								X	groundwater elevation monitoring
P2-MW-03	SA	Gauge only								X	groundwater elevation monitoring
P2-SB-03	SA	Gauge only							X	X	groundwater elevation monitoring
P2-SB-06	SA	Gauge only									groundwater elevation monitoring
MW-14-54	SA	X			X						VOCs
MW-14-55	SA	X			X						VOCs
MW-14-57	SA	X	X		X						perched 1,4-dioxane
MW-14-58	SA	X	X		X						perched 1,4-dioxane
MW-14-59	SA	X	X								perched 1,4-dioxane
MW-14-60	SA	X	X		Mn only						perched 1,4-dioxane
MW-14-62	SA	X	X								perched 1,4-dioxane
Deep Overburden and Weathered Bedrock											
MW-13-42	Q	X	X							X	lower 1,4-dioxane
MW-13-43	Q	X	X						X		lower 1,4-dioxane
MW-13-45	Q	X	X								lower 1,4-dioxane
MW-13-51	SA	X	X							X	lower 1,4-dioxane sentinel
MW-14-56	Q	X	X								lower 1,4-dioxane sentinel
MW-14-61	SA	X	X								lower 1,4-dioxane sentinel
MW-14-63	SA	X	X								lower 1,4-dioxane sentinel
MW-15-72	Q	X	X	X			X				lower 1,4-dioxane, <4 samples
MW-15-73	Q	X	X	X			X				lower 1,4-dioxane, <4 samples
PW-14-01	SA	X	X								lower 1,4-dioxane
PW-14-02	SA	X	X								lower 1,4-dioxane
TW-14-02	Q	X	X	X			X				lower 1,4-dioxane, <4 samples
Bedrock											
MW-12-01	SA	X	X						X	X	bedrock sentinel
MW-12-02	SA	X	X						X		bedrock sentinel
MW-12-05	Q	X	X						X		bedrock sentinel
MW-13-44	Q	X	X								bedrock sentinel
MW-12-06	SA	X	X						X	X	bedrock sentinel
Storm Sewer											
P2-MH-NW	A	X	X					X			
P2-MH-W	A	X	X					X			

Notes:

* Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.

**Metals include Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Chromium VI, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, and Zinc.

***TAL metals defined in Table 3 of the Quality Assurance Project Plan (ARCADIS 2011b).

****Monitoring wells indicated will be sampled annually for geochemical parameters including nitrate, sulfate, total and dissolved iron and manganese and methane

*****Monitoring wells indicated will be sampled biannually, commencing the 2nd Quarter 2016 event for VOCs, 1,4-Dioxane, SVOCs and an extended metals analytical suite comprising, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, and Zinc

† Well to be sampled quarterly until sampling frequency is reevaluated after collection of eight quarters of data.

‡ Well to be sampled quarterly until sampling frequency is reevaluated after collection of four data points.

New wells will be added to the figures and incorporated into the semi-annual monitoring once 4 samples are collected and a COC list is determined

SA = semi-annual
Q = quarterly
A = annual

VOCs = volatile organic compounds
LNAPL = light non-aqueous phase liquid

Table 1
Revised Interim Groundwater Monitoring Summary

Revised August 20, 2015
RACER Trust Plants 2, 3, and 6 - Lansing, Michigan

Well	Frequency	Analyte							Annual Geochem Sampling****	Biannual Sampling*****	Function
		VOCs	1,4-Dioxane	SVOCs	Select Metals*	Hexavalent Chromium	Metals**	TAL Metals***			
Plant 3											
Perched											
CH-14-RO	SA				X	X			X	X	metals
MW-05(3)	SA	X			X						LNAPL sentinel, metals
MW-06(3)	SA	X									LNAPL sentinel
MW-13-31	Q				X				X	X	boundary, <8 data points†
MW-13-32	Q				X						boundary, <8 data points†
MW-13-33	SA				X				X		boundary
UNK-09	SA				X					X	metals
UNK-10	SA	X			X						LNAPL sentinel, metals
UNK-11	SA	X									LNAPL sentinel
LMW-12-09	Q	Gauge only									LNAPL Monitoring
LMW-12-10	Q	Gauge only									LNAPL Monitoring
LMW-12-11	Q	Gauge only									LNAPL Monitoring
UNK-13	Q	Gauge only									LNAPL Monitoring
UNK-14	Q	Gauge only									LNAPL Monitoring
MW-04(3)	SA	Gauge only									groundwater elevation monitoring
MW-12-19	SA	Gauge only								X	groundwater elevation monitoring
P3-SB-07	SA	Gauge only							X		groundwater elevation monitoring
P3-SB-28	SA	Gauge only							X		groundwater elevation monitoring
UNK-15	SA	Gauge only									groundwater elevation monitoring
MW-14-65	SA	X			X						LNAPL sentinel
Deep Overburden and Weathered Bedrock											
MW-12-20	SA	X	X							X	lower 1,4-dioxane sentinel
MW-12-21	SA	X	X						X	X	lower 1,4-dioxane
MW-13-22	Q	X	X						X		lower 1,4-dioxane
MW-13-23	SA	X	X						X		lower 1,4-dioxane sentinel
MW-13-24	SA	X	X						X		lower 1,4-dioxane sentinel
MW-13-25	SA	X	X						X		lower 1,4-dioxane
MW-13-26	SA	X	X							X	lower 1,4-dioxane sentinel
MW-13-29	SA	X	X						X		lower 1,4-dioxane
MW-13-30	SA	X	X								lower 1,4-dioxane sentinel
MW-13-34	SA	X	X						X		lower 1,4-dioxane
MW-13-40	SA	X	X		X						lower 1,4-dioxane/metals sentinel (northern Plant 3)
MW-13-41	SA	X	X		X					X	lower 1,4-dioxane/metals sentinel (northern Plant 3)
MW-13-46	SA	X	X							X	lower 1,4-dioxane sentinel
MW-13-48	Q	X	X						X		lower 1,4-dioxane
MW-13-49	SA	X	X								lower 1,4-dioxane
MW-19	SA	X	X								lower 1,4-dioxane sentinel (northern Plant 3)
MW-22	SA				X				X	X	metals sentinel
MW-23	SA	X	X						X		metals sentinel
MW-91-2	SA	X	X		X	X			X		lower 1,4-dioxane/metals sentinel (northern Plant 3)
MW-02-02(3)	SA	X	X						X	X	lower 1,4-dioxane sentinel (northern Plant 3)
MW-02-04(3)	SA	X	X							X	lower 1,4-dioxane sentinel (northern Plant 3)
MW-02-01(3)	SA	Gauge only							X		groundwater elevation monitoring
MW-02-03(3)	SA	Gauge only								X	groundwater elevation monitoring
MW-04-03(3)	SA	Gauge only								X	groundwater elevation monitoring
MW-04-04(3)	SA	Gauge only							X		groundwater elevation monitoring
MW-13-27	SA	Gauge only									groundwater elevation monitoring
MW-14-64	SA	X	X								lower 1,4-dioxane sentinel
MW-15-71	Q	X	X	X			X				lower 1,4-dioxane sentinel, <4 data points‡
PW-14-03	SA	X	X								lower 1,4-dioxane
Bedrock											
MW-91-5	SA	X	X							X	bedrock sentinel
MW-91-6	SA	X	X								bedrock sentinel
MW-13-28	SA	X	X							X	bedrock sentinel
MW-13-38	SA	X	X								bedrock sentinel
MW-13-39B	SA	Gauge only									groundwater elevation monitoring
MW-13-47	SA	X	X								bedrock sentinel
MW-04-01(3)	SA	Gauge only							X	X	groundwater elevation monitoring
MW-04-02(3)	SA	Gauge only									groundwater elevation monitoring
MW-12-04	SA	Gauge only									groundwater elevation monitoring
MW-13-37	SA	Gauge only									groundwater elevation monitoring
MW-88-1	SA	Gauge only									groundwater elevation monitoring
MW-91-3	SA	Gauge only								X	groundwater elevation monitoring
MW-91-4	SA	Gauge only							X		groundwater elevation monitoring
Storm Sewer											
P3-MH-NE	A	X	X					X			
P3-MH-S	A	X	X					X			
P2 Outfall at P3	A	X	X					X			

Notes:

* Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.

**Metals include Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Chromium VI, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, and Zinc.

***TAL metals defined in Table 3 of the Quality Assurance Project Plan (ARCADIS 2011b).

****Monitoring wells indicated will be sampled annually for geochemical parameters including nitrate, sulfate, total and dissolved iron and manganese and methane

*****Monitoring wells indicated will be sampled biannually, commencing the 2nd Quarter 2016 event for VOCs, 1,4-Dioxane, SVOCs and an extended metals analytical suite comprising, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, and Zinc

† Well with increasing metals trend to be sampled quarterly until sampling frequency is reevaluated after collection of eight quarters of data.

‡ Well to be sampled quarterly until sampling frequency is reevaluated after collection of four data points.

New wells will be added to the figures and incorporated into the semi-annual monitoring once 4 samples are collected and a COC list is determined

SA = semi-annual
Q = quarterly
A = annual

VOCs = volatile organic compounds
LNAPL = light non-aqueous phase liquid

Table 1
Revised Interim Groundwater Monitoring Summary

Revised August 20, 2015
RACER Trust Plants 2, 3, and 6 - Lansing, Michigan

Well	Frequency	Analyte							Annual Geochem Sampling****	Biennial Sampling*****	Function
		VOCs	1,4-Dioxane	SVOCs	Select Metals*	Hexavalent Chromium	Metals**	TAL Metals***			
Plant 6											
Perched											
MW-02-03(6)	SA	X	X		X				X		perched 1,4-dioxane
MW-03-01	SA	X	X		X				X		perched 1,4-dioxane/metals sentinel
MW-03-04	SA	X	X						X		perched 1,4-dioxane
MW-03-06	SA	X	X		X					X	perched 1,4-dioxane/metals sentinel
MW-03-08	SA	X	X						X	X	perched 1,4-dioxane/VOCs
MW-04-05(6)	SA	X			X				X	X	boundary
MW-12-11	SA	X			X				X	X	boundary
MW-12-12	SA	X			X				X		boundary
MW-12-13	SA	X	X		X				X	X	boundary
MW-12-16	SA	X			X				X	X	boundary
MW-13-35	SA				X						boundary, <8 data points†
MW-13-36R	SA				X						boundary, <8 data points†
MWBP-10-UST5-6	SA	X			X						boundary
MWBP-11-UST1-4	SA	X			X						boundary
MWBP-12A-UST1-4	SA	X			X				X	X	boundary
MWBP-12-UST1-4	SA	X			X					X	boundary
P6-SB-18	SA				X				X		metals
P6-SB-32	SA	X							X	X	VOCs
P6-SB-35	SA				X				X		metals
P6-SB-37	SA				X						metals
MW-02-01(6)	SA	Gauge only							X		groundwater elevation monitoring
MW-02-02(6)	SA	Gauge only							X		groundwater elevation monitoring
MW-03-02	SA	Gauge only									groundwater elevation monitoring
MW-03-05	SA	Gauge only									groundwater elevation monitoring
MW-03-07	SA	Gauge only							X		groundwater elevation monitoring
MW-12-09	SA	Gauge only									groundwater elevation monitoring
MW-12-10	SA	Gauge only							X		groundwater elevation monitoring
MW-12-14	SA	Gauge only							X	X	groundwater elevation monitoring
MW-12-15	SA	Gauge only							X		groundwater elevation monitoring
MWBP-12-UST5-6	SA	Gauge only							X		groundwater elevation monitoring
MWBP-13A-UST1-4	SA	Gauge only									groundwater elevation monitoring
P6-MW-01	SA	Gauge only							X		groundwater elevation monitoring
P6-SB-07	SA	Gauge only								X	groundwater elevation monitoring
P6-SB-21	SA	Gauge only									groundwater elevation monitoring
SME-MW-02	SA	Gauge only							X		groundwater elevation monitoring
MW-14-66	SA	X	X		X						perched 1,4-dioxane/metals sentinel
MW-14-67	SA	X	X		X						perched 1,4-dioxane/metals sentinel
MW-14-68	SA	Gauge only									sentinel (DRY)
MW-14-69	SA	Gauge only									sentinel (DRY)
MW-14-70	SA	X	X		X						perched 1,4-dioxane/metals sentinel
Deep Overburden and Weathered Bedrock											
MW-13-52	SA	X	X						X		lower 1,4-dioxane sentinel
MW-13-53	SA	X	X								lower 1,4-dioxane sentinel
Bedrock											
MW-04-01(6)	SA	X	X						X	X	bedrock sentinel
MW-04-04R	SA	Gauge only							X	X	groundwater elevation monitoring
MW-04-06R	SA	Gauge only							X	X	groundwater elevation monitoring
MW-13-50	SA	X	X								bedrock sentinel
Storm Sewer											
P6-MH2-NE	A	X	X					X			
P6-MH2-SW	A	X	X					X			
ESC-1	A	X	X					X			

Notes:

* Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.

**Metals include Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Chromium VI, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, and Zinc.

***TAL metals defined in Table 3 of the Quality Assurance Project Plan (ARCADIS 2011b).

****Monitoring wells

*****Monitoring wells indicated will be sampled biannually, commencing the 2nd Quarter 2016 event for VOCs, 1,4-Dioxane, SVOCs and an extended metals analytical suite comprising, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Vanadium, and Zinc

† Well to be sampled quarterly until sampling frequency is reevaluated after collection of eight quarters of data.

‡ Well to be sampled quarterly until sampling frequency is reevaluated after collection of four data points.

New wells will be added to the figures and incorporated into the semi-annual monitoring once 4 samples are collected and a COC list is determined

SA = semi-annual
Q = quarterly
A = annual

VOCs = volatile organic compounds
LNAPL = light non-aqueous phase liquid

ATTACHMENT 2

Third Quarter 2016 Groundwater Sampling Logs

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-16-76	1050	14.89	2.323	1.859	15.8	1.65	6.87	-41.3	150	73.0	68.26
9/21/2016	1055	14.6	2.320	1.859	18.7	1.88	6.86	-45.6	150	59.8	69.33
	1100	14.51	2.321	1.856	8.5	0.86	6.91	-43.5	150	NR	NR
	1105	14.07	2.206	1.743	9.6	0.97	6.93	-49.5	150	NR	NR
	1110	13.99	2.064	1.63	6.0	0.62	7.01	-54.5	150	NR	NR
	1115	14.31	1.979	1.575	5.3	0.53	7.16	-67.2	150	NR	NR
	1120	14.09	1.971	1.571	5.4	0.54	7.17	-72.4	150	NR	NR
	1125	14.63	1.967	1.578	4.5	0.45	7.19	-75.2	150	NR	NR
	1130	14.63	1.980	1.588	4.4	0.45	7.21	-71.2	150	NR	NR
	1135	14.72	2.004	1.61	4.2	0.42	7.20	-75.4	150	24.9	72.10
	1140	14.54	2.044	1.635	4.1	0.42	7.22	-77.1	150	15.3	72.20
	1145	14.75	2.102	1.691	4.1	0.41	7.21	-77.3	150	14.1	72.28
	1150	14.57	2.162	1.731	3.7	0.38	7.20	-68.4	150	12.4	72.32
	1155	14.89	2.207	1.781	3.8	0.38	7.20	-63.0	150	14.0	72.33
	1200	15.01	2.233	1.807	3.6	0.36	7.19	-59.0	150	10.0	72.34
	1205	15.12	2.252	1.835	3.7	0.36	7.20	-62.2	150	9.83	72.34
	1210	15.05	2.259	1.856	3.9	0.38	7.20	-64.4	150	8.88	72.35
MW-16-75	1340	16.35	1.832	1.529	58.0	5.51	7.22	-85.6	150	47.1	63.69
9/21/2016	1345	15.42	1.817	1.485	12.8	1.25	6.76	-63.4	150	35.1	65.91
	1350	14.99	1.813	1.467	5.1	0.50	6.82	-64.2	150	25.2	66.52
	1355	14.84	1.821	1.467	4.4	0.44	6.91	-68.7	150	17.3	66.95
	1400	14.76	1.821	1.465	6.5	0.66	6.97	-71.0	150	13.8	67.34
	1405	15.02	1.833	1.484	0.2	0.42	7.06	-76.7	100	9.87	67.31
	1410	15.2	1.863	1.524	3.8	0.38	7.12	-81.2	100	7.87	67.30
	1415	15.35	1.885	1.537	3.7	0.38	7.13	-84.6	100	7.20	67.30
	1420	15.09	1.894	1.524	3.8	0.39	7.12	-83.9	100	5.67	67.30

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
TW-14-02	0810	16.12	2.480	2.888	50.5	4.79	6.70	-55.1	150	85.3	65.93
9/22/2016	0815	15.46	3.471	2.839	6.8	0.66	6.61	-53.0	150	39.1	67.30
	0820	15.52	3.531	2.892	5.6	0.55	6.73	-59.3	150	24.1	67.45
	0825	15.49	3.562	2.914	7.5	0.74	6.83	-60.6	150	19.0	67.75
	0830	15.66	3.603	2.961	6.9	0.68	6.82	-61.8	150	18.4	67.91
	0835	15.39	3.629	2.963	5.6	0.55	6.84	-61.6	150	22.6	68.12
	0840	15.32	3.617	2.948	3.7	0.37	6.83	-61.4	150	21.1	68.23
	0845	15.56	3.615	2.964	3.6	0.35	6.86	-62.5	150	17.6	68.24
	0850	15.91	3.631	2.999	4.4	0.43	6.90	-66.3	150	12.5	68.24
	0855	15.70	3.668	3.017	5.7	0.56	6.90	-63.0	150	16.9	68.24
	0900	15.92	3.639	3.032	6.3	0.61	6.91	-69.3	150	19.9	68.24
	0905	15.72	3.630	3.036	6.4	0.64	6.92	-100.7	150	27.7	68.24
	0910	15.99	3.639	3.057	8.0	0.77	6.96	-100.0	150	28.0	68.24
	0915	15.94	3.673	3.105	7.6	0.73	6.97	-98.9	150	27.4	68.24
	0920	15.98	3.660	3.111	7.8	0.75	6.98	-100.8	150	25.7	68.24
MW-16-78	1440	18.62	1.627	1.425	41.4	3.79	6.96	-87.2	150	46.3	69.12
9/22/2016	1445	16.36	1.623	1.355	7.2	0.70	6.30	-45.3	150	26.3	69.16
	1450	16.80	1.619	1.364	6.5	0.63	6.64	-62.9	150	20.7	69.18
	1455	16.21	1.606	1.321	5.8	0.58	6.63	-61.2	150	14.8	69.20
	1500	15.72	1.607	1.322	5.3	0.53	6.63	-58.3	150	10.9	69.21
	1505	15.81	1.609	1.327	5.4	0.53	6.76	-63.7	150	7.47	69.21
	1510	15.87	1.606	1.326	5.4	0.54	6.77	-64.0	150	6.16	69.21
	1515	15.85	1.606	1.326	5.6	0.55	6.79	-64.4	150	7.23	69.21

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-16-81	1735	21.85	2.109	2.140	88.9	7.21	7.59	-24.0	150	17.8	70.65
9/22/2016	1740	20.79	2.128	2.161	79.2	6.51	7.58	-33.2	100	16.4	71.75
	1745	19.26	2.177	2.106	7.9	6.71	7.55	-100.7	100	29.9	70.75
	1750	19.01	2.260	2.234	34.6	3.4	7.66	-99.3	100	27.6	70.80
	1755	18.76	2.261	2.235	47.0	1.9	7.78	-97.8	100	26.4	70.85
	1800	18.76	2.285	2.261	43.8	4.37	7.76	-107.7	100	24.1	70.88
	1805	28.14	2.313	2.295	46.9	4.70	7.72	-96.2	100	20.0	70.9
	1805 - 1820					Pump Trouble Shooting - Stopped Pumping					
	1820	19.95	2.499	2.520	78.6	6.37	7.43	-75	100	28.6	70.92
	1825	19.12	2.571	2.577	65.5	5.35	7.37	-85.4	100	27.5	70.92
	1830	18.66	2.645	2.646	44.3	4.50	7.29	-82.3	100	27.8	70.92
	1835	18.01	2.769	2.769	52.0	4.28	7.17	-82.2	100	37.0	70.92
	1840	22.03	2.777	2.777	51.4	4.26	7.14	-81.5	100	33.4	70.92
	1845	24.71	2.844	2.829	51.0	4.24	7.13	-81.4	100	37.6	70.92
	1845 - 1900					Replace Air Line Leak					
	1900	22.09	3.141	2.901	50.0	4.31	7.08	-97.6	100	30.3	70.92
	1905	9.37	3.167	2.753	37.2	3.40	6.81	-73.7	100	35.2	70.92
	1910	16.85	3.139	2.704	21.2	2.00	6.69	-68.0	100	30.5	70.92
	1915	17.17	3.120	2.668	13.1	1.24	6.68	-67.9	100	25.9	70.92
	1920	17.09	3.109	2.64	5.4	0.53	6.85	-73.6	100	8.8	70.92
	1925	17.13	3.105	2.638	4.9	0.46	6.84	-76.6	100	9.2	70.92
	1930	17.20	3.095	2.634	4.1	0.39	6.85	-79.3	100	8.9	70.92
MW-16-80	0900	15.78	1.600	1.316	42.6	4.15	6.64	-96.0	150	24.2	67.63
9/23/2016	0905	14.29	1.567	1.246	10.5	1.07	6.31	-85.4	150	20.1	69.10
	0910	14.07	1.546	1.223	6.7	0.68	6.48	-89.7	150	14.4	69.46
	0915	14.17	1.544	1.225	5.4	0.55	6.58	-92.5	150	12.8	69.73
	0920	13.81	1.567	1.231	4.7	0.49	6.68	-91.5	150	8.85	69.90
	0925	14.07	1.592	1.26	4.3	0.44	6.73	-99.8	150	6.29	69.98
	0930	14.04	1.592	1.262	4.1	0.42	6.79	-100.1	150	5.75	70.00

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-16-77	0900	15.45	1.586	1.291	27.7	2.73	7.25	214.3	200	57.4	65.55
9/21/2016	0905	14.47	1.579	1.262	9.6	0.97	6.59	239.5	100	69.3	68.32
	0910	14.63	1.580	1.268	8.5	0.86	6.72	225.6	100	68.0	68.91
	0915	14.73	1.585	1.293	8.4	0.86	6.93	177.6	100	91.0	69.49
	0920	15.41	1.587	1.303	8.9	0.89	7.18	173.8	100	73.2	Below top of pump
	0925	16.02	1.587	1.314	14.0	1.37	7.19	176.0	100	70.9	
	0925 - 1000		Purged Dry								
MW-16-74	1140	20.46	2.308	2.271	86.4	7.21	7.29	-67.0	100	62	69.08
9/22/2016	1145	17.30	2.267	1.932	26.0	2.48	6.71	-41.5	100	133	69.76
	1150	17.31	2.258	1.927	27.8	0.65	6.78	-38.6	100	132	
	1155	17.90	2.252	1.948	23.9	2.25	6.91	-45.8	100	133	
	1200	17.64	2.250	1.993	19.7	1.81	7.01	-56.8	100	112	Top of pump
	1205	18.04	2.270	1.989	20.0	1.85	7.07	-69.2	100	100	
	1210	17.76	2.269	1.953	18.1	1.71	7.09	-73.4	100	152	
	1215	17.83	2.263	0.954	15.3	1.43	7.08	-74.5	100	176	
	1220	18.39	2.259	1.976	13.4	1.25	7.08	-75.2	100	169	
	1225 - 1230		Break Ball Free and Began Pumping Again								
	1235	18.74	2.275	2.147	43.2	3.76	7.16	-84.4	100	235	
	1240	18.94	2.251	2.099	39.8	3.48	7.17	-78.4	100	311	
	1245	18.19	2.279	2.000	2.7	4.01	7.28	-71.2	100	260	
	250	18.01	2.283	1.979	29.4	2.75	7.17	-65.4	100	324	Below top of pump
	1255	19.35	2.246	2.047	25.5	2.28	7.18	-76.1	100	312	
	1300	19.41	2.247	2.048	25.4	0.28	7.16	-75.8	100	255	
	1305	20.37	2.266	2.062	24.2	2.17	7.15	-77.0	100	236	
	1310	20.43	2.271	2.074	21.6	1.94	7.17	-79.0	100	240	
	1315	20.56	2.279	2.094	21.4	1.93	7.18	-77.9	100	NA	

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-16-79	1540	19.52	0.858	0.766	34.0	3.06	7.47	-128.5	150	216	70.50
9/21/2016	1545	18.05	0.840	0.728	9.1	0.87	7.02	-103.9	100	272	
	1550	16.55	0.841	0.739	7.8	0.73	7.29	-113.4	100	240	
	1555	17.83	0.847	0.759	6.8	0.62	7.38	-118.9	100	254	
	1600	17.88	0.853	0.753	9.7	0.88	7.40	-129.0	100	196	Below top
	1605	17.93	0.858	0.758	4.9	0.46	7.40	-121.6	50	163	of pump
	1610	9.47	0.857	0.767	4.8	0.45	7.40	-121.5	50	158	
	1615	19.38	0.867	0.792	7.2	0.65	7.40	-126.0	50	145	
	1620	19.18	0.869	0.771	7.4	0.68	7.39	-125.2	50	185	
	1620 - 1640		Purged Dry								
MW-15-71	0935	17.45	0.734	0.628	42.4	4.00	7.01	186.6	225	0.99	70.48
9/21/2016	0940	15.14	0.745	0.605	7.2	0.71	7.06	120.5	225	3.85	70.00
	0945	14.94	0.761	0.615	4.8	0.48	7.10	94.3	225	2.58	74.31
	0950	14.90	0.782	0.631	5.6	0.56	7.13	87.7	225	2.29	74.38
	0955	14.97	0.788	0.638	6.4	0.64	7.14	86.4	225	2.25	74.50
	1000	14.84	0.819	0.660	9.4	0.94	7.15	84.6	225	1.25	74.50
	1005	14.87	0.835	0.673	11.1	1.11	7.16	84.2	225	1.00	74.83
	1010	14.84	0.852	0.687	12.6	1.26	7.16	84.0	225	1.03	74.85
	1015	14.84	0.882	0.715	13.8	1.38	7.15	83.5	225	1.10	75.01
	1020	14.90	0.909	0.734	13.8	1.38	7.15	82.2	225	3.97	75.03
	1025	14.86	1.026	0.828	12.9	1.29	7.13	79.9	225	2.37	75.39
	1030	14.88	1.082	0.874	10.4	1.04	7.12	78.3	225	2.05	75.40
	1035	14.80	1.095	0.879	10.1	1.01	7.12	75.4	225	2.09	75.84
	1040	14.83	1.102	0.884	10.2	1.02	7.12	75.6	225	2.09	75.93

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-13-22	1215	16.50	1.73	1.45	4.50	0.45	6.95	-139.40	255	0.64	80.58
9/21/2016	1220	16.57	1.75	1.50	4.10	0.41	6.88	-137.90	255	0.67	80.60
	1225	16.62	1.79	1.51	3.80	0.38	6.83	-137.50	255	0.80	81.03
	1230	16.73	1.83	0.54	3.60	0.36	6.79	-127.20	255	0.39	81.12
	1235	6.74	1.83	1.54	3.60	0.36	6.79	-121.60	255	0.57	82.00
	1240	16.94	1.85	1.56	3.10	0.31	6.78	-118.80	255	1.12	83.36
	1245	7.06	1.86	1.58	3.00	0.30	6.78	-117.20	255	1.17	83.51
	1250	17.07	1.91	1.62	3.10	0.31	6.77	-113.90	255	0.81	83.50
	1255	16.78	1.94	0.63	2.80	0.28	6.76	-112.00	255	0.83	84.01
	1300	16.68	1.94	1.63	2.80	0.28	6.76	-111.80	255	0.82	84.28
MW-13-48	1445	17.88	2.065	1.783	6.8	0.64	6.76	-78.2	210	3.99	71.50
9/21/2016	1450	17.58	2.085	1.790	4.2	0.39	6.74	-83.6	210	3.58	71.42
	1455	17.60	2.099	1.802	3.8	0.36	6.73	-84.9	210	1.54	71.56
	1500	17.48	2.104	1.802	3.4	0.32	6.72	-85.2	210	1.40	71.56
	1505	17.46	2.107	1.803	3.2	0.30	6.72	-84.5	210	0.67	71.52
	1510	17.51	2.109	1.807	3.0	0.29	6.72	-84.7	210	0.44	71.65
	1515	17.59	2.110	1.811	3.0	0.28	6.72	-85.3	210	0.40	71.77
	1520	17.78	2.111	1.820	2.7	0.27	6.72	-83.7	210	0.48	71.93
	1525	17.80	2.111	1.821	2.7	0.26	6.72	-83.0	210	0.41	72.38
	1530	17.81	2.109	1.822	2.6	0.24	6.72	-83.6	210	0.42	72.91
	1535	17.81	2.108	1.823	2.6	0.24	6.73	-83.5	210	0.39	73.43
MW-16-83	1700										
9/21/2016	1705										
	1745	(9/21/2016) DTW = 78.98; TD = 79.80									
		(9/22/20160) DTW = 76.90; TD - 79.80									
	1600	24.97	1.353	1.353	57.4	4.63	7.32	NA	205	55.0	79.40
	1605								X	52.9	79.65

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-13-31	0810	16.44	0.880	0.737	1.1	0.11	6.56	22.7	185	6.43	10.71
9/22/2016	0815	16.51	0.880	0.738	1.1	0.11	6.57	26.2	185	4.86	0.93
	0820	16.55	0.880	0.738	1.0	0.10	6.58	28.3	185	2.23	10.98
	0825	16.62	0.879	0.738	0.8	0.07	6.59	30.3	185	1.83	10.98
	0830	16.69	0.878	0.739	0.6	0.05	6.60	33.7	185	1.87	11.00
	0835	16.71	0.879	0.740	0.4	0.04	6.60	34.2	185	1.94	11.00
	0840	16.58	0.878	0.737	0.4	0.04	6.61	35.2	185	1.77	12.00
	0845	16.59	0.877	0.737	0.4	0.04	6.61	35.4	185	1.75	12.00
MW-13-32	0905	15.68	1.468	1.207	9.2	0.91	6.66	41.7	205	79.8	8.97
9/22/2016	0910	15.72	1.488	1.225	7.1	0.70	6.50	50.1	205	13.6	9.01
	0915	15.54	1.535	1.258	5.1	0.51	6.56	20.7	205	7.58	9.02
	0920	15.48	1.549	1.267	4.4	0.44	6.58	5.7	205	3.83	9.04
	0925	15.28	1.567	1.277	3.5	0.35	0.61	-14.2	205	3.78	9.04
	0930	15.28	1.569	1.279	3.5	0.35	6.60	-14.0	205	3.71	9.60

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-15-73	1250	18.91	2.677	2.365	18.4	1.69	6.65	-62.2	110	108	76.45
9/22/2016	1255	19.18	2.692	2.392	16.7	1.52	6.82	-72.4	110	93.7	76.62
	1300	18.05	2.694	2.336	14.4	1.34	6.77	-68.4	110	78.3	76.81
	1305	17.59	2.688	2.308	11.5	1.09	6.77	-70.9	110	60.4	76.85
	1310	17.59	2.688	2.309	10.9	1.01	6.79	-76.0	110	57.6	76.99
	1315	17.60	2.689	2.310	10.2	0.98	6.79	-72.1	110	52.1	77.0
	1320	17.61	2.690	2.310	9.7	0.92	6.80	-78.2	110	49.3	77.1
	1325	17.61	2.690	2.310	9.5	0.90	6.85	-81.3	110	46.0	77.1
	1330	17.62	2.692	2.313	8.9	0.85	6.86	-83.7	110	41.0	78.0
	1335	17.74	2.691	2.317	8.2	0.78	6.88	-85.0	110	32.5	78.3
	1340	17.72	2.694	2.317	7.9	0.76	6.87	-85.2	110	27.8	78.5
	1345	17.71	2.695	2.320	7.8	0.73	6.87	-86.3	110	25.1	78.5
	1350	17.93	2.695	2.332	7.1	0.66	6.86	-88.6	110	17.7	78.6
	1355	17.84	2.693	2.325	6.7	0.62	6.86	-89.3	110	15.2	18.9
	1400	17.68	2.692	2.316	6.4	0.61	6.86	-90.1	110	13.5	19.0
	1405	17.63	2.694	2.314	6.1	0.58	6.85	-90.5	110	13.0	19.1
					Pump Quit Working						
	1435	17.58	2.320	1.983	10.9	1.03	6.92	-86.2	110	12.7	19.0
	440	17.71	2.532	2.301	12.1	1.16	6.92	-85.5	110	10.3	
	1445	17.63	2.708	2.326	6.1	0.58	6.89	-85.7	110	6.22	19.3
MW-14-56	1735	19.30	5.286	4.709	111.3	9.82	7.16	54.8	210	329	77.88
9/22/2016	1740	19.20	5.281	4.696	86.7	7.82	7.13	48.7	210	199	77.88
	1745	17.90	5.312	4.596	82.0	7.64	7.15	42.5	210	209	77.89
	1750	17.87	5.314	4.587	81.3	7.61	7.14	42.3	210	119	77.90
	1755	17.78	5.318	4.586	50.5	4.71	6.86	36.8	210	109	77.95
	1800	17.79	5.320	4.587	1.2	3.91	6.84	36.9	210	82.7	78.01
	1805	17.82	5.318	4.690	41.4	3.71	6.82	36.9	210	51.8	78.03
	1810	17.81	5.319	4.599	41.3	3.72	6.82	36.9	210	39.9	78.05

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-13-45	1025	18.67	1.132	0.994	61.0	5.69	7.82	-53.5	125	62.4	70.34
9/21/2016	1030	17.65	1.131	0.973	47.2	4.47	7.83	-59.9	125	58.3	70.36
	1035	17.42	1.130	0.966	35.2	3.35	7.74	-58.0	125	39.2	70.38
	1040	17.28	1.129	0.963	29.3	2.80	7.76	-60.0	125	26.7	70.42
	1045	17.27	1.130	0.964	24.6	2.32	7.79	-63.4	125	--	70.43
	1050	17.24	1.133	0.965	21.7	2.08	7.84	-64.9	125	--	70.43
	1055	17.36	1.135	Pump Stoped Purging							
	1100	17.74	1.138	0.979	21.4	2.03	7.87	-64.6	125	27.5	--
	1105	15.85	1.126	0.929	19.8	1.95	7.70	-51.8	125	18.7	--
	1110	15.71	1.127	0.927	18.0	1.78	7.69	-50.0	125	24.3	--
	1115	15.76	1.132	0.932	16.2	1.60	7.81	-56.5	125	30.4	70.59
	1120	15.75	1.139	0.938	13.1	1.29	7.86	-60.0	125	--	70.60
				Pump Quit Working							
	1135	17.17	1.143	0.971	11.9	1.15	7.88	-67.1	125	29.0	70.56
	1140	17.03	1.142	0.962	13.0	1.26	7.89	-65.8	125	21.6	70.57
	1145	16.89	1.136	0.951	12.9	1.25	7.89	-65.7	125	15.2	70.58
	1150	16.50	1.135	0.948	11.7	1.14	7.89	-66.1	125	14.3	70.59
	1155	16.47	1.135	0.950	10.9	1.06	7.90	-65.0	125	15.1	70.60
	1200	16.49	1.136	0.951	10.7	1.05	7.91	-64.9	125	14.9	70.62
MW-13-43	1415	17.55	1.726	1.479	37.3	3.53	7.08	74.4	200	8.41	71.23
9/21/2016	1420	17.24	1.884	1.606	15.4	1.47	7.12	58.6	200	4.50	71.37
	1425	18.12	2.102	1.832	12.8	1.19	7.13	37.5	180	5.81	71.43
	1430	17.44	2.467	2.111	7.4	0.70	7.15	25.1	180	4.09	71.43
	1435	17.38	2.496	2.133	5.3	0.50	7.20	17.7	180	2.68	71.43
	1440	17.32	2.501	2.134	4.4	0.42	7.21	17.1	180	2.61	71.43
	1445	17.37	2.499	2.135	4.5	0.43	7.21	16.8	180	2.11	71.43
	1450	17.40	2.498	2.136	3.7	0.35	7.21	16.7	180	1.86	71.43
	1455	17.43	2.498	2.139	3.4	0.32	7.22	15.5	180	0.78	71.43
	1500	17.40	2.527	2.161	3.3	0.31	7.22	14.7	180	1.76	71.43

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-13-44	1615	18.74	1.140	1.004	10.9	1.00	9.01	107.3	150	11.0	80.88
9/21/2016	1620	21.53	1.140	1.065	8.6	0.76	9.33	40.4	150	10.5	80.94
	1625	20.78	1.38	1.024	7.5	0.68	9.39	23.7	150	12.2	1.21
	1630	19.06	1.135	1.007	6.6	0.61	9.42	10.7	150	14.6	81.32
	1635	18.95	1.136	1.002	6.6	0.61	9.43	2.6	150	15.6	81.52
	1640	18.80	1.138	1.004	6.4	0.59	9.38	-3.8	150	13.0	81.67
	1645	18.70	1.138	1.000	6.5	0.60	9.45	-4.3	150	13.6	81.76
	1650	18.75	1.139	0.996	6.7	0.62	9.49	-5.5	150	13.3	81.82
MW-12-05	0845	17.54	3.427	2.939	15.1	1.43	7.67	-69.0	150	1.75	76.52
9/22/2016	0850	17.49	3.429	2.937	10.3	0.97	7.65	-67.2	150	1.63	76.58
	0855	17.55	3.427	2.940	10.7	1.01	7.64	-66.6	150	1.36	76.64
	0900	17.71	3.425	2.948	8.5	0.80	7.63	-64.4	150	1.09	76.75
	0905	17.85	3.427	2.959	7.1	0.67	7.63	-64.3	150	1.10	76.89
	0910	17.99	3.428	2.976	6.2	0.58	7.60	-62.9	150	1.03	76.99
	0915	18.21	3.426	2.981	6.3	0.59	7.60	-63.6	150	1.33	77.08
	0920	18.37	3.427	2.994	5.8	0.54	7.60	-63.1	150	1.46	77.14
	0925	18.40	3.429	2.998	6.1	0.57	7.60	-63.9	150	1.36	77.21
MW-15-72	1015	18.14	2.007	1.743	8.1	0.76	7.54	-64.3	150	16.6	61.12
9/22/2016	1020	18.30	2.005	1.749	6.9	0.64	7.55	-66.0	150	15.3	61.00
	1025	18.39	2.042	1.784	5.5	0.51	0.54	-67.9	150	2.2	61.17
	1030	18.13	2.055	1.785	4.6	0.43	7.54	-68.3	150	11.8	61.15
	1035	18.30	2.059	1.796	5.3	0.48	7.53	-67.5	150	11.2	61.25
	1040	18.55	2.069	1.814	4.3	0.40	7.52	-66.9	150	10.5	61.34
	1045	18.58	2.071	1.818	4.1	0.38	7.51	-67.0	150	10.7	61.31
	1050	18.82	2.080	1.835	3.9	0.36	7.51	-66.6	150	10.0	61.33
	1055	18.92	2.085	1.858	4.2	0.38	7.50	-67.0	150	10.1	61.35

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-16-82	1255	21.41	1.065	0.991	19.0	1.73	7.87	-88.1	100	26.90	71.40
9/22/2016	1300	22.79	1.057	1.013	19.4	1.67	7.82	-84.8	100	23.30	71.50
	1305	Issues with Pump Stopping									
	1340	Purging Resumed									
	1345	26.37	1.078	1.181	59.3	4.79	7.77	-32.2	150	--	71.29
		Pump Stopped - Pull Well, Check Valve Stuck									
	1620	24.12	1.078	1.052	45.2	3.85	7.88	-76.5	200	62.1	71.58
	1625	23.25	1.068	1.032	34.2	2.91	7.74	-72.5	200	61.4	7.68
	1630	21.87	1.064	1.000	26.8	2.33	7.66	-71.7	200	52.0	71.85
	1635	21.83	1.063	0.998	22.0	1.92	7.82	-80.7	200	48.9	71.89
	1640	21.79	1.058	0.994	20.5	1.79	7.85	-82.9	200	45.3	71.92
	1645	22.04	1.063	1.003	18.9	1.65	7.85	-84.1	200	36.4	71.99
	1650	21.47	1.062	0.989	16.1	1.42	7.84	-85.3	200	28.0	72.12
	1655	21.57	1.060	0.991	14.4	1.26	7.85	-86.3	200	25.0	72.23
	1700	21.59	1.061	0.992	13.5	1.18	7.85	-86.8	200	22.3	72.29
	1705	21.80	1.060	0.996	11.3	0.99	7.85	-87.6	200	19.8	
	1710	22.01	1.060	1.000	7.3	0.63	7.85	-93.9	200	15.0	
	1715	21.91	1.060	0.998	6.9	0.61	7.86	-94.8	200	13.7	
	1720	21.99	1.060	0.996	6.8	0.60	7.85	-94.7	200	12.1	Hitting Top of Pump
	1725	22.75	1.059	0.004	6.2	0.53	7.85	-98.0	220	11.9	
	1730	22.95	1.061	1.038	5.9	0.48	7.85	-99.6	220	11.6	
	1735	23.09	1.060	1.038	5.6	0.47	7.84	-102.0	220	--	
	1740	Pump Stopping and Starting									
	1745	24.66	1.044	--	26.3	231	7.81	-106.8	200	13.5	--

Attachment 2
Low Flow Sampling
RACER Trust
Lansing, MI

ARCADIS Design & Consultancy for natural and built assets

Well ID/Date	Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
MW-16-84	1130	19.87	1.124	1.014	74.5	6.76	7.53	-28.1	--	76.40	75.90
9/23/2016	1135	18.73	1.196	1.053	87.6	8.12	7.47	-45	--	87.30	76.20
	1140	Pump Stopping Again; Bubbles Being Pulled Up									
	1630	Collected Sample via Bailer									
MW-15-72	1315	17.77	1.966	1.695	22.5	2.09	7.28	-36.8	150	58.1	61.10
9/23/2016	1320	17.35	1.978	1.689	7.8	0.47	7.13	-41.7	150	37.7	61.12
	1325	17.60	1.985	1.706	9.8	0.94	7.23	-50.0	150	33.5	60.89
	1330	17.41	1.997	1.713	0.5	0.45	7.25	-53.7	150	26.4	60.99
	1335	17.38	2.071	1.726	6.9	0.42	7.27	-58.1	150	20.3	61.21
	1340	17.40	2.056	1.756	6.6	0.40	7.28	-61.2	150	20.5	61.24
	1345	16.93	2.049	1.732	8.2	0.81	7.25	-58.9	150	19.9	61.41
	1350	16.85	2.059	1.739	7.2	0.70	7.28	-56.6	150	17.0	61.52
	1355	16.84	2.064	1.742	7.4	0.70	7.31	-57.9	150	15.2	61.71
	1400	16.95	2.070	1.751	5.5	0.53	7.28	-58.5	150	12.7	61.75
	1405	16.99	2.075	1.580	5.3	0.50	7.29	-59.2	150	11.7	61.78
	1410	17.00	2.082	1.764	5.1	0.49	7.30	-59.7	150	10.8	61.81
	1415	17.00	2.085	1.769	4.2	0.41	7.30	-59.9	150	9.71	61.88
	1420	17.05	2.088	1.771	3.9	0.38	7.30	-60.5	150	8.66	61.94
	1425	17.06	2.089	1.773	3.9	0.37	7.30	-59.5	150	8.36	61.99
	1430	17.10	2.090	1.775	3.9	0.37	7.31	-59.7	150	8.74	62.05