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, MI 48909

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

ENVIRONMENT

Subject:
Second Quarter 2016 (Biennial Event) Groundwater Monitoring Summary
RACER Lansing - Plants 2, 3 and 6
Lansing, Michigan

Date:
September 2, 2016

Contact:
Patrick Curry

Phone:
810.225.1926

Email:
Patrick.Curry@arcadis.com

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

Dear Mr. Quackenbush:

The purpose of this correspondence is to summarize the second quarter 2016 groundwater monitoring activities completed at RACER Lansing – Plants 2, 3 and 6 (Site). Arcadis of Michigan, LLC (Arcadis) completed the second quarter 2016 gauging and groundwater monitoring activities as part of the on-going Resource Conservation and Recovery Act (RCRA) Corrective Action, between May 2 and May 17, 2016. The second quarter 2016 event represents the first biennial sampling event for the Site and included:

- Gauging LNAPL wells;
- Site-wide groundwater elevation gauging;
- LNAPL recovery;
- Biennial groundwater sampling activities;
- No-purge pilot testing

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:

- Monitoring wells MW-03-08 and P2-MW-04 could not be sampled due to ponding water above the flush mounts;
- MW-12-19 was dry and could not be sampled;
- MW-13-42 contained insufficient water to collect a sample;
- MW-03-01 and P6-SB-32 were abandoned as part of excavation activities completed by PM Environmental in 2015;
- Due to field error P2-SB-06 was not sampled for geochemical parameters.

Monitoring well locations for Plants 2, 3, and 6 are included on **Figure 1, 2,** and **3**, respectively. The current extent of the lower 1,4-dioxane plume presented on the figures has been updated based on the supplemental toe investigation work completed in July 2016. A report summarizing the findings of the toe investigation will be provided to the MDEQ in September 2016.

SITE ACTIVITIES

Site wide groundwater elevation measurements were collected from a total of 169 wells on May 2, 2016. Prior to starting the gauging activities, wells were 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 wells. Groundwater samples were collected from a total of 127 monitoring wells. The groundwater elevations and LNAPL thicknesses are summarized on **Table 1** and **Table 2**, respectively. A summary of the LNAPL removed from the wells is included as **Table 3**. 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 4, 5 and 6**.

LNAPL Removal

As outlined in the Summary of LNAPL Transmissivity Results memorandum provided to the 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 second 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 2 feet of LNAPL. The thickness of the LNAPL measured in the deeper monitoring wells during the second quarter 2016 is consistent with previous monitoring events. A summary of the LNAPL recovered from these wells is provided as **Table 3**. Approximately 7.1 gallons of total liquid, consisting primarily of LNAPL, was recovered from the wells during the second quarter 2016.

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 11.21 feet during the second 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. A hydrograph, LIF log and monitoring well log for LMW-12-10 is included in **Attachment 2**. LNAPL mobility testing at this location indicated a transmissivity too low to measure using standard recoverability testing. The 0.35 feet of LNAPL present at that time of testing (February 2013) did not recover once removed during the baildown test. 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. LNAPL will be removed when a minimum of 1 foot of LNAPL has accumulated in the well and disposed of offsite

Groundwater Sampling

Between May 3 and May 17, 2016 a total of 127 monitoring wells were sampled and analyzed for one or more of the following parameters. The specific analytes analyzed in each well are provided on the sampling matrix included as **Attachment 1**:

- Target compound list (TCL) volatile organic compounds (VOCs) using USEPA Method SW8260B.
- 1,4-Dioxane using Method SW8260B-SIM.
- 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).
- 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.
- Chromium VI was analyzed at CH-14-RO and MW-91-2 using Method SW6020A.
- Semi-volatile organic compounds (SVOCs) using Method SW8270D.

Annual geochemical sampling was completed in accordance with the IGMP and consisted of:

- Nitrate utilizing Method E300.0
- Sulfate utilizing Method E300.0
- Iron and manganese using method SW6020A (total and dissolved samples collected)
- Dissolved methane using method RSK175

With the exception of the six no purge pilot sampling locations (see discussion below), groundwater samples were collected utilizing low-flow groundwater sampling methods with a submersible 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 3.**

RESULTS

The second quarter 2016 sampling event was the first biennial sampling event and the results are generally consistent with previous groundwater sampling events. Of the 132 wells scheduled to be sampled, two wells (MW-12-19 and MW-13-42) were dry and could not be sampled. Additionally, two flush mounted wells (MW-03-08 and P2-MW-04) were located under standing water and could not be sampled. Monitoring well P2-SB-06 was omitted from annual geochemical sampling due to field error.

Exceedances of the Part 201 Residential Drinking Water (DW) Criteria are highlighted on **Table 4** and summarized on **Figures 4**, **5, and 6**. Results of the second quarter 2015 sampling event are summarized below.

- VOCs and SVOCs exceeding DW Criteria include bis(2-Ethylhexyl)phthalate (DEHP), benzene, vinyl chloride, total xylene, 1,1-Dichloroethane, and 1,4-dioxane. This is consistent with previous groundwater investigation and monitoring results. Previous correspondence with Merit has indicated that the persistent low-level phthalates detected in groundwater at the Site are associated with laboratory contamination.
- Metals exceeding DW Criteria in at least one monitoring well during this event include arsenic, boron, copper, chromium, lead, iron, manganese, nickel and vanadium. The metals results are consistent with previous semi-annual sampling events. Manganese has been shown to be elevated regionally in groundwater relative to aesthetic DW Criteria and is not shown on Figures 4 through 6.
- Chromium VI exceeds the DW criterion at monitoring well CH-14-RO in the north central portion of Plant 3 near the former plating operation. This is consistent with previous groundwater investigation and monitoring results.
- Other than DEHP and related phlalates established to be lab contaminants, low concentrations of pyrene at P6-SB-07 was the only SVOC exceedance out of the 46 samples analyzed for SVOCs as part of the biennial sampling activities.
- Additional metals analysis completed as part of the biennial sampling event did not indicate significant metal detections and exceedances other than those ubiquitous to the site (e.g. iron, arsenic, manganese, and vanadium).

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 previously outlined potential reasons for the occurrence:

- MW-14-58 - 1,4-dioxane was detected at a concentration of 14 micrograms per liter (µg/L) in MW-14-58, located in the perched zone. The second quarter 1,4-dioxane result is the lowest it has ever been at this location since installation; however, this sample was collected using no purge methods as part

of the no purge pilot study, and it is unclear if a direct comparison to previous data is applicable without further evaluation of the method as outlined below. Concentrations of 1,4-dioxane in MW-14-58 have ranged from 24 to 46 µg/L during the past year; consistently below the current 1,4-dioxane DW Criteria of 85 µg/L, but above the proposed DW criteria of 7.2 µg/L (MDEQ 2016). As previously reported, the detections of 1,4-dioxane at this location could be associated with the perched plume at Plant 2, or commingled with the former Adam's Plating Company (APC) perched groundwater plume

- MW-14-56, a weathered bedrock well located near the western Plant 2 property boundary. 1,4-dioxane was detected at a concentration of 6 µg/L, below the proposed criterion of 7.2 µg/L, during second quarter 2016. 1,4-Dioxane was 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 2016a) the lower 1,4-dioxane plume at this location appears to be stable. As discussed with the MDEQ on January 2016, results along W. Genesee Street (Arcadis 2016) suggest that this detection could be related to a deeper 1,4-dioxane impact associated with the former APC.
- MW-13-32 – A well located in the southeastern corner of Plant 3 within Area 16. Total nickel was detected at a concentration of 1.02 milligrams per liter (mg/L; DW criterion: 0.10 mg/L); lower than the first quarter 2016 result of 1.99 mg/L in MW-13-32. In addition, well MW-13-31, located west of MW-13-32 and has sporadically indicated elevated concentrations of nickel, was below drinking water criteria with a concentration of 0.047 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).
- Various metals, primarily arsenic, copper, nickel, lead, and vanadium, were detected above DW Criteria near the property boundaries at several other monitoring well locations similar to previous sampling events. The 2016 update to the plume stability assessment indicates that metals at the Site generally appear stable and are spatially limited (Arcadis 2016a).
- TW-14-02, a weathered bedrock well located at the toe of the lower 1,4-dioxane plume on Plant 2, had a 1,4-dioxane concentration of 132 µg/L which is abnormally low compared to previous sampling events. TW-14-02 has exhibited elevated concentrations of 1,4-dioxane since first being sampled during the second quarter 2015. Detections of 1,4-dioxane ranged from 2,500 µg/L to 3,300 µg/L during the last four quarters. TW-14-02 was resampled on July 26, 2016 and had a 1,4-dioxane concentration of 2,780 µg/L, consistent with historical results. There was no evident cause for the abnormally low concentration observed during the second quarter sampling. Additional work was completed in December 2015 and June 2016 to characterize the area around TW-14-02 and other potential contributing factors such as the perched 1,4-dioxane source area located to the north of TW-14-02(Arcadis 2016). The results of the investigation suggest a high degree of variability of 1,4-dioxane concentrations within the core of the lower plume. The concentration trend at this location suggests a stable 1,4-dioxane concentration (Arcadis 2016a).

- MW-12-05, a bedrock well located near the western edge the LNAPL area on Plant 2, had a 1,4-dioxane concentration of 92 µg/L during the second quarter sampling event. Over the past four quarters there have been consistent detections of 1,4-dioxane ranging from 8 µg/L to 11 µg/L. MW-12-05 was resampled on July 26, 2016 and had a 1,4-dioxane concentration of 10 µg/L, consistent with historical results. MW-12-05 will continue to be monitored in accordance with the approved IGMP.

NO-PURGE PILOT STUDY

Arcadis completed a limited pilot study for no-purge sampling using HydraSleeves™ during the second quarter groundwater sampling event. No-purge sampling has the potential to reduce sampling cost, alleviate turbidity issues, reduce sampling error, and reduce production of investigation derived waste (tubing and purge water). Monitoring wells MW-14-58, MW-14-59, MW-14-60, MW-14-62, MW-14-70, P2-SB-04, and P6-SB-37 were selected from Plants 2 and 6 for the pilot study after meeting the following criteria:

- Has sufficient water to deploy HydraSleeve;
- Has consistent, stable detections;
- Does not require SVOC or annual geochemical sampling (due to additional volume required);
- Has at least four quarters of data for comparison;
- Is not a boundary well (as defined by the IGMP).

On May 3, 2016, HydraSleeves were deployed at the selected well locations, with the exception of P2-SB-04, which was covered by ponded water during the event. The wells were allowed to stabilize for at least 24 hours prior to retrieving the sleeve and sampling. Tables comparing individual well results as well as a cross-plot of historical 1,4-dioxane results vs. no-purge results are provided as **Attachment 4**.

Based on the limited number of wells sampled general observations include:

- 1,4-Dioxane detections were lower than the historical range of concentrations at wells MW-14-58, MW-14-59, and MW-14-60. The 1,4-dioxane at MW-14-62 was consistent with historical results.
- Vinyl chloride was detected in MW-14-60 at a higher concentration (9 µg/L) than in the previous 5 events (2 - 3 µg/L);
- Other VOCs are within normal historical ranges;
- Metals results are within or near historical ranges were collected.

The small dataset limits a conclusive correlation between the HydraSleeves and low-flow sampling results. Based on the observations outlined above, using the HydraSleeves may generate a low bias for 1,4-dioxane, but provide consistent results for other VOCs and metals. Arcadis proposes continuation of the no-purge sampling pilot for the selected wells during the next semi-annual sampling event, and expanding the pilot study to include additional wells for metals analysis. This would allow for further evaluation of the 1,4-dioxane bias, if present, and build a more robust comparison dataset for metals.

CONCLUSIONS

The second quarter biennial monitoring results are consistent with previous events and do not suggest any marked changes to the Site groundwater conditions. Monitoring will continue during the third quarter 2016 per the approved Interim Groundwater Monitoring Plan; however, Arcadis will provide an updated monitoring plan to the MDEQ for review during the third quarter 2016 and work with the MDEQ to have a revised plan approved prior to the fourth quarter 2016 semi-annual event.

The third quarter sampling is scheduled to begin September 19th 2016 and will include all monitoring wells identified in the current sampling matrix (Attachment 1), as well as the new wells installed as part of the recent lower 1,4-dioxane toe investigation activities.

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 U.S., Inc.

Patrick J. Curry, CPG
Senior 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 – May 2016
2 Summary of LNAPL Thicknesses – May 2016
3 Summary of LNAPL Recovery – May 2016
4 Summary of Second Quarter 2015 Groundwater Analytical Data – May 2016

Figures

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

Attachments

1 Interim Groundwater Monitoring Plan – Sampling Matrix
2 LMW-12-10 Hydrograph
3 Second Quarter 2016 Groundwater Sampling Logs
4 No Purge Pilot Study Data

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

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

TABLES

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS
May 2016
Second Quarter 2016 Groundwater Monitoring Report
RACER Trust Plants 2, 3, and 6 - 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 (TOC [ft. msl]):	Ground Surface Elevation (ft. msl):	Total Well Depth (ft. below TOC):	Depth to Water (ft. below TOC):	Groundwater Elevation (ft. msl):
Plant 2								
LMW-12-01	5/2/2016	7	12	864.91	862.14	14.75	8.83	856.08
LMW-12-02	5/2/2016	5	10	865.25	862.17	12.89	6.48	858.77
LMW-12-03D	5/2/2016	17.3	22.3	864.99	862.08	NM	13.05	854.32*
LMW-12-03S	5/2/2016	4	9	864.93	862.06	11.75	6.12	858.81
LMW-12-04	5/2/2016	16	21	864.94	862.12	23.66	10.17	854.77
LMW-12-05	5/2/2016	7	12	865.03	862.17	NM	10.45	854.65*
LMW-12-06	5/2/2016	4	9	865.02	862.15	11.95	6.51	858.51
LMW-12-07	5/2/2016	4	9	864.13	861.50	11.94	5.17	858.96
LMW-12-08	5/2/2016	8	13	864.40	861.56	NM	11.75	856.19*
LMW-14-12D	5/2/2016	18	23	864.59	862.11	NM	24.69	854.41*
LMW-14-13D	5/2/2016	17.5	22.5	865.03	862.06	24.34	9.99	855.04
LMW-14-14D	5/2/2016	18	23	864.89	861.90	25.07	12.24	852.65
LMW-14-15D	5/2/2016	18	23	865.11	861.66	NM	22.65	854.19*
LMW-15-16D	5/2/2016	19.5	24.5	865.20	862.24	NM	22.75	852.01*
LMW-15-17D	5/2/2016	20	25	865.21	862.24	27.28	10.51	854.70
MW-12-01	5/2/2016	87	110	867.94	865.46	111.10	81.35	786.59
MW-12-02	5/2/2016	87	110	853.91	851.88	101.25	72.40	781.51
MW-12-05	5/2/2016	75	99	865.19	862.23	102.00	76.80	788.39
MW-12-06	5/2/2016	80.6	99.5	864.64	861.69	103.43	78.50	786.14
MW-12-07	5/2/2016	10	15	872.11	869.21	17.71	5.91	866.20
MW-12-08	5/2/2016	19	24	864.53	861.55	27.39	6.00	858.53
MW-12-09	5/2/2016	14	19	863.54	860.63	21.60	13.40	850.14
MW-12-18	5/2/2016	28	33	866.43	864.19	34.80	23.06	843.37
MW-13-42	5/2/2016	70	75	861.61	860.03	77.00	76.66	784.95
MW-13-43	5/2/2016	72	77	863.82	860.97	79.80	71.22	792.60
MW-13-44	5/2/2016	96	115	864.24	861.03	119.30	82.31	781.93
MW-13-45	5/2/2016	72	77	863.80	861.54	78.30	70.30	793.50
MW-13-51	5/2/2016	77	87	875.34	872.51	89.84	75.35	799.99
MW-14-54	5/2/2016	14	19	865.21	862.21	19.04	12.81	852.40
MW-14-55	5/2/2016	13	18	864.17	861.73	20.10	16.30	847.87
MW-14-56	5/2/2016	71	76	863.27	860.56	78.95	75.45	787.82
MW-14-57	5/2/2016	15	20	863.97	861.10	21.38	12.89	851.08
MW-14-58	5/2/2016	22	27	863.12	860.12	29.92	13.73	849.39
MW-14-59	5/2/2016	12	17	864.61	861.80	18.85	6.56	858.05
MW-14-60	5/2/2016	15	20	864.65	861.80	23.56	12.30	852.35
MW-14-61	5/2/2016	70	75	865.51	862.30	77.45	73.20	792.31
MW-14-62	5/2/2016	12	17	865.17	862.25	19.62	5.00	860.17
MW-14-63	5/2/2016	68	73	854.64	851.68	76.70	71.91	782.73
MW-15-72	5/2/2016	63	68	NS	NS	70.62	60.33	NS
MW-15-73	5/2/2016	78	83	NS	NS	81.10	76.42	NS
P2-MW-01	5/2/2016	31	36	858.00	858.35	34.78	14.80	843.20
P2-MW-02	5/2/2016	31	41	872.24	872.70	40.20	37.30	834.94
P2-MW-03	5/2/2016	27	32	854.18	854.66	27.20	9.39	844.79
P2-MW-04	5/2/2016	26	36	862.28	862.59	NM	NM	NM
P2-SB-03	5/2/2016	14	19	863.89	861.03	22.10	16.92	846.97
P2-SB-06	5/2/2016	24	29	866.06	862.09	33.60	18.75	847.31
P2-SB-20	5/2/2016	8	13	864.46	861.12	16.29	8.65	855.81
P2-SB-37	5/2/2016	5	10	865.90	861.90	NM	7.49	859.79*

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS
May 2016
Second Quarter 2016 Groundwater Monitoring Report
RACER Trust Plants 2, 3, and 6 - 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 (TOC [ft. msl]):	Ground Surface Elevation (ft. msl):	Total Well Depth (ft. below TOC):	Depth to Water (ft. below TOC):	Groundwater Elevation (ft. msl):
Plant 2 (cont.)								
PMW-01	5/2/2016	2.59	7.59	860.85	861.33	NM	4.55	859.76*
PMW-02	5/2/2016	2.59	7.59	861.12	861.50	NM	0.60	860.7*
PMW-03	5/2/2016	1.2	6.2	861.59	862.12	6.10	1.27	860.32
PW-14-01	5/2/2016	71.6	76.8	864.97	862.38	82.85	67.77	797.20
PW-14-02	5/2/2016	75	80	863.91	861.17	85.30	70.80	793.11
TW-14-02	5/2/2016	67	72	865.01	862.13	76.68	66.16	798.85
TW-14-03	5/2/2016	75	80	864.02	861.32	83.10	71.53	792.49
TW-15-12	5/2/2016	73	78	860.88	861.23	78.35	68.25	792.63
TW-15-13	5/2/2016	79	84	864.13	861.19	87.10	71.00	793.13
Plant 3								
CH-14-RO	5/2/2016	7	12	866.44	863.68	14.80	6.74	859.70
LMW-12-09	5/2/2016	3	8	863.22	860.40	10.75	3.60	859.62
LMW-12-10	5/2/2016	14	19	866.82	863.60	NM	20.35	856.55*
LMW-12-11	5/2/2016	15	20	866.53	863.53	22.85	11.70	854.83
MW-02-01(3)	5/2/2016	59	69	865.54	863.35	72.20	54.32	811.22
MW-02-02(3)	5/2/2016	74	84	862.70	863.11	83.80	68.44	794.26
MW-02-03(3)	5/2/2016	79	89	859.63	859.90	NM	NM	NM
MW-02-04(3)	5/2/2016	76	86	862.61	862.93	84.30	64.65	797.96
MW-04(3)	5/2/2016	10.5	15.5	859.40	859.79	15.70	3.83	855.57
MW-04-01(3)	5/2/2016	95	105	862.61	862.93	104.60	53.73	808.88
MW-04-02(3)	5/2/2016	126	136	861.09	861.26	132.30	68.63	792.46
MW-04-03(3)	5/2/2016	80	90	860.72	861.00	87.40	67.33	793.39
MW-04-04(3)	5/2/2016	72	82	855.72	856.11	81.60	61.97	793.75
MW-05(3)	5/2/2016	10	15	859.02	859.79	15.25	3.83	855.19
MW-06(3)	5/2/2016	6.5	11.5	859.52	859.79	11.55	2.59	856.93
MW-12-04	5/2/2016	77	100	844.08	844.26	100.00	53.31	790.77
MW-12-19	5/2/2016	5	10	859.55	859.96	8.90	Dry	Dry
MW-12-20	5/2/2016	75	80	864.20	861.45	79.40	70.58	793.62
MW-12-21	5/2/2016	70	75	864.50	861.45	78.05	69.83	794.67
MW-13-22	5/2/2016	89	94	864.37	861.50	96.25	73.14	791.23
MW-13-23	5/2/2016	69	74	864.31	861.45	77.50	74.28	790.03
MW-13-24	5/2/2016	69	74	864.35	861.48	77.35	69.12	795.23
MW-13-25	5/2/2016	67	72	863.77	860.49	74.95	70.13	793.64
MW-13-26	5/2/2016	72	77	863.95	861.67	79.20	69.49	794.46
MW-13-27	5/2/2016	67	72	864.50	861.54	75.85	71.73	792.77
MW-13-28	5/2/2016	99	115.5	864.42	861.61	116.10	73.93	790.49
MW-13-29	5/2/2016	68	73	862.81	859.81	76.30	70.19	792.62
MW-13-30	5/2/2016	72	77	864.53	861.66	79.85	71.88	792.65
MW-13-31	5/2/2016	5	10	861.27	858.36	12.80	7.14	854.13
MW-13-32	5/2/2016	5	10	860.11	857.32	12.65	5.93	854.18
MW-13-33	5/2/2016	12	17	860.71	857.69	19.20	8.45	852.26
MW-13-34	5/2/2016	74	79	853.92	851.82	79.84	70.11	783.81
MW-13-37	5/2/2016	97	112	866.02	863.75	114.45	75.19	790.83
MW-13-38	5/2/2016	107	124	866.47	863.71	126.20	76.02	790.45
MW-13-39B	5/2/2016	97	112	860.20	857.33	106.55	69.42	790.78
MW-13-40	5/2/2016	72	77	862.67	859.69	78.70	66.48	796.19
MW-13-41	5/2/2016	77	82	866.38	863.68	84.70	66.41	799.97
MW-13-46	5/2/2016	68	73	854.54	852.12	75.30	65.50	789.04

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS
May 2016
Second Quarter 2016 Groundwater Monitoring Report
RACER Trust Plants 2, 3, and 6 - 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 (TOC [ft. msl]):	Ground Surface Elevation (ft. msl):	Total Well Depth (ft. below TOC):	Depth to Water (ft. below TOC):	Groundwater Elevation (ft. msl):
Plant 3 (cont.)								
MW-13-47	5/2/2016	99	119	853.74	851.89	113.60	69.45	784.29
MW-13-48	5/2/2016	65	70	854.83	852.17	73.03	61.86	792.97
MW-13-49	5/2/2016	73	78	853.01	850.55	81.62	70.30	782.71
MW-14-64	5/2/2016	98.6	103.6	864.56	861.77	106.25	73.34	791.22
MW-14-65	5/2/2016	5	10	866.34	863.71	13.20	5.71	860.63
MW-15-71	5/2/2016	110	115	864.56	861.58	118.30	71.14	793.42
MW-19	5/2/2016	55	65	859.74	859.92	64.30	54.70	805.04
MW-22	5/2/2016	52.5	62.5	859.69	860.08	63.40	53.73	805.96
MW-23	5/2/2016	52	62	859.45	859.76	61.35	52.79	806.66
MW-88-1	5/2/2016	103.5	140	858.75	859.06	137.30	72.60	786.15
MW-91-2	5/2/2016	68	78	863.62	863.88	76.60	62.68	800.94
MW-91-3	5/2/2016	105	117	860.81	859.35	119.15	72.89	787.92
MW-91-4	5/2/2016	116	132.5	855.59	855.93	130.75	63.83	791.76
MW-91-5	5/2/2016	112.5	128	860.61	861.20	126.55	67.22	793.39
MW-91-6	5/2/2016	82	98	851.84	852.22	81.32	65.90	785.94
MW-93-1	5/2/2016	65	75	866.05	863.56	70.05	Dry	Dry
P3-SB-07	5/2/2016	11	16	866.84	863.63	19.65	8.62	858.22
P3-SB-28	5/2/2016	8	13	866.43	863.63	10.35	4.65	861.78
PW-14-03	5/2/2016	79.6	84.6	864.31	861.55	94.30	75.86	788.45
TW-14-06	5/2/2016	80	87	864.20	861.44	89.30	74.84	789.36
TW-14-07	5/2/2016	83	88	864.45	861.44	91.35	74.75	789.70
TW-14-08	5/2/2016	84	89	864.30	861.42	91.45	74.92	789.38
TW-14-09	5/2/2016	84	89	864.39	861.71	91.85	75.35	789.04
TW-15-10	5/2/2016	85	90	864.81	861.45	94.50	75.26	789.55
TW-15-11	5/2/2016	85	90	864.51	861.60	93.20	75.61	788.90
UNK-09	5/2/2016	11	16	859.42	860.02	15.25	1.71	857.71
UNK-10	5/2/2016	11	16	859.34	860.05	15.35	2.31	857.03
UNK-11	5/2/2016	6.5	11.5	859.91	860.17	11.75	4.09	855.82
UNK-13	5/2/2016	11	16	859.11	859.91	14.98	3.82	855.29
UNK-14	5/2/2016	10.4	15.4	859.32	859.70	NM	3.19	856.57*
UNK-15	5/2/2016	11	16	859.56	859.94	15.65	2.04	857.52
Plant 6								
MW-02-01(6)	5/2/2016	35	45	865.54	863.35	40.10	27.81	837.73
MW-02-02(6)	5/2/2016	35	45	868.04	868.41	43.41	30.00	838.04
MW-02-03(6)	5/2/2016	35	45	869.54	869.97	44.63	30.96	838.58
MW-03-02	5/2/2016	30	40	864.52	864.76	39.24	22.14	842.38
MW-03-04	5/2/2016	33	43	865.28	865.53	42.70	22.47	842.81
MW-03-06	5/2/2016	30	40	870.45	870.80	40.58	36.25	834.20
MW-03-07	5/2/2016	30	40	866.88	867.02	40.51	26.30	840.58
MW-04-01(6)	5/2/2016	78	88	866.85	867.15	87.48	77.00	789.85
MW-04-04R	5/2/2016	82	110	873.31	870.64	113.73	83.10	790.21
MW-04-05(6)	5/2/2016	20	30	858.33	858.87	29.63	11.33	847.00
MW-04-06R	5/2/2016	74	99.5	861.56	858.59	98.00	72.44	789.12
MW-12-10	5/2/2016	8	13	860.89	858.82	17.97	9.93	850.96
MW-12-11	5/2/2016	13	18	857.26	857.68	16.80	4.41	852.85
MW-12-12	5/2/2016	13	18	874.34	874.61	17.21	5.96	868.38
MW-12-13	5/2/2016	18.5	23.5	882.60	880.51	25.40	12.45	870.15
MW-12-14	5/2/2016	25	30	872.56	869.28	32.08	24.14	848.42

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS
May 2016
Second Quarter 2016 Groundwater Monitoring Report
RACER Trust Plants 2, 3, and 6 - Lansing, Michigan

Well ID:	Date Collected:	Screened Interval Top (ft. bgs)	Screened Interval Bottom (ft. bgs):	Reference Elevation (TOC [ft. msl]):	Ground Surface Elevation (ft. msl):	Total Well Depth (ft. below TOC):	Depth to Water (ft. below TOC):	Groundwater Elevation (ft. msl):
Plant 6 (cont.)								
MW-12-15	5/2/2016	18	23	865.23	865.49	22.69	19.75	845.48
MW-12-16	5/2/2016	28	33	864.24	864.73	32.20	23.23	841.01
MW-13-35	5/2/2016	25	30	864.81	865.23	29.50	24.00	840.81
MW-13-36R	5/2/2016	5.5	10.5	878.04	875.28	9.85	4.06	873.98
MW-13-50	5/2/2016	85	107	872.85	869.93	109.84	85.90	786.95
MW-13-52	5/2/2016	70	80	872.50	869.84	82.10	71.10	801.40
MW-13-53	5/2/2016	73	83	875.56	873.10	85.40	77.85	797.71
MW-14-66	5/2/2016	14	19	877.85	874.73	22.23	5.55	872.30
MW-14-67	5/2/2016	13	18	877.76	875.07	20.84	6.40	871.36
MW-14-68	5/2/2016	36	41	878.44	875.42	44.07	Dry	Dry
MW-14-69	5/2/2016	41	46	883.62	880.72	49.00	Dry	Dry
MW-14-70	5/2/2016	16	21	882.79	880.08	23.11	9.68	873.11
MWBP-10-UST5-6	5/2/2016	28	38	867.70	867.99	38.05	31.30	836.40
MWBP-11-UST1-4	5/2/2016	9	19	868.66	869.07	11.22	2.05	866.61
MWBP-12A-UST1-4	5/2/2016	28	38	869.74	869.96	36.72	30.08	839.66
MWBP-12-UST1-4	5/2/2016	15	25	870.02	870.58	11.25	6.80	863.22
MWBP-12-UST5-6	5/2/2016	28	38	NS	NS	38.50	32.52	NS
MWBP-13A-UST1-4	5/2/2016	28	38	869.99	870.10	38.01	32.70	837.29
P6-MW-01	5/2/2016	23	28	870.10	866.87	31.20	29.15	840.95
P6-SB-07	5/2/2016	15	20	877.36	874.36	23.62	6.13	871.23
P6-SB-18	5/2/2016	3	8	878.46	874.60	12.15	4.11	874.35
P6-SB-21	5/2/2016	3	8	874.20	870.92	11.11	2.40	871.80
P6-SB-35	5/2/2016	3	8	877.76	874.28	11.96	3.70	874.06
P6-SB-37	5/2/2016	5	10	878.12	874.32	13.92	4.32	873.80
SME-MW-02	5/2/2016	33	38	869.30	NS	37.25	33.46	835.84

Note:
* - groundwater elevation corrected for LNAPL thickness
-- not calculated or not available
ft. - feet
ft. msl - feet above mean sea level
NM - not measured
NS - not surveyed
ID - Identification
TOC - Top of Casing
bgs - below ground suface

TABLE 2
SUMMARY OF LNAPL THICKNESS
May 2016
Second Quarter 2015 Groundwater Monitoring 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):
Plant 2								
LMW-12-01	5/2/2016	864.91	862.14	14.75	8.83	NP	NP	856.08
LMW-12-02	5/2/2016	865.25	862.17	12.89	6.48	NP	NP	858.77
LMW-12-03D	5/2/2016	864.99	862.08	NM	13.05	10.40	2.65	854.32*
LMW-12-03S	5/2/2016	864.93	862.06	11.75	6.12	NP	NP	858.81
LMW-12-04	5/2/2016	864.94	862.12	23.66	10.17	NP	NP	854.77
LMW-12-05	5/2/2016	865.03	862.17	NM	10.45	10.37	0.08	854.65*
LMW-12-06	5/2/2016	865.02	862.15	11.95	6.51	NP	NP	858.51
LMW-12-07	5/2/2016	864.13	861.50	11.94	5.17	NP	NP	858.96
LMW-12-08	5/2/2016	864.40	861.56	NM	11.75	7.82	3.93	856.19*
LMW-14-12D	5/2/2016	864.59	862.11	NM	24.69	8.56	16.13	854.41*
LMW-14-13D	5/2/2016	865.03	862.06	24.34	9.99	NP	NP	855.04
LMW-14-14D	5/2/2016	864.89	861.90	25.07	12.24	NP	NP	852.65
LMW-14-15D	5/2/2016	865.11	861.66	NM	22.65	9.61	13.04	854.19*
LMW-15-16D	5/2/2016	865.20	862.24	NM	22.75	12.12	10.63	852.01*
LMW-15-17D	5/2/2016	865.21	862.24	27.28	10.51	NP	NP	854.70
P2-SB-37	5/2/2016	865.90	861.90	NM	7.49	5.96	1.53	859.79*
PMW-01	5/2/2016	860.85	861.33	NM	4.55	0.70	3.85	859.76*
PMW-02	5/2/2016	861.12	861.50	NM	0.60	0.40	0.20	860.7*
PMW-03	5/2/2016	861.59	862.12	6.10	1.27	NP	NP	860.32
Plant 3								
LMW-12-09	5/2/2016	863.22	860.40	10.75	3.60	NP	NP	859.62
LMW-12-10	5/2/2016	866.82	863.60	NM	20.35	9.14	11.21	856.55*
LMW-12-11	5/2/2016	866.53	863.53	22.85	11.70	NP	NP	854.83
UNK-13	5/2/2016	859.11	859.91	14.98	3.82	NP	NP	855.29
UNK-14	5/2/2016	859.32	859.70	NM	3.19	2.70	0.49	856.57*

Note:
*Groundwater elevations have been corrected for the presence of LNAPL using a measured LNAPL density of 0.8995 g/mL
ft. - feet
ft. msl - feet above mean sea level
ID - Identification
NM - Not Measured
NP - No Product
TOC - Top of Casing

TABLE 3
SUMMARY OF LNAPL RECOVERY
May 2015
Second Quarter 2015 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	5/2/2016	864.99	862.08	NM	13.05	10.40	2.65	854.32*	0.44	0.44
LMW-14-12D	5/2/2016	864.59	862.11	NM	24.69	8.56	16.13	854.41*	2.69	2.69
LMW-14-13D	5/2/2016	865.03	862.06	24.34	9.99	NP	NP	855.04	NP	NP
LMW-14-14D	5/2/2016	864.89	861.90	25.07	12.24	NP	NP	852.65	NP	NP
LMW-14-15D	5/2/2016	865.11	861.66	22.65	22.65	9.61	13.04	854.19*	2.18	2.18
LMW-15-16D	5/2/2016	865.20	862.24	NM	22.75	12.12	10.63	852.01*	1.78	1.78
LMW-15-17D	5/2/2016	865.21	862.24	27.28	10.51	NP	NP	854.70	NP	NP
								Total:	7.09	7.09

Note:
*Groundwater elevations have been corrected for the presence of LNAPL using a measured LNAPL density of 0.8995 g/mL
** Volume calculations based on an internal well volume of 0.1686 gallons per foot in a 2 inch diameter well. All wells in this table are 2 inches in diameter.
*** Recovery performed via 1.5 inch diameter weighted PVC bailers. Volume for this quarter was estimated from initial LNAPL thickness.

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

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MI GW (DEQ2013) RES DW	MI GW (DEQ2013) GSI	CH-14-RO 05/12/16 CH-14-RO_051216	MW-01(2) 05/09/16 MW-01(2)_050916	MW-02-01(3) 05/09/16 MW-02-01(3)_050916	MW-02-01(6) 05/04/16 MW-02-01(6)_050416	MW-02-02(3) 05/11/16 MW-02-02(3)_051116	MW-02-02(6) 05/05/16 MW-02-02(6)_050516	MW-02-03(3) 05/11/16 MW-02-03(3)_051116	MW-02-03(6) 05/05/16 MW-02-03(6)_050516	MW-02-04(3) 05/11/16 MW-02-04(3)_051116
Air Monitoring												
Methane	ug/L	- -	- -	0.51 O	110 O	7.7 O	2,600 O	120 O	150 O	NA	390 O	NA
Field												
Conductance, specific	mS/cm	- -	- -	1132	6171	659	4810	5899	4555	2675	8767	3283
Dissolved oxygen (DO)	mg/L	- -	- -	0.69	0.4	1.57	0.48	7.61	1.82	5.12	1.07	3.18
Oxidation reduction potential (ORP), field	millivolts	- -	- -	-35	54	-65	-128	-97	-30	-89	-61	-6
pH	s.u.	- -	- -	7.13	6.8	7.48	7.26	6.55	6.97	6.96	6.78	6.93
Temperature, field	Deg C	- -	- -	18.1	14.2	17.6	12.2	12.8	15.0	16.5	22.4	18.2
Turbidity (field)	NTU	- -	- -	1.3	14.8	20.6	12.3	8.0	5.6	9.9	284.3	69.1
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	10	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.2	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.05	5.7	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,2-Dichlorobenzene	µg/L	600	13	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,4-Dichlorobenzene	µg/L	75	17	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,4-Dioxane	µg/L	7.2	2,800	<3	<3	NA	NA	<3	NA	<3	**17 [16] [a]**	<3
1,1,1-Trichloroethane	µg/L	200	89	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
2-Hexanone	µg/L	1,000	- -	<10	<10	NA	NA	<10	NA	<10	<10 [<10]	<10
1,1,2,2-Tetrachloroethane	µg/L	8.5	78	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Acetone	µg/L	730	1,700	<10	<10	NA	NA	<10	NA	<10	<10 [<10]	<10
1,1,2-Trichloroethane	µg/L	5	330	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Bromodichloromethane	µg/L	80	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,1-Dichloroethane	µg/L	880	740	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Bromoform	µg/L	80	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,1-Dichloroethene	µg/L	7	130	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Bromomethane (Methyl bromide)	µg/L	10	35	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,2-Dichloroethane	µg/L	5	360	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Carbon disulfide	µg/L	800	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Carbon tetrachloride	µg/L	5	45	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
cis-1,2-Dichloroethene	µg/L	70	620	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Chlorobenzene	µg/L	100	25	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
trans-1,2-Dichloroethene	µg/L	100	1,500	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Chloroform (Trichloromethane)	µg/L	80	350	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Trichloroethene	µg/L	5	200	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Chloromethane (Methyl chloride)	µg/L	260	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Tetrachloroethene	µg/L	5	60	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
cis-1,3-Dichloropropene	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Vinyl chloride	µg/L	2	13	<1	<1	NA	NA	<1	NA	<1	1 [2]	<1
Chloroethane	µg/L	430	1,100	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Dichlorodifluoromethane (CFC-12)	µg/L	1,700	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Benzene	µg/L	5	200	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Methyl acetate	µg/L	- -	- -	<10	<10	NA	NA	<10	NA	<10	<10 [<10]	<10
Ethylbenzene	µg/L	74	18	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Methylene chloride	µg/L	5	1,500	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Styrene	µg/L	100	80	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Toluene	µg/L	790	270	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
trans-1,3-Dichloropropene	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Methyl tert butyl ether (MTBE)	µg/L	40	7,100	<1	16	NA	NA	<1	NA	<1	<1 [<1]	<1
Trichlorofluoromethane (CFC-11)	µg/L	2,600	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Trifluorotrichloroethane (Freon 113)	µg/L	170,000	32	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	13,000	2,200	<10	<10	NA	NA	<10	NA	<10	<10 [<10]	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	1,800	- -	<10	<10	NA	NA	<10	NA	<10	<10 [<10]	<10
1,2,4-Trichlorobenzene	µg/L	70	99	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,2,4-Trimethylbenzene	µg/L	63	17	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	72	45	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	5	230	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
1,3-Dichlorobenzene	µg/L	6.6	28	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Cyclohexane	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Methyl cyclohexane	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MI GW (DEQ2013)	MI GW (DEQ2013)	CH-14-RO 05/12/16	MW-01(2) 05/09/16	MW-02-01(3) 05/09/16	MW-02-01(6) 05/04/16	MW-02-02(3) 05/11/16	MW-02-02(6) 05/05/16	MW-02-03(3) 05/11/16	MW-02-03(6) 05/05/16	MW-02-04(3) 05/11/16
Dibromochloromethane	µg/L	80	- -	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Isopropyl benzene	µg/L	800	28	<1	<1	NA	NA	<1	NA	<1	<1 [<1]	<1
Total Xylenes	µg/L	280	41	<3	<3	NA	NA	<3	NA	<3	<3 [<3]	<3
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,4,6-Trichlorophenol	µg/L	120	5	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,4-Dichlorophenol	µg/L	73	11	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,4,5-Trichlorophenol	µg/L	730	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,4-Dimethylphenol	µg/L	370	380	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,4-Dinitrophenol	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,4-Dinitrotoluene	µg/L	7.7	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2,6-Dinitrotoluene	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2-Chloronaphthalene	µg/L	1,800	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2-Chlorophenol	µg/L	45	18	<1	<1	NA	NA	<1	NA	<1	NA	<1
2-Methylnaphthalene	µg/L	260	19	<1	<1	NA	NA	<1	NA	<1	NA	<1
2-Methylphenol	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2-Nitroaniline	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
2-Nitrophenol	µg/L	20	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
3&4-Methylphenol	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
3,3'-Dichlorobenzidine	µg/L	1.1	0.3	<1	<1	NA	NA	<1	NA	<1	NA	<1
Naphthalene	µg/L	520	11	<1	<1	NA	NA	<1	NA	<1	NA	<1
3-Nitroaniline	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
4,6-Dinitro-2-methylphenol	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
4-Bromophenyl phenyl ether	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
4-Chloro-3-methylphenol	µg/L	150	7.4	<1	<1	NA	NA	<1	NA	<1	NA	<1
4-Chloroaniline	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
4-Chlorophenyl phenyl ether	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
4-Nitroaniline	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
4-Nitrophenol	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Anthracene	µg/L	43	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Acenaphthene	µg/L	1,300	38	<1	<1	NA	NA	<1	NA	<1	NA	<1
Acenaphthylene	µg/L	52	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Acetophenone	µg/L	1,500	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Atrazine	µg/L	3	7.3	<1	<1	NA	NA	<1	NA	<1	NA	<1
Benzaldehyde	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Benzo(a)anthracene	µg/L	2.1	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Benzo(a)pyrene	µg/L	5	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Benzo(b)fluoranthene	µg/L	1.5	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Benzo(g,h,i)perylene	µg/L	1	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Benzo(k)fluoranthene	µg/L	1	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Biphenyl (1,1-Biphenyl)	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
bis(2-Chloroethoxy)methane	µg/L	- -	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
bis(2-Chloroethyl)ether	µg/L	2	1	<1	<1	NA	NA	<1	NA	<1	NA	<1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	25	2 B	2	NA	NA	<2	NA	<2	NA	<2
Butyl benzylphthalate (BBP)	µg/L	1,200	67	<1	<1	NA	NA	<1	NA	<1	NA	<1
Caprolactam	µg/L	5,800	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Carbazole	µg/L	85	10	<1	<1	NA	NA	<1	NA	<1	NA	<1
Chrysene	µg/L	1.6	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Dibenz(a,h)anthracene	µg/L	2	- -	<2	<2	NA	NA	<2	NA	<2	NA	<2
Dibenzofuran	µg/L	- -	4	<1	<1	NA	NA	<1	NA	<1	NA	<1
Diethyl phthalate	µg/L	5,500	110	<1	<1	NA	NA	<1	NA	<1	NA	<1
Dimethyl phthalate	µg/L	73,000	- -	<2	<1	NA	NA	<2	NA	<2	NA	<2
Di-n-butylphthalate (DBP)	µg/L	880	9.7	<1	<1	NA	NA	2 B	NA	2 B	NA	2 B
Di-n-octyl phthalate (DnOP)	µg/L	130	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Fluoranthene	µg/L	210	1.6	<1	<1	NA	NA	<1	NA	<1	NA	<1
Fluorene	µg/L	880	12	<1	<1	NA	NA	<1	NA	<1	NA	<1
Hexachlorobenzene	µg/L	1	0.2	<1	<1	NA	NA	<1	NA	<1	NA	<1
Hexachlorobutadiene	µg/L	15	0.053	<1	<1	NA	NA	<1	NA	<1	NA	<1
Hexachlorocyclopentadiene	µg/L	50	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Hexachloroethane	µg/L	7.3	6.7	<1	<1	NA	NA	<1	NA	<1	NA	<1
Indeno(1,2,3-cd)pyrene	µg/L	2	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MI GW (DEQ2013)	MI GW (DEQ2013)	CH-14-RO 05/12/16	MW-01(2) 05/09/16	MW-02-01(3) 05/09/16	MW-02-01(6) 05/04/16	MW-02-02(3) 05/11/16	MW-02-02(6) 05/05/16	MW-02-03(3) 05/11/16	MW-02-03(6) 05/05/16	MW-02-04(3) 05/11/16
Isophorone	µg/L	770	1,300	<1	<1	NA	NA	<1	NA	<1	NA	<1
Nitrobenzene	µg/L	3.4	180	<1	<1	NA	NA	<1	NA	<1	NA	<1
N-Nitrosodi-n-propylamine	µg/L	5	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
N-Nitrosodiphenylamine	µg/L	270	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Pentachlorophenol	µg/L	1	2.8	<1	<1	NA	NA	<1	NA	<1	NA	<1
Phenanthrene	µg/L	52	2	<1	<1	NA	NA	<1	NA	<1	NA	<1
Phenol	µg/L	4,400	450	<1	<1	NA	NA	<1	NA	<1	NA	<1
Pyrene	µg/L	140	- -	<1	<1	NA	NA	<1	NA	<1	NA	<1
Inorganics												
Iron	mg/L	0.3	- -	**0.61** [a]	**4.90** [a]	**2.48** [a]	**6.60** [a]	NA	**4.34** [a]	NA	**17.2** [a]	NA
Sodium	mg/L	230	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	<0.005	<0.005	NA	NA	<0.005	NA	<0.005	NA	<0.005
Arsenic	mg/L	0.01	0.01	<0.002	0.006	NA	NA	0.007	NA	0.009	**0.070 [0.072]** [ab]	**0.031** [ab]
Barium	mg/L	2	1.2	0.039	0.288	NA	NA	0.049	NA	0.372	NA	0.167
Boron	mg/L	0.5	7.2	0.10	0.09	NA	NA	0.04	NA	<0.04	NA	<0.04
Cadmium	mg/L	0.005	0.0045	<0.0005	<0.0005	NA	NA	<0.0005	NA	<0.0005	NA	<0.0005
Chromium	mg/L	- -	0.16	**12.9** [b]	<0.005	NA	NA	<0.005	NA	<0.005	0.006 [0.006]	<0.005
Chromium VI (hexavalent)	mg/L	0.1	0.011	**13.0** [ab]	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	<0.005	<0.005	NA	NA	0.012	NA	0.011	NA	0.038
Copper	mg/L	1	0.02	<0.005	0.006	NA	NA	0.008	NA	<0.005	0.008 [0.008]	<0.005
Lead	mg/L	0.004	0.044	<0.003	<0.003	NA	NA	<0.003	NA	<0.003	0.003 [0.003]	0.003
Manganese	mg/L	0.05	4.5	0.008	**0.232** [a]	0.045	**0.254** [a]	**2.30** [a]	**0.103** [a]	**0.078** [a]	**0.271** [a]	**0.088** [a]
Mercury	mg/L	0.002	0.0000013	<0.0001	<0.0001	NA	NA	<0.0001	NA	<0.0001	NA	<0.0001
Nickel	mg/L	0.1	0.12	0.030	0.035	NA	NA	0.043	NA	0.011	0.033 [0.034]	0.015
Selenium	mg/L	0.05	- -	0.005	<0.005	NA	NA	<0.005	NA	<0.005	NA	<0.005
Silver	mg/L	0.034	0.0002	<0.0005	<0.0005	NA	NA	<0.0005	NA	<0.0005	NA	<0.0005
Vanadium	mg/L	0.0045	0.027	**0.191** [ab]	<0.005	NA	NA	<0.005	NA	<0.005	**0.006 [0.008]** [a]	<0.005
Zinc	mg/L	2.4	0.26	<0.005	0.015	NA	NA	0.021	NA	0.005	NA	0.015
Inorganics-Filtered												
Iron (dissolved)	mg/L	0.3	- -	<0.02	**4.08** [a]	**1.13** [a]	**5.74** [a]	**5.35** [a]	**4.02** [a]	NA	**13.6** [a]	NA
Sodium (dissolved)	mg/L	230	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	NA	<0.005	NA	NA	NA	NA	NA	NA	<0.005
Arsenic (dissolved)	mg/L	0.01	0.01	NA	0.006	NA	NA	NA	NA	NA	**0.062 [0.062]** [ab]	0.010
Barium (dissolved)	mg/L	2	1.2	NA	0.312	NA	NA	NA	NA	NA	NA	0.156
Boron (Dissolved)	mg/L	0.5	7.2	NA	0.08	NA	NA	NA	NA	NA	NA	<0.04
Cadmium (dissolved)	mg/L	0.005	0.0045	NA	<0.0005	NA	NA	NA	NA	NA	NA	<0.0005
Chromium (dissolved)	mg/L	- -	0.16	NA	<0.005	NA	NA	NA	NA	NA	<0.005 [<0.005]	<0.005
Cobalt (dissolved)	mg/L	0.04	0.1	NA	<0.005	NA	NA	NA	NA	NA	NA	0.039
Copper (dissolved)	mg/L	1	0.02	NA	<0.005	NA	NA	NA	NA	NA	<0.005 [<0.005]	<0.005
Lead (dissolved)	mg/L	0.004	0.044	NA	<0.003	NA	NA	NA	NA	NA	<0.003 [<0.003]	<0.003
Manganese (dissolved)	mg/L	0.05	4.5	0.005	**0.199** [a]	0.039	**0.248** [a]	**2.30** [a]	**0.102** [a]	NA	**0.215** [a]	**0.064** [a]
Mercury (dissolved)	mg/L	- -	- -	NA	<0.0001	NA	NA	NA	NA	NA	NA	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	NA	0.032	NA	NA	NA	NA	NA	0.032 [0.033]	0.015
Selenium (dissolved)	mg/L	0.05	- -	NA	<0.005	NA	NA	NA	NA	NA	NA	<0.005
Silver (dissolved)	mg/L	0.034	0.0002	NA	<0.0005	NA	NA	NA	NA	NA	NA	<0.0005
Vanadium (dissolved)	mg/L	0.0045	0.027	NA	<0.005	NA	NA	NA	NA	NA	<0.005 [<0.005]	<0.005
Zinc (dissolved)	mg/L	2.4	0.26	NA	0.015	NA	NA	NA	NA	NA	NA	0.006
General Chemistry												
Nitrate (as N)	mg/L	10	- -	**19.0** [a]	<0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	NA
Sulfate	mg/L	250	- -	149	91	60	11	**1,080** [a]	34	NA	45	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-03(2) 05/09/16 MW-03(2)_050916	MW-03-04 05/11/16 MW-03-04_051116	MW-03-06 05/13/16 MW-03-06_051316	MW-03-07 05/05/16 MW-03-07_050516	MW-04-01(3) 05/09/16 MW-04-01(3)_050916	MW-04-01(6) 05/04/16 MW-04-01(6)_050416	MW-04-03(3) 05/11/16 MW-04-03(3)_051116	MW-04-04(3) 05/16/16 MW-04-04_051616	MW-04-04R 05/12/16 MW-04-04R_051216	MW-04-05(6) 05/04/16 MW-04-05(6)_050416
Air Monitoring											
Methane	ug/L	2.3 O	24 O	NA	43 O	<0.50 O	16 O	NA	23 O	7.2 O	120 O
Field											
Conductance, specific	mS/cm	5675	1777	12078	1193	1086	950	1566	NA	1230	8164
Dissolved oxygen (DO)	mg/L	1.14	1.2	1.63	0.76	2.81	2.24	0.28	NA	3.85	0.56
Oxidation reduction potential (ORP), field	millivolts	30	-9	38	-85	12	-1	-129	NA	25	-81
pH	s.u.	6.74	7.14	6.8	7.25	7.54	7.03	6.91	NA	6.98	6.97
Temperature, field	Deg C	13.2	16.8	17.9	10.7	14.1	11.2	15.5	NA	24.7	10.8
Turbidity (field)	NTU	2.0	9.1	4.3	1.3	0.8	41.8	1.9	NA	9.9	1.2
Volatile Organics											
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,2-Dichlorobenzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,4-Dichlorobenzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,4-Dioxane	µg/L	<3 [<3]	**29 [30] [a]**	6	NA	<3	<3	<3	NA	<3	<3
1,1,1-Trichloroethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
2-Hexanone	µg/L	<10 [<10]	<10 [<10]	<10	NA	<10	<10	<10	NA	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Acetone	µg/L	<10 [<10]	<10 [<10]	<10	NA	<10	<10	<10	NA	<10	<10
1,1,2-Trichloroethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Bromodichloromethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,1-Dichloroethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Bromoform	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,1-Dichloroethene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,2-Dichloroethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Carbon disulfide	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Carbon tetrachloride	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
cis-1,2-Dichloroethene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Chlorobenzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
trans-1,2-Dichloroethene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Chloroform (Trichloromethane)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Trichloroethene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Tetrachloroethene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
cis-1,3-Dichloropropene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Vinyl chloride	µg/L	<1 [<1]	<1 [<1]	**11 [a]**	NA	<1	<1	**9 [a]**	NA	<1	<1
Chloroethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Benzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Methyl acetate	µg/L	<10 [<10]	<10 [<10]	<10	NA	<10	<10	<10	NA	<10	<10
Ethylbenzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Methylene chloride	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Styrene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Toluene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
trans-1,3-Dichloropropene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	2 [2]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10 [<10]	<10 [<10]	<10	NA	<10	<10	<10	NA	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10 [<10]	<10 [<10]	<10	NA	<10	<10	<10	NA	<10	<10
1,2,4-Trichlorobenzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
1,3-Dichlorobenzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Cyclohexane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Methyl cyclohexane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-03(2) 05/09/16	MW-03-04 05/11/16	MW-03-06 05/13/16	MW-03-07 05/05/16	MW-04-01(3) 05/09/16	MW-04-01(6) 05/04/16	MW-04-03(3) 05/11/16	MW-04-04(3) 05/16/16	MW-04-04R 05/12/16	MW-04-05(6) 05/04/16
Dibromochloromethane	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Isopropyl benzene	µg/L	<1 [<1]	<1 [<1]	<1	NA	<1	<1	<1	NA	<1	<1
Total Xylenes	µg/L	<3 [<3]	<3 [<3]	<3	NA	<3	<3	<3	NA	<3	<3
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,4,6-Trichlorophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,4-Dichlorophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,4,5-Trichlorophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,4-Dimethylphenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,4-Dinitrophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,4-Dinitrotoluene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2,6-Dinitrotoluene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2-Chloronaphthalene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2-Chlorophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2-Methylnaphthalene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2-Methylphenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2-Nitroaniline	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
2-Nitrophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
3&4-Methylphenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
3,3'-Dichlorobenzidine	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Naphthalene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	1	NA	<1	<1
3-Nitroaniline	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4,6-Dinitro-2-methylphenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4-Bromophenyl phenyl ether	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4-Chloro-3-methylphenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4-Chloroaniline	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4-Chlorophenyl phenyl ether	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4-Nitroaniline	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
4-Nitrophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Anthracene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Acenaphthene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Acenaphthylene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Acetophenone	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Atrazine	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Benzaldehyde	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Benzo(a)anthracene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Benzo(a)pyrene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Benzo(b)fluoranthene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Benzo(g,h,i)perylene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Benzo(k)fluoranthene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Biphenyl (1,1-Biphenyl)	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
bis(2-Chloroethoxy)methane	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
bis(2-Chloroethyl)ether	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	<1 [<1]	NA	3 B	NA	2	<1	3	NA	2 B	2
Butyl benzylphthalate (BBP)	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Caprolactam	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Carbazole	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Chrysene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Dibenz(a,h)anthracene	µg/L	<2 [<2]	NA	<2	NA	<2	<2	<2	NA	<2	<2
Dibenzofuran	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Diethyl phthalate	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Dimethyl phthalate	µg/L	<1 [<1]	NA	<2	NA	<2	<1	<2	NA	<2	<1
Di-n-butylphthalate (DBP)	µg/L	<1 [1]	NA	<1	NA	1 B	<1	2 B	NA	<1	<1
Di-n-octyl phthalate (DnOP)	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Fluoranthene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Fluorene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Hexachlorobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Hexachlorobutadiene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Hexachlorocyclopentadiene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Hexachloroethane	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Indeno(1,2,3-cd)pyrene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-03(2) 05/09/16	MW-03-04 05/11/16	MW-03-06 05/13/16	MW-03-07 05/05/16	MW-04-01(3) 05/09/16	MW-04-01(6) 05/04/16	MW-04-03(3) 05/11/16	MW-04-04(3) 05/16/16	MW-04-04R 05/12/16	MW-04-05(6) 05/04/16
Isophorone	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Nitrobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
N-Nitrosodi-n-propylamine	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
N-Nitrosodiphenylamine	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Pentachlorophenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Phenanthrene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Phenol	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Pyrene	µg/L	<1 [<1]	NA	<1	NA	<1	<1	<1	NA	<1	<1
Inorganics											
Iron	mg/L	**1.86** [a]	**2.50** [a]	NA	**2.30** [a]	NA	**2.15** [a]	NA	**4.94** [a]	**3.71** [a]	**3.35** [a]
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	<0.005 [<0.005]	NA	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
Arsenic	mg/L	0.005 [0.006]	NA	**0.020** [ab]	NA	0.002	**0.013** [ab]	<0.002	NA	**0.060** [ab]	0.008
Barium	mg/L	0.348 [0.346]	NA	0.268	NA	0.039	0.266	0.183	NA	0.410	0.364
Boron	mg/L	0.14 [0.14]	NA	0.074	NA	0.12	0.08	0.38	NA	0.04	0.10
Cadmium	mg/L	<0.0005 [<0.0005]	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005
Chromium	mg/L	<0.005 [<0.005]	NA	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	<0.005 [<0.005]	NA	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
Copper	mg/L	0.006 [0.006]	NA	<0.005	NA	0.009	0.005	<0.005	NA	<0.005	<0.005
Lead	mg/L	<0.003 [<0.003]	NA	<0.003	NA	<0.003	<0.003	<0.003	NA	<0.003	<0.003
Manganese	mg/L	**0.832 [0.82]** [a]	**0.129** [a]	**0.239** [a]	**0.075** [a]	<0.005	**0.097** [a]	**0.181** [a]	**0.400** [a]	0.034	**0.235** [a]
Mercury	mg/L	<0.0001 [<0.0001]	NA	<0.0001	NA	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001
Nickel	mg/L	0.038 [0.035]	NA	0.029	NA	0.006	0.006	0.007	NA	0.007	0.008
Selenium	mg/L	<0.005 [<0.005]	NA	0.012	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
Silver	mg/L	**0.0005 [<0.0005]** [b]	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005
Vanadium	mg/L	<0.005 [<0.005]	NA	**0.015** [a]	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
Zinc	mg/L	0.011 [0.01]	NA	<0.005	NA	0.067	0.024	0.007	NA	<0.005	0.014
Inorganics-Filtered											
Iron (dissolved)	mg/L	0.05	**1.94** [a]	NA	**2.11** [a]	<0.02	**1.34** [a]	NA	**3.92** [a]	**1.99** [a]	**3.35** [a]
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	NA	NA	NA	NA	NA	0.010	NA	NA	NA	NA
Barium (dissolved)	mg/L	NA	NA	NA	NA	NA	0.251	NA	NA	NA	NA
Boron (Dissolved)	mg/L	NA	NA	NA	NA	NA	0.08	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA
Chromium (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA
Copper (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA
Lead (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.003	NA	NA	NA	NA
Manganese (dissolved)	mg/L	**0.777** [a]	**0.122** [a]	NA	**0.077** [a]	<0.005	**0.076** [a]	NA	**0.364** [a]	0.028	**0.235** [a]
Mercury (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA	NA
Nickel (dissolved)	mg/L	NA	NA	NA	NA	NA	0.005	NA	NA	NA	NA
Selenium (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA
Silver (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA
Zinc (dissolved)	mg/L	NA	NA	NA	NA	NA	0.007	NA	NA	NA	NA
General Chemistry											
Nitrate (as N)	mg/L	3.1	<0.5	NA	<0.5	0.8	<0.5	NA	<0.5	<0.5	<0.5
Sulfate	mg/L	71	83	NA	67	90	76	NA	164	38	121

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-04-06R 05/03/16 MW-04-06R_050316	MW-05(3) 05/10/16 MW-05(3)_05102016	MW-06(3) 05/06/16 MW-06(3)_050616	MW-12-01 05/12/16 MW-12-01_051216	MW-12-02 05/03/16 MW-12-02_050316	MW-12-05 05/17/16 MW-12-05 (05172016)	MW-12-05 (Resample) 07/26/16 MW-12-05 (07262016)	MW-12-06 05/12/16 MW-12-06_051216	MW-12-07 05/13/16 MW-12-07 (05132016)	MW-12-08 05/16/16 MW-12-08 (05162016)
Air Monitoring											
Methane	ug/L	8.1 O	NA	NA	9.8 O	24 O	31 O	NA	25 O	NA	NA
Field											
Conductance, specific	mS/cm	3612	2168	513	2148	1201	3699	3478	1009	829	16600
Dissolved oxygen (DO)	mg/L	1.06	0.72	1.49	0.78	1.26	0.4	0.32	0.72	6.32	0.15
Oxidation reduction potential (ORP), field	millivolts	-180	-34	-7	-118	-74	-225	-106	-142	-51	-272
pH	s.u.	7.39	7.18	7.51	7.04	6.98	6.98	6.81	7.27	7.36	6.81
Temperature, field	Deg C	17.0	11.0	14.3	22.0	19.9	13.3	NA	20.6	10.2	12.6
Turbidity (field)	NTU	43.9	1.3	0.4	198.9	58.0	7.9	9.3	5.8	15.9	11.9
Volatile Organics											
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,4-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,4-Dioxane	µg/L	<3	NA	NA	<3	<3	**92** [a]	**10**	<3	<3	<3
1,1,1-Trichloroethane	µg/L	<1	<1	19	<1	<1	<1	NA	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	1	<1	<1	<1	NA	<1	<1	<1
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,2-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Chloroform (Trichloromethane)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Methyl acetate	µg/L	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Methyl cyclohexane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-04-06R 05/03/16	MW-05(3) 05/10/16	MW-06(3) 05/06/16	MW-12-01 05/12/16	MW-12-02 05/03/16	MW-12-05 05/17/16	MW-12-05 (Resample) 07/26/16	MW-12-06 05/12/16	MW-12-07 05/13/16	MW-12-08 05/16/16
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Isopropyl benzene	µg/L	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1
Total Xylenes	µg/L	<3	<3	<3	<3	<3	<3	NA	<3	<3	<3
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,4,6-Trichlorophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,4-Dichlorophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,4,5-Trichlorophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,4-Dimethylphenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,4-Dinitrophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,4-Dinitrotoluene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2,6-Dinitrotoluene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2-Chloronaphthalene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2-Chlorophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2-Methylnaphthalene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2-Methylphenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2-Nitroaniline	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
2-Nitrophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
3&4-Methylphenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
3,3'-Dichlorobenzidine	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Naphthalene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
3-Nitroaniline	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4,6-Dinitro-2-methylphenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4-Bromophenyl phenyl ether	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4-Chloro-3-methylphenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4-Chloroaniline	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4-Chlorophenyl phenyl ether	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4-Nitroaniline	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
4-Nitrophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Anthracene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Acenaphthene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Acenaphthylene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Acetophenone	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Atrazine	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Benzaldehyde	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Benzo(a)anthracene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Benzo(a)pyrene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Benzo(b)fluoranthene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Benzo(k)fluoranthene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Biphenyl (1,1-Biphenyl)	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
bis(2-Chloroethoxy)methane	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
bis(2-Chloroethyl)ether	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	NA	NA	4 B	NA	NA	NA	4 B	**8 B** [a]	4 B
Butyl benzylphthalate (BBP)	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Caprolactam	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Carbazole	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Chrysene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Dibenz(a,h)anthracene	µg/L	<2	NA	NA	<2	NA	NA	NA	<2	<2	<2
Dibenzofuran	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Diethyl phthalate	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Dimethyl phthalate	µg/L	<2	NA	NA	<2	NA	NA	NA	<2	<2	<2
Di-n-butylphthalate (DBP)	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Di-n-octyl phthalate (DnOP)	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Fluoranthene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Fluorene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Hexachlorobenzene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Hexachlorocyclopentadiene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Hexachloroethane	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Indeno(1,2,3-cd)pyrene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-04-06R 05/03/16	MW-05(3) 05/10/16	MW-06(3) 05/06/16	MW-12-01 05/12/16	MW-12-02 05/03/16	MW-12-05 05/17/16	MW-12-05 (Resample) 07/26/16	MW-12-06 05/12/16	MW-12-07 05/13/16	MW-12-08 05/16/16
Isophorone	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Nitrobenzene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
N-Nitrosodi-n-propylamine	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
N-Nitrosodiphenylamine	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Pentachlorophenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Phenanthrene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Phenol	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Pyrene	µg/L	<1	NA	NA	<1	NA	NA	NA	<1	<1	<1
Inorganics											
Iron	mg/L	**19.3** [a]	NA	NA	**16.1** [a]	**5.94** [a]	**12.3** [a]	NA	**9.48** [a]	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005	<0.005
Arsenic	mg/L	**0.013** [ab]	<0.002	NA	**0.020** [ab]	NA	NA	NA	0.008	<0.002	**0.019** [ab]
Barium	mg/L	0.213	NA	NA	0.093	NA	NA	NA	0.081	0.038	0.262
Boron	mg/L	0.04	NA	NA	0.11	NA	NA	NA	0.19	0.046	<0.04
Cadmium	mg/L	<0.0005	NA	NA	<0.0005	NA	NA	NA	<0.0005	<0.0005	<0.0005
Chromium	mg/L	<0.005	<0.005	NA	<0.005	NA	NA	NA	<0.005	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005	<0.005
Copper	mg/L	<0.005	<0.005	NA	<0.005	NA	NA	NA	<0.005	<0.005	<0.005
Lead	mg/L	<0.003	<0.003	NA	<0.003	NA	NA	NA	<0.003	<0.003	<0.003
Manganese	mg/L	**0.247** [a]	NA	NA	**0.093** [a]	**0.157** [a]	**0.111** [a]	NA	**0.059** [a]	0.012	**0.658** [a]
Mercury	mg/L	<0.0001	NA	NA	<0.0001	NA	NA	NA	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.006	0.006	NA	0.012	NA	NA	NA	<0.005	0.008	0.026
Selenium	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005	<0.005
Silver	mg/L	<0.0005	NA	NA	<0.0005	NA	NA	NA	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	<0.005	<0.005	NA	<0.005	NA	NA	NA	<0.005	<0.005	**0.020** [a]
Zinc	mg/L	<0.005	NA	NA	0.008	NA	NA	NA	<0.005	<0.005	<0.005
Inorganics-Filtered											
Iron (dissolved)	mg/L	**15.5** [a]	NA	NA	**3.76** [a]	**4.28** [a]	**11.5** [a]	NA	**6.95** [a]	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	<0.005
Arsenic (dissolved)	mg/L	**0.017** [ab]	NA	NA	**0.013** [ab]	NA	NA	NA	NA	<0.002	**0.019** [ab]
Barium (dissolved)	mg/L	0.288	NA	NA	0.086	NA	NA	NA	NA	0.034	0.255
Boron (Dissolved)	mg/L	0.05	NA	NA	0.11	NA	NA	NA	NA	0.046	<0.04
Cadmium (dissolved)	mg/L	<0.0005	NA	NA	<0.0005	NA	NA	NA	NA	<0.0005	<0.0005
Chromium (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	<0.005
Cobalt (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	<0.005
Copper (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	<0.005
Lead (dissolved)	mg/L	<0.003	NA	NA	<0.003	NA	NA	NA	NA	<0.003	<0.003
Manganese (dissolved)	mg/L	**0.208** [a]	NA	NA	**0.070** [a]	**0.149** [a]	**0.108** [a]	NA	**0.055** [a]	<0.005	**0.653** [a]
Mercury (dissolved)	mg/L	<0.0002	NA	NA	<0.0001	NA	NA	NA	NA	<0.0001	<0.0001
Nickel (dissolved)	mg/L	0.008	NA	NA	0.010	NA	NA	NA	NA	<0.005	0.026
Selenium (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	<0.005
Silver (dissolved)	mg/L	<0.0005	NA	NA	<0.0005	NA	NA	NA	NA	<0.0005	<0.0005
Vanadium (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	**0.021** [a]
Zinc (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	NA	NA	NA	<0.005	0.006
General Chemistry											
Nitrate (as N)	mg/L	<0.5	NA	NA	<0.5	<0.5	<0.5	NA	<0.5	NA	NA
Sulfate	mg/L	65	NA	NA	116	153	**1,870** [a]	NA	30	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-12-09 05/04/16 MW-12-09_050416	MW-12-10 05/03/16 MW-12-10_050316	MW-12-11 05/12/16 MW-12-11 (05122016)	MW-12-12 05/10/16 MW-12-12_051016	MW-12-13 05/12/16 MW-12-13_051216	MW-12-14 05/10/16 MW-12-14_051016	MW-12-15 05/11/16 MW-12-15_051116	MW-12-16 05/11/16 MW-12-16_051116	MW-12-17 05/09/16 MW-12-17_050916	MW-12-18 05/13/16 MW-12-18 (05132016)	MW-12-20 05/05/16 MW-12-20 (050516)
Air Monitoring												
Methane	ug/L	NA	12 O	9.1 O	NA	0.80 O	<0.50 O	310 O	72 O	15 O	NA	NA
Field												
Conductance, specific	mS/cm	4079	2243	6172	700	1435	1290	1364	2279	609	2931	1568
Dissolved oxygen (DO)	mg/L	1.44	1.4	-0.01000	0.47	3.31	3.16	0.67	6.54	2.09	0.11	1.5
Oxidation reduction potential (ORP), field	millivolts	-9	55	-369	129	1	166	-3	40	-184	-299	-66
pH	s.u.	6.7	6.81	6.71	7.63	7.32	6.9	6.84	7.09	7.7	7.07	6.83
Temperature, field	Deg C	14.0	19.5	13.2	9.6	19.3	9.2	19.5	14.1	14.0	13.3	19.2
Turbidity (field)	NTU	37.8	9.7	13.4	68.9	6.8	32.8	7.2	29.2	5.6	23.3	119.1
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,2-Dichlorobenzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,4-Dichlorobenzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,4-Dioxane	µg/L	<3	NA	<3	NA	<3	<3	NA	<3	NA	<3	<3
1,1,1-Trichloroethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
2-Hexanone	µg/L	<10	NA	<10	<10	<10	<10	NA	<10	NA	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Acetone	µg/L	<10	NA	<10	<10	<10	<10	NA	<10	NA	<10	<10
1,1,2-Trichloroethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Bromodichloromethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,1-Dichloroethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	2	<1
Bromoform	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,1-Dichloroethene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,2-Dichloroethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Carbon disulfide	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Carbon tetrachloride	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Chlorobenzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Chloroform (Trichloromethane)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Trichloroethene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Tetrachloroethene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
cis-1,3-Dichloropropene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Vinyl chloride	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Chloroethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Benzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Methyl acetate	µg/L	<10	NA	<10	<10	<10	<10	NA	<10	NA	<10	<10
Ethylbenzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Methylene chloride	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Styrene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Toluene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	NA	<10	<10	<10	<10	NA	<10	NA	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	NA	<10	<10	<10	<10	NA	<10	NA	<10	<10
1,2,4-Trichlorobenzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
1,3-Dichlorobenzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Cyclohexane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Methyl cyclohexane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-12-09 05/04/16	MW-12-10 05/03/16	MW-12-11 05/12/16	MW-12-12 05/10/16	MW-12-13 05/12/16	MW-12-14 05/10/16	MW-12-15 05/11/16	MW-12-16 05/11/16	MW-12-17 05/09/16	MW-12-18 05/13/16	MW-12-20 05/05/16
Dibromochloromethane	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Isopropyl benzene	µg/L	<1	NA	<1	<1	<1	<1	NA	<1	NA	<1	<1
Total Xylenes	µg/L	<3	NA	<3	<3	<3	<3	NA	<3	NA	<3	<3
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,4,6-Trichlorophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,4-Dichlorophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,4,5-Trichlorophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,4-Dimethylphenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,4-Dinitrophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,4-Dinitrotoluene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2,6-Dinitrotoluene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2-Chloronaphthalene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2-Chlorophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2-Methylnaphthalene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2-Methylphenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2-Nitroaniline	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
2-Nitrophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
3&4-Methylphenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
3,3'-Dichlorobenzidine	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Naphthalene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
3-Nitroaniline	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4,6-Dinitro-2-methylphenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4-Bromophenyl phenyl ether	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4-Chloro-3-methylphenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4-Chloroaniline	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4-Chlorophenyl phenyl ether	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4-Nitroaniline	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
4-Nitrophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Anthracene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Acenaphthene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Acenaphthylene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Acetophenone	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Atrazine	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Benzaldehyde	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Benzo(a)anthracene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Benzo(a)pyrene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Benzo(b)fluoranthene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Benzo(k)fluoranthene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Biphenyl (1,1-Biphenyl)	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
bis(2-Chloroethoxy)methane	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
bis(2-Chloroethyl)ether	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	<1	NA	5 B	NA	3 B	<2	NA	<2	NA	6 B	1
Butyl benzylphthalate (BBP)	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Caprolactam	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Carbazole	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Chrysene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Dibenz(a,h)anthracene	µg/L	<2	NA	<2	NA	<2	<2	NA	<2	NA	<2	<2
Dibenzofuran	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Diethyl phthalate	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Dimethyl phthalate	µg/L	<1	NA	<2	NA	<2	<2	NA	<2	NA	<2	<1
Di-n-butylphthalate (DBP)	µg/L	<1	NA	<1	NA	<1	2 B	NA	3 B	NA	<1	<1
Di-n-octyl phthalate (DnOP)	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Fluoranthene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Fluorene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Hexachlorobenzene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Hexachlorobutadiene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Hexachlorocyclopentadiene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Hexachloroethane	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Indeno(1,2,3-cd)pyrene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-12-09 05/04/16	MW-12-10 05/03/16	MW-12-11 05/12/16	MW-12-12 05/10/16	MW-12-13 05/12/16	MW-12-14 05/10/16	MW-12-15 05/11/16	MW-12-16 05/11/16	MW-12-17 05/09/16	MW-12-18 05/13/16	MW-12-20 05/05/16
Isophorone	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Nitrobenzene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
N-Nitrosodi-n-propylamine	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
N-Nitrosodiphenylamine	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Pentachlorophenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Phenanthrene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Phenol	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Pyrene	µg/L	<1	NA	<1	NA	<1	<1	NA	<1	NA	<1	<1
Inorganics												
Iron	mg/L	NA	0.13	**4.93** [a]	NA	**1.62** [a]	**1.67** [a]	**6.44** [a]	**5.48** [a]	0.18	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	<0.005	NA	NA	NA	<0.005	<0.005	NA	<0.005	NA	<0.005	<0.005
Arsenic	mg/L	0.005	NA	NA	<0.002	0.002	0.002	NA	**0.019** [ab]	NA	0.004	0.003
Barium	mg/L	0.045	NA	NA	NA	0.119	0.096	NA	0.163	NA	0.221	0.118
Boron	mg/L	0.20	NA	NA	NA	0.04	0.09	NA	0.06	NA	0.048	0.04
Cadmium	mg/L	<0.0005	NA	NA	NA	<0.0005	<0.0005	NA	<0.0005	NA	<0.0005	<0.0005
Chromium	mg/L	<0.005	NA	NA	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	0.025
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	<0.005	NA	NA	NA	<0.005	<0.005	NA	<0.005	NA	<0.005	<0.005
Copper	mg/L	0.008	NA	NA	0.005	<0.005	0.005	NA	<0.005	NA	<0.005	**0.022** [b]
Lead	mg/L	0.003	NA	NA	<0.003	<0.003	<0.003	NA	<0.003	NA	<0.003	0.004
Manganese	mg/L	**0.802** [a]	**0.606** [a]	**0.680** [a]	NA	**0.100** [a]	**0.370** [a]	**0.327** [a]	**0.386** [a]	**0.061** [a]	**0.057** [a]	**0.319** [a]
Mercury	mg/L	<0.0001	NA	NA	NA	<0.0001	<0.0001	NA	<0.0001	NA	<0.0001	<0.0001
Nickel	mg/L	0.020	NA	NA	0.007	0.017	0.009	NA	0.010	NA	0.007	0.029
Selenium	mg/L	<0.005	NA	NA	NA	<0.005	<0.005	NA	<0.005	NA	<0.005	<0.005
Silver	mg/L	<0.0005	NA	NA	NA	<0.0005	<0.0005	NA	<0.0005	NA	<0.0005	<0.0005
Vanadium	mg/L	<0.005	NA	NA	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	<0.005
Zinc	mg/L	0.015	NA	NA	NA	<0.005	0.008	NA	0.007	NA	0.005	0.032
Inorganics-Filtered												
Iron (dissolved)	mg/L	NA	0.05	**4.41** [a]	NA	**0.74** [a]	**0.84** [a]	**6.42** [a]	**3.92** [a]	<0.02	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	<0.005	NA	NA	NA	NA	<0.005	NA	<0.005	NA	<0.005	<0.005
Arsenic (dissolved)	mg/L	0.004	NA	NA	<0.002	NA	<0.002	NA	**0.013** [ab]	NA	0.003	<0.002
Barium (dissolved)	mg/L	0.045	NA	NA	NA	NA	0.096	NA	0.159	NA	0.220	0.091
Boron (Dissolved)	mg/L	0.20	NA	NA	NA	NA	0.09	NA	0.06	NA	0.045	0.04
Cadmium (dissolved)	mg/L	<0.0005	NA	NA	NA	NA	<0.0005	NA	<0.0005	NA	<0.0005	<0.0005
Chromium (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	<0.005
Cobalt (dissolved)	mg/L	<0.005	NA	NA	NA	NA	<0.005	NA	<0.005	NA	<0.005	<0.005
Copper (dissolved)	mg/L	0.007	NA	NA	0.010	NA	<0.005	NA	0.007	NA	<0.005	0.005
Lead (dissolved)	mg/L	<0.003	NA	NA	<0.003	NA	<0.003	NA	<0.003	NA	<0.003	<0.003
Manganese (dissolved)	mg/L	**0.785** [a]	**0.600** [a]	**0.674** [a]	NA	**0.090** [a]	**0.351** [a]	**0.324** [a]	**0.378** [a]	0.018	**0.060** [a]	**0.173** [a]
Mercury (dissolved)	mg/L	<0.0002	NA	NA	NA	NA	<0.0001	NA	<0.0001	NA	<0.0001	<0.0001
Nickel (dissolved)	mg/L	0.019	NA	NA	<0.005	NA	0.009	NA	0.008	NA	0.008	0.015
Selenium (dissolved)	mg/L	<0.005	NA	NA	NA	NA	<0.005	NA	<0.005	NA	<0.005	<0.005
Silver (dissolved)	mg/L	<0.0005	NA	NA	NA	NA	<0.0005	NA	<0.0005	NA	<0.0005	<0.0005
Vanadium (dissolved)	mg/L	<0.005	NA	NA	<0.005	NA	<0.005	NA	<0.005	NA	<0.005	<0.005
Zinc (dissolved)	mg/L	0.013	NA	NA	NA	NA	0.006	NA	0.007	NA	<0.005	0.008
General Chemistry												
Nitrate (as N)	mg/L	NA	<0.5	<0.5	NA	<0.5	1.3	<0.5	<0.5	<0.5	NA	NA
Sulfate	mg/L	NA	34	**251** [a]	NA	172	158	41	193	56	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-12-21 05/09/16 MW-13-21 (050916)	MW-13-22 05/09/16 MW-13-22 (050916)	MW-13-23 05/05/16 MW-13-23_050516	MW-13-24 05/09/16 MW-13-24 (050916)	MW-13-25 05/04/16 MW-13-25_050416	MW-13-26 05/05/16 MW-13-26_050516	MW-13-28 05/06/16 MW-13-28_050616	MW-13-29 05/05/16 MW-13-29_050516	MW-13-30 05/05/16 MW-13-30_050516	MW-13-31 05/09/16 MW-13-31_050916	MW-13-32 05/09/16 MW-13-32_050916
Air Monitoring												
Methane	ug/L	2.0 O	5.9 O [5.2 O]	3.1 O	3.2 O	7.8 O	NA	NA	14 O	NA	2.4 O	NA
Field												
Conductance, specific	mS/cm	NA	2069	2099	1980	2088	1622	755	2678	1631	996	1384
Dissolved oxygen (DO)	mg/L	NA	0.18	1.02	0.15	0.39	0.49	1.73	7.57	1.11	0.23	1.08
Oxidation reduction potential (ORP), field	millivolts	NA	-129	-43	-121	-89	-115	-46	-4	-92	-57	17
pH	s.u.	NA	6.79	6.68	6.72	6.68	6.79	11.32	6.64	6.73	6.79	6.95
Temperature, field	Deg C	NA	15.5	16.2	14.6	11.6	17.2	13.8	14.0	18.1	14.4	12.9
Turbidity (field)	NTU	NA	14.9	398.8	2.9	16.7	5.2	0.5	188.6	76.1	8.6	2.9
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	NA
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	NA
1,2-Dichlorobenzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,4-Dichlorobenzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,4-Dioxane	µg/L	**360 Y** [a]	**170 [170]** [a]	5	<3	**25** [a]	<3	<3	**18** [a]	<3	<3	NA
1,1,1-Trichloroethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
2-Hexanone	µg/L	<10	<10 [<10]	<10	<10	NA	<10	<10	<10	<10	<10	NA
1,1,2,2-Tetrachloroethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Acetone	µg/L	<10	<10 [<10]	<10	<10	NA	<10	15	<10	<10	<10	NA
1,1,2-Trichloroethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Bromodichloromethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,1-Dichloroethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Bromoform	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,1-Dichloroethene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Bromomethane (Methyl bromide)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,2-Dichloroethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Carbon disulfide	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Carbon tetrachloride	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
cis-1,2-Dichloroethene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Chlorobenzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
trans-1,2-Dichloroethene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Chloroform (Trichloromethane)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Trichloroethene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Chloromethane (Methyl chloride)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Tetrachloroethene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
cis-1,3-Dichloropropene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Vinyl chloride	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Chloroethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Benzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Methyl acetate	µg/L	<10	<10 [<10]	<10	<10	NA	<10	<10	<10	<10	<10	NA
Ethylbenzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Methylene chloride	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Styrene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Toluene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
trans-1,3-Dichloropropene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Methyl tert butyl ether (MTBE)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10 [<10]	<10	<10	NA	<10	<10	<10	<10	<10	NA
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10 [<10]	<10	<10	NA	<10	<10	<10	<10	<10	NA
1,2,4-Trichlorobenzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
1,3-Dichlorobenzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Cyclohexane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Methyl cyclohexane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-12-21 05/09/16	MW-13-22 05/09/16	MW-13-23 05/05/16	MW-13-24 05/09/16	MW-13-25 05/04/16	MW-13-26 05/05/16	MW-13-28 05/06/16	MW-13-29 05/05/16	MW-13-30 05/05/16	MW-13-31 05/09/16	MW-13-32 05/09/16
Dibromochloromethane	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Isopropyl benzene	µg/L	<1	<1 [<1]	<1	<1	NA	<1	<1	<1	<1	<1	NA
Total Xylenes	µg/L	<3	<3 [<3]	<3	<3	NA	<3	<3	<3	<3	<3	NA
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,4,6-Trichlorophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,4-Dichlorophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,4,5-Trichlorophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,4-Dimethylphenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,4-Dinitrophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,4-Dinitrotoluene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2,6-Dinitrotoluene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2-Chloronaphthalene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2-Chlorophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2-Methylnaphthalene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2-Methylphenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2-Nitroaniline	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
2-Nitrophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
3&4-Methylphenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
3,3'-Dichlorobenzidine	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Naphthalene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
3-Nitroaniline	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4,6-Dinitro-2-methylphenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4-Bromophenyl phenyl ether	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4-Chloro-3-methylphenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4-Chloroaniline	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4-Chlorophenyl phenyl ether	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4-Nitroaniline	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
4-Nitrophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Anthracene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Acenaphthene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Acenaphthylene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Acetophenone	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Atrazine	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Benzaldehyde	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Benzo(a)anthracene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Benzo(a)pyrene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Benzo(b)fluoranthene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Benzo(g,h,i)perylene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Benzo(k)fluoranthene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Biphenyl (1,1-Biphenyl)	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
bis(2-Chloroethoxy)methane	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
bis(2-Chloroethyl)ether	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	<2	NA	NA	NA	NA	3	<1	NA	NA	<2	NA
Butyl benzylphthalate (BBP)	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Caprolactam	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Carbazole	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Chrysene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Dibenz(a,h)anthracene	µg/L	<2	NA	NA	NA	NA	<2	<2	NA	NA	<2	NA
Dibenzofuran	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Diethyl phthalate	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Dimethyl phthalate	µg/L	<2	NA	NA	NA	NA	<1	<1	NA	NA	<2	NA
Di-n-butylphthalate (DBP)	µg/L	2 B	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Di-n-octyl phthalate (DnOP)	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Fluoranthene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Fluorene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Hexachlorobenzene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Hexachlorobutadiene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Hexachlorocyclopentadiene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Hexachloroethane	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Indeno(1,2,3-cd)pyrene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-12-21 05/09/16	MW-13-22 05/09/16	MW-13-23 05/05/16	MW-13-24 05/09/16	MW-13-25 05/04/16	MW-13-26 05/05/16	MW-13-28 05/06/16	MW-13-29 05/05/16	MW-13-30 05/05/16	MW-13-31 05/09/16	MW-13-32 05/09/16
Isophorone	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Nitrobenzene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
N-Nitrosodi-n-propylamine	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
N-Nitrosodiphenylamine	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Pentachlorophenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Phenanthrene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Phenol	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Pyrene	µg/L	<1	NA	NA	NA	NA	<1	<1	NA	NA	<1	NA
Inorganics												
Iron	mg/L	NA	**11.8 [11.5]** [a]	**7.35** [a]	**8.64** [a]	**9.56** [a]	NA	NA	**31.7** [a]	NA	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	<0.005	NA	NA	NA	NA	<0.005	<0.005	NA	NA	<0.005	NA
Arsenic	mg/L	0.005	NA	NA	NA	NA	0.005	<0.002	NA	NA	<0.002	<0.002 [<0.002]
Barium	mg/L	0.053	NA	NA	NA	NA	0.195	0.009	NA	NA	0.138	NA
Boron	mg/L	**1.04** [a]	NA	NA	NA	NA	0.10	**0.66** [a]	NA	NA	0.19	NA
Cadmium	mg/L	<0.0005	NA	NA	NA	NA	<0.0005	<0.0005	NA	NA	0.0011	NA
Chromium	mg/L	0.015	NA	NA	NA	NA	<0.005	<0.005	NA	NA	0.019	0.006 [0.008]
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.009	NA	NA	NA	NA	<0.005	<0.005	NA	NA	<0.005	NA
Copper	mg/L	**0.027** [b]	NA	NA	NA	NA	<0.005	<0.005	NA	NA	0.008	0.007 [0.008]
Lead	mg/L	0.004	NA	NA	NA	NA	<0.003	<0.003	NA	NA	**0.005** [a]	<0.003 [<0.003]
Manganese	mg/L	**0.297** [a]	**0.077 [0.075]** [a]	**0.974** [a]	**0.225** [a]	**0.704** [a]	**0.140** [a]	<0.005	**0.847** [a]	NA	0.023	NA
Mercury	mg/L	<0.0001	NA	NA	NA	NA	<0.0002	<0.0001	NA	NA	<0.0001	NA
Nickel	mg/L	0.034	NA	NA	NA	NA	0.007	0.007	NA	NA	0.047	**1.02 [1.19]** [ab]
Selenium	mg/L	<0.005	NA	NA	NA	NA	<0.005	<0.005	NA	NA	<0.005	NA
Silver	mg/L	**0.0081** [b]	NA	NA	NA	NA	<0.0005	<0.0005	NA	NA	<0.0005	NA
Vanadium	mg/L	<0.005	NA	NA	NA	NA	<0.005	<0.005	NA	NA	<0.005	<0.005 [<0.005]
Zinc	mg/L	0.033	NA	NA	NA	NA	0.008	<0.005	NA	NA	**0.462** [b]	NA
Inorganics-Filtered												
Iron (dissolved)	mg/L	NA	**11.5 [11.5]** [a]	**3.26** [a]	**8.82** [a]	**9.10** [a]	NA	NA	**6.68** [a]	NA	0.03	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	**1.04** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	<0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	**0.179** [a]	**0.076 [0.077]** [a]	**0.902** [a]	**0.228** [a]	**0.700** [a]	NA	NA	**0.826** [a]	NA	0.024	NA
Mercury (dissolved)	mg/L	<0.0001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.028	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	<0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	0.008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry												
Nitrate (as N)	mg/L	<0.5	<0.5 [<0.5]	<0.5	<0.5	<0.5	NA	NA	<0.5	NA	0.5	NA
Sulfate	mg/L	**612** [a]	**732 [737]** [a]	**981** [a]	**566** [a]	**763** [a]	NA	NA	**1,310** [a]	NA	49	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-13-33 05/09/16 MW-13-33_050916	MW-13-34 05/03/16 MW-13-34_050316	MW-13-35 05/12/16 MW-13-35 (05122016)	MW-13-36R 05/09/16 MW-13-36R_050916	MW-13-38 05/12/16 MW-13-38_051216	MW-13-40 05/12/16 MW-13-40_051216	MW-13-41 05/12/16 MW-13-41_051216	MW-13-43 05/05/16 MW-13-43_050516	MW-13-44 05/05/16 MW-13-44_050516	MW-13-45 05/10/16 MW-13-45_051016	MW-13-46 05/04/16 MW-13-46_050416
Air Monitoring												
Methane	ug/L	<0.50 O	28 O	NA	NA	NA	NA	NA	58 O	NA	NA	NA
Field												
Conductance, specific	mS/cm	758	1649	2	1432	2005	7673	6049	2	1323	1329	2652
Dissolved oxygen (DO)	mg/L	1.86	0.26	8.85	0.57	0.52	5.73	0.23	16.29	1.01	1.09	2.99
Oxidation reduction potential (ORP), field	millivolts	26	-169	-93	-61	-149	-65	-116	69	-305	-212	-62
pH	s.u.	6.97	7.07	7.48	11.84	7.84	6.87	7.06	7.11	7.99	7.31	6.74
Temperature, field	Deg C	15.1	17.3	19.4	14.6	18.3	17.2	18.2	14.0	18.1	12.6	12.0
Turbidity (field)	NTU	2.2	27.2	3.9	6.1	12.8	32.4	26.4	1.8	33.5	9.0	36.1
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dichlorobenzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,4-Dichlorobenzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,4-Dioxane	µg/L	NA	**64 [64] [a]**	NA	NA	<3	<3	**12**	**310 Y [250 Y] [a]**	<3	**49 [a]**	<3
1,1,1-Trichloroethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
2-Hexanone	µg/L	NA	<10 [<10]	NA	NA	<10	<10	<10	<10 [<10]	<10	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Acetone	µg/L	NA	<10 [<10]	NA	NA	54	<10	<10	<10 [<10]	<10	<10	<10
1,1,2-Trichloroethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Bromodichloromethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,1-Dichloroethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Bromoform	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,1-Dichloroethene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Bromomethane (Methyl bromide)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dichloroethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Carbon disulfide	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Carbon tetrachloride	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Chlorobenzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Chloroform (Trichloromethane)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Trichloroethene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Chloromethane (Methyl chloride)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Tetrachloroethene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Vinyl chloride	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Chloroethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Benzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Methyl acetate	µg/L	NA	<10 [<10]	NA	NA	<10	<10	<10	<10 [<10]	<10	<10	<10
Ethylbenzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Methylene chloride	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Styrene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Toluene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	NA	<10 [<10]	NA	NA	<10	<10	<10	<10 [<10]	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	NA	<10 [<10]	NA	NA	<10	<10	<10	<10 [<10]	<10	<10	<10
1,2,4-Trichlorobenzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
1,3-Dichlorobenzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Cyclohexane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Methyl cyclohexane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-13-33 05/09/16	MW-13-34 05/03/16	MW-13-35 05/12/16	MW-13-36R 05/09/16	MW-13-38 05/12/16	MW-13-40 05/12/16	MW-13-41 05/12/16	MW-13-43 05/05/16	MW-13-44 05/05/16	MW-13-45 05/10/16	MW-13-46 05/04/16
Dibromochloromethane	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Isopropyl benzene	µg/L	NA	<1 [<1]	NA	NA	<1	<1	<1	<1 [<1]	<1	<1	<1
Total Xylenes	µg/L	NA	<3 [<3]	NA	NA	<3	<3	<3	<3 [<3]	<3	<3	<3
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,4,6-Trichlorophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,4-Dichlorophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,4,5-Trichlorophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,4-Dimethylphenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,4-Dinitrophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,4-Dinitrotoluene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2,6-Dinitrotoluene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2-Chloronaphthalene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2-Chlorophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2-Methylnaphthalene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2-Methylphenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2-Nitroaniline	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
2-Nitrophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
3&4-Methylphenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
3,3'-Dichlorobenzidine	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Naphthalene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
3-Nitroaniline	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4-Bromophenyl phenyl ether	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4-Chloro-3-methylphenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4-Chloroaniline	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4-Chlorophenyl phenyl ether	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4-Nitroaniline	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
4-Nitrophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Anthracene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Acenaphthene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Acenaphthylene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Acetophenone	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Atrazine	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Benzaldehyde	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Benzo(a)anthracene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Benzo(a)pyrene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Benzo(b)fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Benzo(g,h,i)perylene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Benzo(k)fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
bis(2-Chloroethoxy)methane	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
bis(2-Chloroethyl)ether	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	NA	NA	NA	NA	**13 B** [a]	NA	NA	NA	<1
Butyl benzylphthalate (BBP)	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Caprolactam	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Carbazole	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Chrysene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Dibenz(a,h)anthracene	µg/L	NA	NA	NA	NA	NA	NA	<2	NA	NA	NA	<2
Dibenzofuran	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Diethyl phthalate	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Dimethyl phthalate	µg/L	NA	NA	NA	NA	NA	NA	<2	NA	NA	NA	<1
Di-n-butylphthalate (DBP)	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Fluorene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Hexachlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Hexachlorobutadiene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Hexachlorocyclopentadiene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Hexachloroethane	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-13-33 05/09/16	MW-13-34 05/03/16	MW-13-35 05/12/16	MW-13-36R 05/09/16	MW-13-38 05/12/16	MW-13-40 05/12/16	MW-13-41 05/12/16	MW-13-43 05/05/16	MW-13-44 05/05/16	MW-13-45 05/10/16	MW-13-46 05/04/16
Isophorone	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Nitrobenzene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
N-Nitrosodi-n-propylamine	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
N-Nitrosodiphenylamine	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Pentachlorophenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Phenanthrene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Phenol	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Pyrene	µg/L	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	<1
Inorganics												
Iron	mg/L	**0.60** [a]	**6.97** [a]	NA	NA	NA	NA	NA	**2.99** [a]	NA	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005
Arsenic	mg/L	<0.002	NA	<0.002	<0.002	NA	**0.026** [ab]	**0.020** [ab]	0.003 [0.003]	<0.002	NA	0.003
Barium	mg/L	NA	NA	NA	NA	NA	NA	0.065	NA	NA	NA	0.108
Boron	mg/L	NA	NA	NA	NA	NA	NA	0.27	NA	NA	NA	0.06
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	<0.0005
Chromium	mg/L	<0.005	NA	<0.005	<0.005	NA	<0.005	<0.005	NA	<0.005	NA	<0.005
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	0.007	NA	NA	NA	<0.005
Copper	mg/L	<0.005	NA	<0.005	0.008	NA	<0.005	0.007	NA	NA	NA	0.006
Lead	mg/L	<0.003	NA	<0.003	<0.003	NA	<0.003	<0.003	<0.003 [<0.003]	<0.003	NA	0.003
Manganese	mg/L	<0.005	**0.093** [a]	NA	NA	NA	NA	**0.091** [a]	**0.749** [a]	NA	NA	**0.572** [a]
Mercury	mg/L	NA	NA	NA	NA	NA	NA	<0.0001	NA	NA	NA	<0.0001
Nickel	mg/L	<0.005	NA	<0.005	<0.005	NA	0.025	0.039	NA	NA	NA	0.010
Selenium	mg/L	NA	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005
Silver	mg/L	NA	NA	NA	NA	NA	NA	**0.0005** [b]	NA	NA	NA	<0.0005
Vanadium	mg/L	<0.005	NA	<0.005	**0.009** [a]	NA	<0.005	<0.005	NA	NA	NA	<0.005
Zinc	mg/L	NA	NA	NA	NA	NA	NA	0.011	NA	NA	NA	0.012
Inorganics-Filtered												
Iron (dissolved)	mg/L	<0.02	**5.35** [a]	NA	NA	NA	NA	NA	**1.55** [a]	NA	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005
Arsenic (dissolved)	mg/L	NA	NA	NA	NA	NA	**0.027** [ab]	**0.016** [ab]	NA	<0.002	NA	0.002
Barium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	0.063	NA	NA	NA	0.111
Boron (Dissolved)	mg/L	NA	NA	NA	NA	NA	NA	0.28	NA	NA	NA	0.05
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	<0.0005
Chromium (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	<0.005	NA	<0.005	NA	<0.005
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	0.005	NA	NA	NA	<0.005
Copper (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	<0.005	NA	NA	NA	<0.005
Lead (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.003	<0.003	NA	<0.003	NA	<0.003
Manganese (dissolved)	mg/L	<0.005	**0.084** [a]	NA	NA	NA	NA	**0.060** [a]	**0.767** [a]	NA	NA	**0.589** [a]
Mercury (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	<0.0001	NA	NA	NA	<0.0002
Nickel (dissolved)	mg/L	NA	NA	NA	NA	NA	0.024	0.035	NA	NA	NA	0.009
Selenium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005
Silver (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	<0.0005
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	NA	<0.005	<0.005	NA	NA	NA	<0.005
Zinc (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	0.006	NA	NA	NA	0.008
General Chemistry												
Nitrate (as N)	mg/L	<0.5	<0.5	NA	NA	NA	NA	NA	<0.5	NA	NA	NA
Sulfate	mg/L	26	156	NA	NA	NA	NA	NA	**371** [a]	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-13-47 05/04/16 MW-13-47_050416	MW-13-48 05/04/16 MW-13-48_050416	MW-13-49 05/03/16 MW-13-49_050316	MW-13-50 05/11/16 MW-13-50_051116	MW-13-51 05/16/16 MW-13-51_051616	MW-13-52 05/11/16 MW-13-52_051116	MW-13-53 05/16/16 MW-13-53_051616	MW-14-54 05/17/16 MW-14-54_051716	MW-14-55 05/09/16 MW-14-55_050916	MW-14-56 05/04/16 MW-14-56_050416	MW-14-57 05/10/16 MW-14-57_051016
Air Monitoring												
Methane	ug/L	NA	NA	NA	NA	NA	6.1 O	NA	NA	NA	NA	NA
Field												
Conductance, specific	mS/cm	2103	2211	1783	1185	1693	2026	1549	1221	730	5916	940
Dissolved oxygen (DO)	mg/L	0.4	0.29	0.84	0.85	0.8	5.35	1.96	8.34	6.54	15.3	0.64
Oxidation reduction potential (ORP), field	millivolts	-149	-155	-139	-84	-24	20	35	0	-52	245	-164
pH	s.u.	7.14	6.77	6.98	7.04	6.86	7.02	6.86	8.21	7.25	6.73	7.31
Temperature, field	Deg C	12.4	12.1	19.7	18.1	18.6	16.1	15.1	60.3	17.0	13.4	10.9
Turbidity (field)	NTU	473.4	58.8	9.1	3.1	13.5	74.0	17.1	7.8	11.6	6.0	6.8
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,4-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,4-Dioxane	µg/L	<3	**280 Y** [a]	<3	<3	<3	<3	<3	NA	NA	6	<3 [<3]
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	14 [14]
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10	<100 Y	<10	<10	<10 [<10]
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Acetone	µg/L	<10	<10	<10	<10	<10	<10	<10	<100 Y	<10	<10	<10 [<10]
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	1 [<1]
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Bromomethane (Methyl bromide)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,2-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Chlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Chloroform (Trichloromethane)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Chloromethane (Methyl chloride)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
cis-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Benzene	µg/L	<1	<1	<1	<1	<1	<1	<1	**550 Y** [abh]	<1	<1	<1 [<1]
Methyl acetate	µg/L	<10	<10	<10	<10	<10	<10	<10	<100 Y	<10	<10	<10 [<10]
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	**860 Y** [ab]	<1	<1	<1 [<1]
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1	90 Y	<1	<1	<1 [<1]
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Methyl tert butyl ether (MTBE)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10	<10	<10	<10	<10	<10	<100 Y	<10	<10	<10 [<10]
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10	<10	<10	<10	<10	<10	<100 Y	<10	<10	<10 [<10]
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Cyclohexane	µg/L	<1	<1	<1	<1	<1	<1	<1	60 Y	<1	<1	<1 [<1]
Methyl cyclohexane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-13-47 05/04/16	MW-13-48 05/04/16	MW-13-49 05/03/16	MW-13-50 05/11/16	MW-13-51 05/16/16	MW-13-52 05/11/16	MW-13-53 05/16/16	MW-14-54 05/17/16	MW-14-55 05/09/16	MW-14-56 05/04/16	MW-14-57 05/10/16
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<10 Y	<1	<1	<1 [<1]
Isopropyl benzene	µg/L	<1	<1	<1	<1	<1	<1	<1	**30 Y** [b]	<1	<1	<1 [<1]
Total Xylenes	µg/L	<3	<3	<3	<3	<3	<3	<3	**880 Y** [ab]	<3	<3	<3 [<3]
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2-Chlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2-Methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2-Nitroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
2-Nitrophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Naphthalene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
3-Nitroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4-Chloroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4-Nitroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Anthracene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Acenaphthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Acetophenone	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Atrazine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Benzaldehyde	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	NA	NA	4 B	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Caprolactam	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Carbazole	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Chrysene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	µg/L	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
Dibenzofuran	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Diethyl phthalate	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/L	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Fluorene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Hexachloroethane	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-13-47 05/04/16	MW-13-48 05/04/16	MW-13-49 05/03/16	MW-13-50 05/11/16	MW-13-51 05/16/16	MW-13-52 05/11/16	MW-13-53 05/16/16	MW-14-54 05/17/16	MW-14-55 05/09/16	MW-14-56 05/04/16	MW-14-57 05/10/16
Isophorone	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Nitrobenzene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Pentachlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Phenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Pyrene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA	NA
Inorganics												
Iron	mg/L	NA	NA	NA	NA	NA	**3.54** [a]	NA	NA	NA	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	**0.013** [ab]	NA	NA	0.002	<0.002	NA	<0.002 [<0.002]
Barium	mg/L	NA	NA	NA	NA	0.260	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	0.042	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA
Chromium	mg/L	NA	NA	NA	NA	<0.005	NA	NA	<0.005	<0.005	NA	<0.005 [<0.005]
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	<0.005	NA	NA	<0.005	<0.005	NA	<0.005 [<0.005]
Lead	mg/L	NA	NA	NA	NA	<0.003	NA	NA	<0.003	<0.003	NA	<0.003 [<0.003]
Manganese	mg/L	NA	NA	NA	NA	**0.258** [a]	**0.185** [a]	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	<0.0001	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	0.008	NA	NA	<0.005	0.013	NA	0.011 [0.011]
Selenium	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	<0.005	NA	NA	<0.005	<0.005	NA	<0.005 [<0.005]
Zinc	mg/L	NA	NA	NA	NA	0.008	NA	NA	NA	NA	NA	NA
Inorganics-Filtered												
Iron (dissolved)	mg/L	NA	NA	NA	NA	NA	**1.51** [a]	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	NA	NA	NA	NA	0.009	NA	NA	NA	<0.002	NA	NA
Barium (dissolved)	mg/L	NA	NA	NA	NA	0.250	NA	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	NA	NA	NA	NA	0.041	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	NA	NA
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	NA	NA
Lead (dissolved)	mg/L	NA	NA	NA	NA	<0.003	NA	NA	NA	<0.003	NA	NA
Manganese (dissolved)	mg/L	NA	NA	NA	NA	**0.255** [a]	**0.182** [a]	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	NA	NA	NA	NA	<0.0001	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	NA	NA	NA	NA	0.008	NA	NA	NA	<0.005	NA	NA
Selenium (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	NA	NA
Zinc (dissolved)	mg/L	NA	NA	NA	NA	0.007	NA	NA	NA	NA	NA	NA
General Chemistry												
Nitrate (as N)	mg/L	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	NA	NA	NA	NA	75	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-14-58 05/17/16 MW-14-58_051716	MW-14-59 05/17/16 MW-14-59_051716	MW-14-60 05/17/16 MW-14-60_051716	MW-14-61 05/12/16 MW-14-61_051216	MW-14-62 05/17/16 MW-14-62_051716	MW-14-63 05/03/16 MW-14-63_050316	MW-14-64 05/06/16 MW-14-64 (05062016)	MW-14-65 05/11/16 MW-14-65 (05112016)	MW-14-66 05/16/16 MW-14-66_051616	MW-14-67 05/13/16 MW-14-67_051316	MW-14-70 05/16/16 MW-14-70_051616
Air Monitoring												
Methane	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field												
Conductance, specific	mS/cm	NA	NA	NA	1175	NA	1566	1564	991	1307	1198	NA
Dissolved oxygen (DO)	mg/L	NA	NA	NA	0.88	NA	1.7	0.18	1.29	0.57	2.4	NA
Oxidation reduction potential (ORP), field	millivolts	NA	NA	NA	-87	NA	129	-91	-244	534	182	NA
pH	s.u.	NA	NA	NA	7.06	NA	6.75	7.01	7.2	7.37	7.93	NA
Temperature, field	Deg C	NA	NA	NA	19.4	NA	17.1	17.9	16.5	11.0	13.8	NA
Turbidity (field)	NTU	NA	NA	NA	5.2	NA	57.1	53.6	11.7	7.1	5.3	NA
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,4-Dioxane	µg/L	**14** [a]	**80** [a]	**131** [a]	<3	**176** [a]	<3	<3	NA	<3	<3	<3
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<50 Y	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<50 Y	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	11	<1	<1	235 Y	<1	<1	<1	1	<1	<1
Bromoform	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	**18** [a]	<1	<1	<5 Y	<1	<1	<1	2	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<1	<1	1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	**9** [a]	<1	<5 Y	<1	<1	<1	<1	<1	<1
Chloroethane	µg/L	<1	<1	36	<1	10 Y	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Methyl acetate	µg/L	<10	<10	<10	<10	<50 Y	<10	<10	<10	<10	<10	<10
Ethylbenzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Methylene chloride	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10	<10	<10	<50 Y	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10	<10	<10	<50 Y	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-14-58 05/17/16	MW-14-59 05/17/16	MW-14-60 05/17/16	MW-14-61 05/12/16	MW-14-62 05/17/16	MW-14-63 05/03/16	MW-14-64 05/06/16	MW-14-65 05/11/16	MW-14-66 05/16/16	MW-14-67 05/13/16	MW-14-70 05/16/16
Dibromochloromethane	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Isopropyl benzene	µg/L	<1	<1	<1	<1	<5 Y	<1	<1	<1	<1	<1	<1
Total Xylenes	µg/L	<3	<3	<3	<3	<15 Y	<3	<3	<3	<3	<3	<3
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-14-58 05/17/16	MW-14-59 05/17/16	MW-14-60 05/17/16	MW-14-61 05/12/16	MW-14-62 05/17/16	MW-14-63 05/03/16	MW-14-64 05/06/16	MW-14-65 05/11/16	MW-14-66 05/16/16	MW-14-67 05/13/16	MW-14-70 05/16/16
Isophorone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics												
Iron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.006	NA	NA	NA	NA	NA	NA	<0.002	0.003	<0.002	<0.002
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	<0.005	NA	NA	NA	NA	NA	NA	0.083	<0.005	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	0.006	NA	NA	NA	NA	NA	NA	<0.005	<0.005	0.005	0.005
Lead	mg/L	<0.003	NA	NA	NA	NA	NA	NA	<0.003	<0.003	<0.003	<0.003
Manganese	mg/L	NA	NA	**0.414** [a]	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.023	NA	NA	NA	NA	NA	NA	0.013	0.011	0.007	0.009
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	**0.007** [a]	NA	NA	NA	NA	NA	NA	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered												
Iron (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry												
Nitrate (as N)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MW-15-71 05/05/16 MW-15-71 (050516)	MW-15-72 05/16/16 MW-15-72 (05162016)	MW-15-73 05/13/16 MW-15-73_051316	MW-19 05/10/16 MW-19_05102016	MW-22 05/10/16 MW-22_05102016	MW-23 05/10/16 MW-23_051016	MW-91-2 05/12/16 MW-91-2_051216	MW-91-3 05/13/16 MW-91-3_051316	MW-91-4 05/16/16 MW-91-4_051616	MW-91-5 05/06/16 MW-91-5 (05062016)	MW-91-6 05/04/16 MW-91-6_050416
Air Monitoring												
Methane	ug/L	NA	NA	NA	NA	1.8 O	2.4 O	2.2 O	NA	40 O	NA	NA
Field												
Conductance, specific	mS/cm	1722	2452	5138	700	2631	1371	1655	996	1483	1287	1497
Dissolved oxygen (DO)	mg/L	0.6	0.11	0.89	2.94	1.86	1.78	0.35	1.23	0.28	0.57	0.52
Oxidation reduction potential (ORP), field	millivolts	-99	-245	-169	3	-4	-47	-111	-47	-126	-98	-114
pH	s.u.	6.97	6.99	6.89	7.58	6.95	7.2	7.17	7.28	7.07	7.13	7.01
Temperature, field	Deg C	17.5	17.0	14.4	13.4	13.0	11.8	20.8	18.1	13.3	12.8	12.9
Turbidity (field)	NTU	373.3	12.4	34.3	18.1	35.8	35.9	3.7	7.5	8.9	30.5	3.9
Volatile Organics												
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,4-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,4-Dioxane	µg/L	<3	**190 Y** [a]	<3	<3	<3	<3	<3	<3	NA	<3	<3
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	NA	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Acetone	µg/L	<10	<10	<10	17	<10	<10	<10	<10	NA	<10	<10
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	2	<1	<1	<1	<1	NA	<1	<1
Bromoform	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,2-Dichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Chloroform (Trichloromethane)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
cis-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Chloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Methyl acetate	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	NA	<10	<10
Ethylbenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Methylene chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	NA	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	NA	<10	<10
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Methyl cyclohexane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-15-71 05/05/16	MW-15-72 05/16/16	MW-15-73 05/13/16	MW-19 05/10/16	MW-22 05/10/16	MW-23 05/10/16	MW-91-2 05/12/16	MW-91-3 05/13/16	MW-91-4 05/16/16	MW-91-5 05/06/16	MW-91-6 05/04/16
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Isopropyl benzene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1
Total Xylenes	µg/L	<3	<3	<3	<3	<3	<3	<3	<3	NA	<3	<3
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,4,6-Trichlorophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,4-Dichlorophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,4,5-Trichlorophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,4-Dimethylphenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,4-Dinitrophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,4-Dinitrotoluene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2,6-Dinitrotoluene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2-Chloronaphthalene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2-Chlorophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2-Methylnaphthalene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2-Methylphenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2-Nitroaniline	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
2-Nitrophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
3&4-Methylphenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
3,3'-Dichlorobenzidine	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Naphthalene	µg/L	<1	<1	<1	NA	2	NA	NA	<1	NA	<1	NA
3-Nitroaniline	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4,6-Dinitro-2-methylphenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4-Bromophenyl phenyl ether	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4-Chloro-3-methylphenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4-Chloroaniline	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4-Chlorophenyl phenyl ether	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4-Nitroaniline	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
4-Nitrophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Anthracene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Acenaphthene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Acenaphthylene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Acetophenone	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Atrazine	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Benzaldehyde	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Benzo(a)anthracene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Benzo(a)pyrene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Benzo(b)fluoranthene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Benzo(g,h,i)perylene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Benzo(k)fluoranthene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Biphenyl (1,1-Biphenyl)	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
bis(2-Chloroethoxy)methane	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
bis(2-Chloroethyl)ether	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	<1	6 B	4 B	NA	<2	NA	NA	3 B	NA	<1	NA
Butyl benzylphthalate (BBP)	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Caprolactam	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Carbazole	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Chrysene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Dibenz(a,h)anthracene	µg/L	<2	<2	<2	NA	<2	NA	NA	<2	NA	<2	NA
Dibenzofuran	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Diethyl phthalate	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Dimethyl phthalate	µg/L	<1	<2	<2	NA	<2	NA	NA	<2	NA	<1	NA
Di-n-butylphthalate (DBP)	µg/L	<1	<1	<1	NA	1 B	NA	NA	<1	NA	<1	NA
Di-n-octyl phthalate (DnOP)	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Fluoranthene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Fluorene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Hexachlorobenzene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Hexachlorobutadiene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Hexachlorocyclopentadiene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Hexachloroethane	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Indeno(1,2,3-cd)pyrene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MW-15-71 05/05/16	MW-15-72 05/16/16	MW-15-73 05/13/16	MW-19 05/10/16	MW-22 05/10/16	MW-23 05/10/16	MW-91-2 05/12/16	MW-91-3 05/13/16	MW-91-4 05/16/16	MW-91-5 05/06/16	MW-91-6 05/04/16
Isophorone	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Nitrobenzene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
N-Nitrosodi-n-propylamine	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
N-Nitrosodiphenylamine	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Pentachlorophenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Phenanthrene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Phenol	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Pyrene	µg/L	<1	<1	<1	NA	<1	NA	NA	<1	NA	<1	NA
Inorganics												
Iron	mg/L	NA	NA	NA	NA	NA	**4.16** [a]	**3.81** [a]	NA	**2.94** [a]	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	<0.005	NA	<0.005	NA
Arsenic	mg/L	0.002	<0.002	0.002	NA	0.005	NA	NA	<0.002	NA	**0.011** [ab]	NA
Barium	mg/L	0.041	0.018	0.063	NA	0.153	NA	NA	0.022	NA	0.354	NA
Boron	mg/L	0.09	0.174	0.055	NA	<0.04	NA	NA	0.224	NA	0.11	NA
Cadmium	mg/L	<0.0005	<0.0005	<0.0005	NA	<0.0005	NA	NA	<0.0005	NA	<0.0005	NA
Chromium	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	<0.005	NA	<0.005	NA
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	<0.01	NA	NA	NA	NA
Cobalt	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	<0.005	NA	<0.005	NA
Copper	mg/L	<0.005	0.006	0.005	NA	<0.005	NA	NA	<0.005	NA	<0.005	NA
Lead	mg/L	<0.003	<0.003	<0.003	NA	<0.003	NA	NA	<0.003	NA	<0.003	NA
Manganese	mg/L	**0.113** [a]	**0.171** [a]	**0.240** [a]	NA	**1.14** [a]	**0.071** [a]	**0.058** [a]	0.006	**0.342** [a]	**0.093** [a]	NA
Mercury	mg/L	<0.0001	<0.0001	<0.0001	NA	<0.0001	NA	NA	<0.0001	NA	<0.0001	NA
Nickel	mg/L	0.008	0.016	0.022	NA	0.013	NA	NA	0.006	NA	0.005	NA
Selenium	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	<0.005	NA	<0.005	NA
Silver	mg/L	<0.0005	<0.0005	<0.0005	NA	**0.0006** [b]	NA	NA	<0.0005	NA	<0.0005	NA
Vanadium	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	<0.005	NA	<0.005	NA
Zinc	mg/L	0.018	0.008	0.012	NA	0.006	NA	NA	0.010	NA	0.012	NA
Inorganics-Filtered												
Iron (dissolved)	mg/L	NA	NA	NA	NA	NA	**3.20** [a]	**3.44** [a]	NA	**2.88** [a]	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	NA	NA	<0.005	NA
Arsenic (dissolved)	mg/L	0.005	<0.002	0.002	NA	0.002	NA	0.008	NA	NA	**0.012** [ab]	NA
Barium (dissolved)	mg/L	0.193	0.018	0.063	NA	0.146	NA	NA	NA	NA	0.350	NA
Boron (Dissolved)	mg/L	0.10	0.176	0.057	NA	0.04	NA	NA	NA	NA	0.10	NA
Cadmium (dissolved)	mg/L	<0.0005	<0.0005	<0.0005	NA	<0.0005	NA	NA	NA	NA	<0.0005	NA
Chromium (dissolved)	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	NA	<0.005	NA
Cobalt (dissolved)	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	NA	NA	<0.005	NA
Copper (dissolved)	mg/L	<0.005	0.006	0.005	NA	<0.005	NA	<0.005	NA	NA	<0.005	NA
Lead (dissolved)	mg/L	<0.003	<0.003	<0.003	NA	<0.003	NA	<0.003	NA	NA	<0.003	NA
Manganese (dissolved)	mg/L	**0.108** [a]	**0.169** [a]	**0.253** [a]	NA	**0.971** [a]	**0.063** [a]	**0.054** [a]	NA	**0.338** [a]	**0.085** [a]	NA
Mercury (dissolved)	mg/L	<0.0001	<0.0001	<0.0001	NA	<0.0001	NA	NA	NA	NA	<0.0001	NA
Nickel (dissolved)	mg/L	0.006	0.014	0.024	NA	0.013	NA	<0.005	NA	NA	0.005	NA
Selenium (dissolved)	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	NA	NA	NA	<0.005	NA
Silver (dissolved)	mg/L	<0.0005	<0.0005	<0.0005	NA	**0.0006** [b]	NA	NA	NA	NA	<0.0005	NA
Vanadium (dissolved)	mg/L	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.005	NA	NA	<0.005	NA
Zinc (dissolved)	mg/L	0.006	0.009	0.018	NA	0.006	NA	NA	NA	NA	<0.005	NA
General Chemistry												
Nitrate (as N)	mg/L	NA	NA	NA	NA	<0.5	<0.5	<0.5	NA	<0.5	NA	NA
Sulfate	mg/L	NA	NA	NA	NA	105	165	196	NA	154	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	MWBP-10-UST5-6 05/11/16 MWBP-10_UST5-6_051116	MWBP-11-UST1-4 05/09/16 MWBP-11-UST1-4_050916	MWBP-12A-UST1-4 05/10/16 MWBP-12A-UST1-4_051016	MWBP-12-UST1-4 05/06/16 MWBP-12-USTl-4_050616	MWBP-12-UST5-6 05/11/16 MWBP-12_UST5-6_051116	P2-MW-01 05/16/16 P2-MW-01_051616	P2-MW-02 05/10/16 P2-MW-02_051016	P2-MW-03 05/03/16 P2-MW-03_050316	P2-SB-03 05/10/16 P2-SB-03_051016
Air Monitoring										
Methane	ug/L	NA	NA	98 O	NA	11 O	NA	NA	NA	18 O
Field										
Conductance, specific	mS/cm	3944	1046	3720	1943	2674	629	937	1997	1063
Dissolved oxygen (DO)	mg/L	0.91	0.62	1.65	2.26	0.65	5.85	0.63	1.32	1.92
Oxidation reduction potential (ORP), field	millivolts	-6	-71	-27	-38	-82	719	-175	51	-124
pH	s.u.	6.98	10.27	6.82	7.24	6.87	7.99	7.05	6.83	7.26
Temperature, field	Deg C	15.3	13.0	11.6	16.3	15.1	22.2	12.5	19.0	12.8
Turbidity (field)	NTU	4.6	0.2	1.9	0.7	8.4	2.1	1.5	178.1	1.2
Volatile Organics										
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	<1	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	<1	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,4-Dichlorobenzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,4-Dioxane	µg/L	<3	NA	<3	<3	NA	<3	<3	**36** [a]	<3
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	NA	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	14	NA	<10	<10	<10	<10
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Bromoform	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Chloroform (Trichloromethane)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Chloroethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	**77** [a]	NA	<1	<1	<1	<1
Methyl acetate	µg/L	<10	<10	<10	<10	NA	<10	<10	<1	<10
Ethylbenzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Methylene chloride	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	2	<1	<1	<1	NA	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10	<10	<10	NA	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10	<10	<10	NA	<10	<10	<1	<10
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	<1	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	<1	NA
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	3	NA	<1	<1	<1	<1
Methyl cyclohexane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MWBP-10-UST5-6 05/11/16	MWBP-11-UST1-4 05/09/16	MWBP-12A-UST1-4 05/10/16	MWBP-12-UST1-4 05/06/16	MWBP-12-UST5-6 05/11/16	P2-MW-01 05/16/16	P2-MW-02 05/10/16	P2-MW-03 05/03/16	P2-SB-03 05/10/16
Dibromochloromethane	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Isopropyl benzene	µg/L	<1	<1	<1	<1	NA	<1	<1	<1	<1
Total Xylenes	µg/L	<3	<3	<3	<3	NA	<3	<3	<3	<3
Semivolatile Organics										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,4,6-Trichlorophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,4-Dichlorophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,4,5-Trichlorophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,4-Dimethylphenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,4-Dinitrophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,4-Dinitrotoluene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2,6-Dinitrotoluene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2-Chloronaphthalene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2-Chlorophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2-Methylnaphthalene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2-Methylphenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2-Nitroaniline	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
2-Nitrophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
3&4-Methylphenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
3,3'-Dichlorobenzidine	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Naphthalene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
3-Nitroaniline	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4-Bromophenyl phenyl ether	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4-Chloro-3-methylphenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4-Chloroaniline	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4-Nitroaniline	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
4-Nitrophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Anthracene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Acenaphthene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Acenaphthylene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Acetophenone	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Atrazine	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Benzaldehyde	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Benzo(a)anthracene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Benzo(a)pyrene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Benzo(b)fluoranthene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Benzo(k)fluoranthene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
bis(2-Chloroethyl)ether	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	<2	<1	NA	4 B	<2	<2	<2
Butyl benzylphthalate (BBP)	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Caprolactam	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Carbazole	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Chrysene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Dibenz(a,h)anthracene	µg/L	NA	NA	<2	<2	NA	<2	<2	<2	<2
Dibenzofuran	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Diethyl phthalate	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Dimethyl phthalate	µg/L	NA	NA	<2	<1	NA	<2	<2	<2	<2
Di-n-butylphthalate (DBP)	µg/L	NA	NA	1 B	<1	NA	<1	1 B	4	3 B
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Fluoranthene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Fluorene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Hexachlorobenzene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Hexachlorocyclopentadiene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Hexachloroethane	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		MWBP-10-UST5-6 05/11/16	MWBP-11-UST1-4 05/09/16	MWBP-12A-UST1-4 05/10/16	MWBP-12-UST1-4 05/06/16	MWBP-12-UST5-6 05/11/16	P2-MW-01 05/16/16	P2-MW-02 05/10/16	P2-MW-03 05/03/16	P2-SB-03 05/10/16
Isophorone	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Nitrobenzene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
N-Nitrosodiphenylamine	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Pentachlorophenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Phenanthrene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Phenol	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Pyrene	µg/L	NA	NA	<1	<1	NA	<1	<1	<1	<1
Inorganics										
Iron	mg/L	NA	NA	**16.1** [a]	NA	**8.19** [a]	NA	NA	NA	**0.53** [a]
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Arsenic	mg/L	0.005	**0.015** [ab]	**0.012** [ab]	0.007	NA	0.003	<0.002	0.005	<0.002
Barium	mg/L	NA	NA	0.482	0.055	NA	0.399	0.159	0.440	0.105
Boron	mg/L	NA	NA	0.06	0.14	NA	<0.04	<0.04	0.09	<0.04
Cadmium	mg/L	NA	NA	<0.0005	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005
Chromium	mg/L	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Copper	mg/L	<0.005	0.006	<0.005	0.005	NA	<0.005	<0.005	<0.005	<0.005
Lead	mg/L	<0.003	<0.003	<0.003	<0.003	NA	<0.003	<0.003	<0.003	<0.003
Manganese	mg/L	NA	NA	**0.440** [a]	**0.114** [a]	**0.250** [a]	**0.052** [a]	**0.147** [a]	**0.194** [a]	**0.063** [a]
Mercury	mg/L	NA	NA	<0.0001	<0.0001	NA	<0.0002	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.006	<0.005	0.012	0.006	NA	0.008	0.006	0.009	0.008
Selenium	mg/L	NA	NA	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	NA	NA	**0.0007** [b]	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Zinc	mg/L	NA	NA	0.008	0.005	NA	0.009	0.011	0.011	0.005
Inorganics-Filtered										
Iron (dissolved)	mg/L	NA	NA	**12.9** [a]	NA	**8.18** [a]	NA	NA	NA	<0.02
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.005	NA
Arsenic (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	0.004	NA
Barium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	0.443	NA
Boron (Dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	0.08	NA
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.0005	NA
Chromium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.005	NA
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.005	NA
Copper (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.005	NA
Lead (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.003	NA
Manganese (dissolved)	mg/L	NA	NA	**0.428** [a]	NA	**0.248** [a]	NA	NA	**0.189** [a]	**0.106** [a]
Mercury (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.0001	NA
Nickel (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	0.007	NA
Selenium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.005	NA
Silver (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.0005	NA
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	<0.005	NA
Zinc (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	0.009	NA
General Chemistry										
Nitrate (as N)	mg/L	NA	NA	<0.5	NA	<0.5	NA	NA	NA	<0.5
Sulfate	mg/L	NA	NA	**296** [a]	NA	**262** [a]	NA	NA	NA	56

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	P2-SB-20 05/04/16 P2-SB-20_050416	P3-SB-07 05/11/16 P3-SB-07_051116	P3-SB-28 05/12/16 P3-SB-28 (05122016)	P6-MW-01 05/10/16 P6-MW-01_051016	P6-SB-07 05/06/16 P6-SB-07_050616	P6-SB-18 05/12/16 P6-SB-18 (05122016)	P6-SB-35 05/16/16 P6-SB-35_051616	P6-SB-37 05/16/16 P6-SB-37_051616	PW-14-01 05/17/16 PW-14-01 (05172016)	PW-14-02 05/05/16 PW-14-02_050516
Air Monitoring											
Methane	ug/L	NA	<0.50 O	73 O	75 O	NA	9.8 O	0.70 O	NA	NA	NA
Field											
Conductance, specific	mS/cm	298	965	396	1684	515	420	318	NA	1815	3101
Dissolved oxygen (DO)	mg/L	3.15	1.57	0.69	0.6	2.03	1.35	3.82	NA	0.24	1.25
Oxidation reduction potential (ORP), field	millivolts	-219	-47	-244	10	-87	-240	609	NA	-254	-111
pH	s.u.	9.99	7.28	7.9	6.98	7.65	11.07	10.65	NA	7.02	6.79
Temperature, field	Deg C	10.9	14.2	14.7	11.1	15.2	18.0	16.5	NA	15.3	17.9
Turbidity (field)	NTU	15.4	3.7	6.5	8.4	13.9	5.9	1.3	NA	5.4	89.8
Volatile Organics											
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,2-Dichlorobenzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,4-Dichlorobenzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,4-Dioxane	µg/L	<3 [<3]	NA	NA	NA	<3	NA	NA	NA	**420 Y [440 Y]** [a]	**220 Y** [a]
1,1,1-Trichloroethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
2-Hexanone	µg/L	<10 [<10]	NA	NA	NA	<10	NA	NA	NA	<10 [<10]	<10
1,1,2,2-Tetrachloroethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Acetone	µg/L	<10 [<10]	NA	NA	NA	<10	NA	NA	NA	<10 [<10]	<10
1,1,2-Trichloroethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Bromodichloromethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,1-Dichloroethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Bromoform	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,1-Dichloroethene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Bromomethane (Methyl bromide)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Carbon disulfide	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Carbon tetrachloride	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
cis-1,2-Dichloroethene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Chlorobenzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
trans-1,2-Dichloroethene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Chloroform (Trichloromethane)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Trichloroethene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Chloromethane (Methyl chloride)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Tetrachloroethene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
cis-1,3-Dichloropropene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Vinyl chloride	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Chloroethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Benzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Methyl acetate	µg/L	<10 [<10]	NA	NA	NA	<10	NA	NA	NA	<10 [<10]	<10
Ethylbenzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Methylene chloride	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Styrene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Toluene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
trans-1,3-Dichloropropene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Methyl tert butyl ether (MTBE)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10 [<10]	NA	NA	NA	<10	NA	NA	NA	<10 [<10]	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10 [<10]	NA	NA	NA	<10	NA	NA	NA	<10 [<10]	<10
1,2,4-Trichlorobenzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
1,3-Dichlorobenzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Cyclohexane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Methyl cyclohexane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		P2-SB-20 05/04/16	P3-SB-07 05/11/16	P3-SB-28 05/12/16	P6-MW-01 05/10/16	P6-SB-07 05/06/16	P6-SB-18 05/12/16	P6-SB-35 05/16/16	P6-SB-37 05/16/16	PW-14-01 05/17/16	PW-14-02 05/05/16
Dibromochloromethane	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Isopropyl benzene	µg/L	<1 [<1]	NA	NA	NA	<1	NA	NA	NA	<1 [<1]	<1
Total Xylenes	µg/L	<3 [<3]	NA	NA	NA	<3	NA	NA	NA	<3 [<3]	<3
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,4-Dichlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,4-Dimethylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,4-Dinitrophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2-Chloronaphthalene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2-Chlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2-Methylnaphthalene	µg/L	NA	NA	NA	NA	8	NA	NA	NA	NA	NA
2-Methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2-Nitroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
2-Nitrophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
3&4-Methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Naphthalene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
3-Nitroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4-Chloroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4-Nitroaniline	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
4-Nitrophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Anthracene	µg/L	NA	NA	NA	NA	2	NA	NA	NA	NA	NA
Acenaphthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Acenaphthylene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Acetophenone	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Atrazine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Benzaldehyde	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Benzo(a)anthracene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Benzo(a)pyrene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	NA	NA	**28** [ab]	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	µg/L	NA	NA	NA	NA	4	NA	NA	NA	NA	NA
Caprolactam	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Carbazole	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Chrysene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	µg/L	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA
Dibenzofuran	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Diethyl phthalate	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	µg/L	NA	NA	NA	NA	1	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Fluoranthene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Fluorene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Hexachlorobenzene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Hexachloroethane	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		P2-SB-20 05/04/16	P3-SB-07 05/11/16	P3-SB-28 05/12/16	P6-MW-01 05/10/16	P6-SB-07 05/06/16	P6-SB-18 05/12/16	P6-SB-35 05/16/16	P6-SB-37 05/16/16	PW-14-01 05/17/16	PW-14-02 05/05/16
Isophorone	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Nitrobenzene	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Pentachlorophenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Phenanthrene	µg/L	NA	NA	NA	NA	**13** [b]	NA	NA	NA	NA	NA
Phenol	µg/L	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Pyrene	µg/L	NA	NA	NA	NA	10	NA	NA	NA	NA	NA
Inorganics											
Iron	mg/L	NA	0.05	0.03	**3.84** [a]	NA	0.20	0.07	NA	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	191
Antimony	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	<0.002	0.004	0.007 [0.007]	<0.002	NA	0.004
Barium	mg/L	NA	NA	NA	NA	0.048	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	0.07	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA
Chromium	mg/L	NA	NA	NA	NA	<0.005	<0.005	0.011 [0.011]	0.016	NA	<0.005
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	<0.005	**0.023** [b]	<0.005 [<0.005]	0.008	NA	NA
Lead	mg/L	NA	NA	NA	NA	<0.003	**0.030** [a]	<0.003 [<0.003]	<0.003	NA	<0.003
Manganese	mg/L	NA	0.021	**0.157** [a]	**0.643** [a]	**0.071** [a]	<0.005	<0.005	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	<0.0001	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	<0.005	<0.005	<0.005 [<0.005]	<0.005	NA	NA
Selenium	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	<0.005	**0.015** [a]	**0.019 [0.018]** [a]	**0.011** [a]	NA	NA
Zinc	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Inorganics-Filtered											
Iron (dissolved)	mg/L	NA	<0.02	<0.02	**2.92** [a]	NA	<0.02	0.07	NA	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	192
Antimony (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	0.004
Barium (dissolved)	mg/L	NA	NA	NA	NA	0.050	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	NA	NA	NA	NA	0.08	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	NA	NA	NA	NA	<0.003	NA	NA	NA	NA	<0.003
Manganese (dissolved)	mg/L	NA	<0.005	**0.127** [a]	**0.663** [a]	**0.070** [a]	<0.005	<0.005	NA	NA	NA
Mercury (dissolved)	mg/L	NA	NA	NA	NA	<0.0001	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	NA	NA	NA	NA	0.007	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	NA	NA	NA	NA	0.007	NA	NA	NA	NA	NA
General Chemistry											
Nitrate (as N)	mg/L	NA	**11.0** [a]	<0.5	<0.5	NA	<0.5	0.9	NA	NA	NA
Sulfate	mg/L	NA	122	11	**452** [a]	NA	18	33	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	PW-14-03 05/10/16 PW-14-03 (05102016)	SME-MW-02 05/05/16 SME-MW-02_050516	TW-14-02 05/17/16 TW-14-02_051716	TW-14-02 (Resample) 07/26/16 TW-14-02_07262016	TW-14-03 05/06/16 TW-14-03_050616	TW-14-06 05/10/16 TW-14-06 (05102016)	TW-14-07 05/10/16 TW-14-07 (05102016)	TW-14-08 05/10/16 TW-14-08 (05102016)	TW-14-09 05/11/16 TW-14-09 (05112016)	TW-15-10 05/11/16 TW-15-10 (05112016)
Air Monitoring											
Methane	ug/L	NA	0.58 O	NA	NA	NA	NA	NA	NA	NA	NA
Field											
Conductance, specific	mS/cm	3294	2896	3845	3723	5999	3657	3503	6325	3948	3765
Dissolved oxygen (DO)	mg/L	4.6	4.07	0.75	NA	0.63	0.13	0.14	0.38	0.14	0.2
Oxidation reduction potential (ORP), field	millivolts	-161	83	66	NA	-40	-161	-190	-265	-367	-292
pH	s.u.	6.8	7.08	6.95	6.87	6.29	6.67	6.69	6.22	6.42	6.49
Temperature, field	Deg C	13.7	18.8	12.9	28.3	12.5	14.1	12.1	12.2	15.5	15.6
Turbidity (field)	NTU	7.0	22.9	84.8	138.0	7.5	85.3	39.9	49.2	1942.6	45.5
Volatile Organics											
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,2-Dichlorobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,4-Dichlorobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,4-Dioxane	µg/L	**450 Y [390 Y]** [a]	NA	**132** [a]	**2,780** [a]	**240 Y** [a]	**720 Y** [a]	**175** [a]	**890 Y** [a]	**510 Y** [a]	**170 Y** [a]
1,1,1-Trichloroethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
2-Hexanone	µg/L	<10 [<10]	NA	<10	NA	<10	NA	<10	<10	NA	<10
1,1,2,2-Tetrachloroethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Acetone	µg/L	<10 [<10]	NA	<10	NA	<10	NA	<10	<10	NA	<10
1,1,2-Trichloroethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Bromodichloromethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,1-Dichloroethane	µg/L	<1 [<1]	NA	<1	NA	1	NA	<1	<1	NA	<1
Bromoform	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,1-Dichloroethene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Bromomethane (Methyl bromide)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,2-Dichloroethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Carbon disulfide	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	8	NA	<1
Carbon tetrachloride	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
cis-1,2-Dichloroethene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Chlorobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
trans-1,2-Dichloroethene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Chloroform (Trichloromethane)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Trichloroethene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Chloromethane (Methyl chloride)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Tetrachloroethene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
cis-1,3-Dichloropropene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Vinyl chloride	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Chloroethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Benzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Methyl acetate	µg/L	<10 [<10]	NA	<10	NA	<10	NA	<10	<10	NA	<10
Ethylbenzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Methylene chloride	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Styrene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Toluene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
trans-1,3-Dichloropropene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Methyl tert butyl ether (MTBE)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10 [<10]	NA	<10	NA	<10	NA	<10	<10	NA	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10 [<10]	NA	<10	NA	<10	NA	<10	<10	NA	<10
1,2,4-Trichlorobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
1,3-Dichlorobenzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Cyclohexane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Methyl cyclohexane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected:		PW-14-03 05/10/16	SME-MW-02 05/05/16	TW-14-02 05/17/16	TW-14-02 (Resample) 07/26/16	TW-14-03 05/06/16	TW-14-06 05/10/16	TW-14-07 05/10/16	TW-14-08 05/10/16	TW-14-09 05/11/16	TW-15-10 05/11/16
Dibromochloromethane	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Isopropyl benzene	µg/L	<1 [<1]	NA	<1	NA	<1	NA	<1	<1	NA	<1
Total Xylenes	µg/L	<3 [<3]	NA	<3	NA	<3	NA	<3	<3	NA	<3
Semivolatile Organics											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Acetophenone	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Atrazine	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	<2	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Caprolactam	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Carbazole	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	µg/L	NA	NA	<2	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/L	NA	NA	<2	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	µg/L	NA	NA	1	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		PW-14-03 05/10/16	SME-MW-02 05/05/16	TW-14-02 05/17/16	TW-14-02 (Resample) 07/26/16	TW-14-03 05/06/16	TW-14-06 05/10/16	TW-14-07 05/10/16	TW-14-08 05/10/16	TW-14-09 05/11/16	TW-15-10 05/11/16
Isophorone	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Phenol	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Pyrene	µg/L	NA	NA	<1	NA	NA	NA	NA	NA	NA	NA
Inorganics											
Iron	mg/L	NA	**1.22** [a]	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	0.008	NA	NA	0.002	NA	NA	0.007	NA
Barium	mg/L	NA	NA	**1.25** [b]	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	<0.04	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	0.038	NA
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	<0.003	NA	NA	<0.003	NA	NA	**0.013** [a]	NA
Manganese	mg/L	NA	**0.054** [a]	**0.069** [a]	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	<0.0001	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	0.019	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered											
Iron (dissolved)	mg/L	NA	0.04	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	NA	NA	0.008	NA	NA	<0.002	NA	NA	0.004	NA
Barium (dissolved)	mg/L	NA	NA	**1.23** [b]	NA	NA	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	NA	NA	0.040	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	<0.005	NA
Cobalt (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	NA	NA	<0.003	NA	NA	<0.003	NA	NA	<0.003	NA
Manganese (dissolved)	mg/L	NA	0.040	**0.059** [a]	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	NA	NA	<0.0001	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	NA	NA	0.019	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	NA	NA	<0.0005	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA
General Chemistry											
Nitrate (as N)	mg/L	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	68	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: Date Collected: Sample Name:	Units	TW-15-12 05/06/16 TW-15-12_050616	TW-15-13 05/06/16 TW-15-13_050616	UNK-09 05/10/16 UNK-09_05102016	UNK-10 05/06/16 UNK-10_050616	UNK-11 05/06/16 UNK-11_050616
Air Monitoring						
Methane	ug/L	NA	NA	NA	NA	NA
Field						
Conductance, specific	mS/cm	2072	3211	444	721	734
Dissolved oxygen (DO)	mg/L	6.77	0.71	0.38	0.27	0.81
Oxidation reduction potential (ORP), field	millivolts	199	-54	-104	-139	-104
pH	s.u.	7.24	6.86	7.57	7.39	7.14
Temperature, field	Deg C	17.0	19.8	12.0	15.9	15.5
Turbidity (field)	NTU	278.3	2.5	0.4	4.9	25.5
Volatile Organics						
1,2,3-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA
Ethyl ether	µg/L	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,4-Dioxane	µg/L	**21** [a]	**340 Y** [a]	<3	NA	NA
1,1,1-Trichloroethane	µg/L	3	<1	<1	<1	<1
2-Hexanone	µg/L	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	µg/L	<1	<1	<1	<1	<1
Acetone	µg/L	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	56	<1	1	<1	<1
Bromoform	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	**10** [a]	<1	<1	<1	<1
Bromomethane (Methyl bromide)	µg/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	<1	<1	<1	<1	<1
Carbon disulfide	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3	<1	<1	<1	<1
Chloromethane (Methyl chloride)	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1
Chloroethane	µg/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	µg/L	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1
Methyl acetate	µg/L	<10	<10	<10	<10	<10
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
Methylene chloride	µg/L	<1	<1	<1	<1	<1
Styrene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	µg/L	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	µg/L	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	µg/L	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	µg/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<3 X
Methyl cyclohexane	µg/L	<1	<1	<1	<1	<2 X

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		TW-15-12 05/06/16	TW-15-13 05/06/16	UNK-09 05/10/16	UNK-10 05/06/16	UNK-11 05/06/16
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1
Isopropyl benzene	µg/L	<1	<1	<1	<1	2
Total Xylenes	µg/L	<3	<3	<3	<3	<3
Semivolatile Organics						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	NA	NA	<1	NA	NA
2,4,6-Trichlorophenol	µg/L	NA	NA	<1	NA	NA
2,4-Dichlorophenol	µg/L	NA	NA	<1	NA	NA
2,4,5-Trichlorophenol	µg/L	NA	NA	<1	NA	NA
2,4-Dimethylphenol	µg/L	NA	NA	<1	NA	NA
2,4-Dinitrophenol	µg/L	NA	NA	<1	NA	NA
2,4-Dinitrotoluene	µg/L	NA	NA	<1	NA	NA
2,6-Dinitrotoluene	µg/L	NA	NA	<1	NA	NA
2-Chloronaphthalene	µg/L	NA	NA	<1	NA	NA
2-Chlorophenol	µg/L	NA	NA	<1	NA	NA
2-Methylnaphthalene	µg/L	NA	NA	<1	NA	NA
2-Methylphenol	µg/L	NA	NA	<1	NA	NA
2-Nitroaniline	µg/L	NA	NA	<1	NA	NA
2-Nitrophenol	µg/L	NA	NA	<1	NA	NA
3&4-Methylphenol	µg/L	NA	NA	<1	NA	NA
3,3'-Dichlorobenzidine	µg/L	NA	NA	<1	NA	NA
Naphthalene	µg/L	NA	NA	1	NA	NA
3-Nitroaniline	µg/L	NA	NA	<1	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	NA	NA	<1	NA	NA
4-Bromophenyl phenyl ether	µg/L	NA	NA	<1	NA	NA
4-Chloro-3-methylphenol	µg/L	NA	NA	<1	NA	NA
4-Chloroaniline	µg/L	NA	NA	<1	NA	NA
4-Chlorophenyl phenyl ether	µg/L	NA	NA	<1	NA	NA
4-Nitroaniline	µg/L	NA	NA	<1	NA	NA
4-Nitrophenol	µg/L	NA	NA	<1	NA	NA
Anthracene	µg/L	NA	NA	<1	NA	NA
Acenaphthene	µg/L	NA	NA	<1	NA	NA
Acenaphthylene	µg/L	NA	NA	<1	NA	NA
Acetophenone	µg/L	NA	NA	<1	NA	NA
Atrazine	µg/L	NA	NA	<1	NA	NA
Benzaldehyde	µg/L	NA	NA	<1	NA	NA
Benzo(a)anthracene	µg/L	NA	NA	<1	NA	NA
Benzo(a)pyrene	µg/L	NA	NA	<1	NA	NA
Benzo(b)fluoranthene	µg/L	NA	NA	<1	NA	NA
Benzo(g,h,i)perylene	µg/L	NA	NA	<1	NA	NA
Benzo(k)fluoranthene	µg/L	NA	NA	<1	NA	NA
Biphenyl (1,1-Biphenyl)	µg/L	NA	NA	<1	NA	NA
bis(2-Chloroethoxy)methane	µg/L	NA	NA	<1	NA	NA
bis(2-Chloroethyl)ether	µg/L	NA	NA	<1	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	NA	NA	<2	NA	NA
Butyl benzylphthalate (BBP)	µg/L	NA	NA	<1	NA	NA
Caprolactam	µg/L	NA	NA	<1	NA	NA
Carbazole	µg/L	NA	NA	<1	NA	NA
Chrysene	µg/L	NA	NA	<1	NA	NA
Dibenz(a,h)anthracene	µg/L	NA	NA	<2	NA	NA
Dibenzofuran	µg/L	NA	NA	<1	NA	NA
Diethyl phthalate	µg/L	NA	NA	<1	NA	NA
Dimethyl phthalate	µg/L	NA	NA	<2	NA	NA
Di-n-butylphthalate (DBP)	µg/L	NA	NA	<1	NA	NA
Di-n-octyl phthalate (DnOP)	µg/L	NA	NA	<1	NA	NA
Fluoranthene	µg/L	NA	NA	<1	NA	NA
Fluorene	µg/L	NA	NA	<1	NA	NA
Hexachlorobenzene	µg/L	NA	NA	<1	NA	NA
Hexachlorobutadiene	µg/L	NA	NA	<1	NA	NA
Hexachlorocyclopentadiene	µg/L	NA	NA	<1	NA	NA
Hexachloroethane	µg/L	NA	NA	<1	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	NA	NA	<1	NA	NA

TABLE 4
SUMMARY OF 2nd QUARTER 2016 GROUNDWATER ANALYTICAL DATA
May 2016
Second Quarter 2015 Groundwater Monitoring Report
RACER Trust Plants 2,3,and 6 - Lansing, Michigan

Location ID: / Date Collected:		TW-15-12 05/06/16	TW-15-13 05/06/16	UNK-09 05/10/16	UNK-10 05/06/16	UNK-11 05/06/16
Isophorone	µg/L	NA	NA	<1	NA	NA
Nitrobenzene	µg/L	NA	NA	<1	NA	NA
N-Nitrosodi-n-propylamine	µg/L	NA	NA	<1	NA	NA
N-Nitrosodiphenylamine	µg/L	NA	NA	<1	NA	NA
Pentachlorophenol	µg/L	NA	NA	<1	NA	NA
Phenanthrene	µg/L	NA	NA	<1	NA	NA
Phenol	µg/L	NA	NA	<1	NA	NA
Pyrene	µg/L	NA	NA	<1	NA	NA
Inorganics						
Iron	mg/L	NA	NA	NA	**2.08** [a]	NA
Sodium	mg/L	NA	**251** [a]	NA	NA	NA
Antimony	mg/L	NA	NA	<0.005	NA	NA
Arsenic	mg/L	0.010	NA	**0.012** [ab]	**0.012** [ab]	NA
Barium	mg/L	NA	NA	0.038	NA	NA
Boron	mg/L	NA	NA	0.06	NA	NA
Cadmium	mg/L	NA	NA	<0.0005	NA	NA
Chromium	mg/L	0.006	NA	<0.005	<0.005	NA
Chromium VI (hexavalent)	mg/L	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	<0.005	NA	NA
Copper	mg/L	NA	NA	<0.005	<0.005	NA
Lead	mg/L	<0.003	NA	<0.003	<0.003	NA
Manganese	mg/L	NA	NA	**0.067** [a]	NA	NA
Mercury	mg/L	NA	NA	<0.0001	NA	NA
Nickel	mg/L	NA	NA	<0.005	<0.005	NA
Selenium	mg/L	NA	NA	<0.005	NA	NA
Silver	mg/L	NA	NA	<0.0005	NA	NA
Vanadium	mg/L	NA	NA	<0.005	<0.005	NA
Zinc	mg/L	NA	NA	0.018	NA	NA
Inorganics-Filtered						
Iron (dissolved)	mg/L	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	<0.002	NA	NA	NA	NA
Barium (dissolved)	mg/L	NA	NA	NA	NA	NA
Boron (Dissolved)	mg/L	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	NA	NA	NA	NA	NA
Chromium (dissolved)	mg/L	<0.005	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	<0.003	NA	NA	NA	NA
Manganese (dissolved)	mg/L	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	NA	NA	NA	NA	NA
General Chemistry						
Nitrate (as N)	mg/L	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	NA	NA	NA	NA

Table Notes:

MI GW (DEQ2013)
RES DW

-- Bold fonts represent data where detections were noted above the MDL but below MDEQ Part 201 Generic Cleanup Criteria.
-- Data shown in [ ] represent duplicate sample analytical results.
- - = Not listed in the MDEQ Criteria Tables.
mS/cm - milli Siemans per centimeter
mg/L - milligrams per liter
s.u. - standard unit
Deg. C. - degrees celcius
NTU - Nephelometric Turbidity Unit
ug/L - micrograms per liter
a - Sample exceeds Residential Drinking Water Criteria. 1,4-Dioxane includes the proposed drinking water criteria of 8.5 ug/L.
b - Sample exceeds Groundwater Surface Water Interface Criteria
NA - Not Analyzed during the 2nd Quarter 2015 Sampling Event

Lab and Validation Data Qualifiers:
B = Compounds also found in associated method blank.
X = Elevated reporting limit due to matrix interference.
Y = Elevated reporting limit due to high target concentration.
O = Analysis performed by outside laboratory.

FIGURES

MW-14-63
MW-12-02
P2-MW-01
P2-MW-03
MW-16-80
TW-14-03
TW-15-12
MW-13-43
TW-15-13
MW-13-45
P2-SB-20
P2-SB-03
MW-13-42
MW-15-73
PW-14-02
MW-14-59
MW-14-58
MW-16-83
MW-16-82
MW-14-60
LMW-12-02
LMW-12-08
P2-MW-04
MW-12-05
LMW-14-14D
PMW-PM
LMW-12-07
MW-15-72
MW-14-61
LMW-12-03S/D
LMW-12-01
LMW-14
P2-SB-37
MW-12-06
MW-14-57
LMW-15-17D
PMW-03
MW-12-09
MW-14-56
LMW-12-06
LMW-12-05
LMW-12-04
P2-SB-06
LMW-15-16D
MW-14-62
MW-16-81
MW-16-79
MW-12-18
MW-14-55
MW-14-54
TW-14-02
MW-16-74
MW-16-78
TW-14-01
PW-14-01
MW-16-76
MW-12-01
MW-16-77
MW-16-75
MW-12-07
MW-12-08
P2-MW-02
MW-13-51
MW-13-52
MW-13-50
MW-13-53
MW-12-17
MW-03(2)
MW-02(2)
MW-01(2)
MWBP-12-UST5-6
MWBP-10-UST5-6

LEGEND

EXISTING MONITORING WELLS

- NAPL MONITORING WELL
- PERCHED MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL; TEST MW
- BEDROCK MONITORING WELL
- 2Q16 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
* : EXTENT OF IMPACTS UPDATED BASED ON THE RESULTS OF ARCADIS 2015 LOWER 1,4-DIOXANE PLUME TOE INVESTIGATION AND 2016 SUPPLEMENTAL LOWER 1,4-DIOXANE PLUME TOE INVESTIGATION

0 200 400
SCALE IN FEET

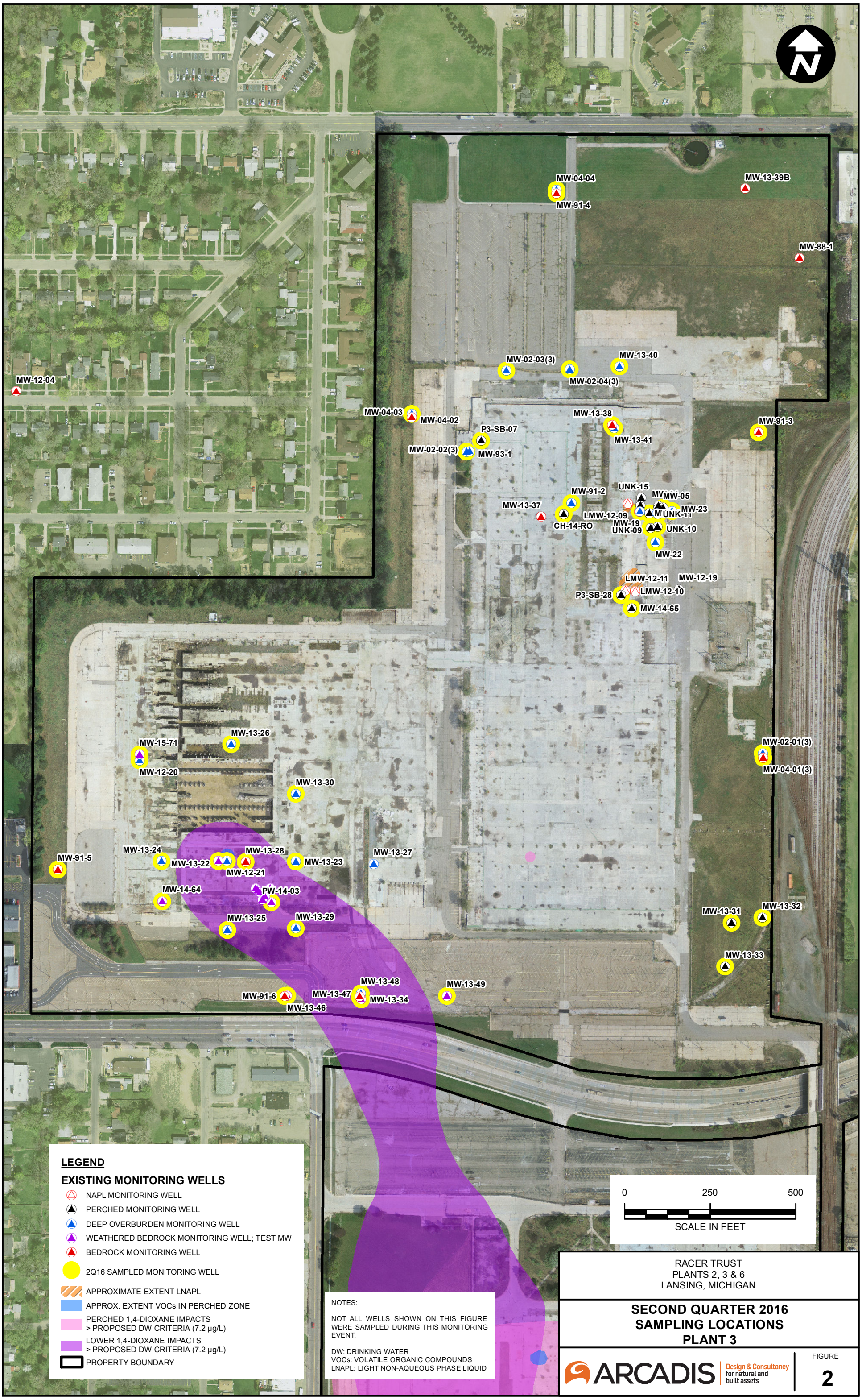
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SECOND 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\working\Quarterly GW Monitoring Report DRAFT.mxd PLOTTED: 8/3/2016 2:55:37 PM 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\working\Quarterly GW Monitoring Report DRAFT.mxd PLOTTED: 8/2/2016 10:11:20 PM BY: dolexa

MW-12-03
MW-12-10R
MW-04-06R
MW-04-05
MW-12-11
MW-03-02
MW-12-12
MW-14-70
MW-03-04
MW-03-05
MW-02-01(6)
MW-14-66
P6-SB-18
MW-12-13
MW-14-69
MW-03-07
MW-02-03(6)
MW-04-01(6)
MW-02-02(6)
MW-03-06
P6-SB-37
MW-14-68
SME-MW-02
MW-14-67
MW-04-04R
MW-03-08
P6-SB-35
MW-13-36R
P6-SB-21
P6-SB-07
MWBP-13A-UST1-4
MWBP-12-UST1-4
MWBP-11-UST1-4
MWBP-12A-UST1-4
MWBP-10A-UST1-4
MWBP-10-UST1-4
P6-MW-01
MW-12-14
MW-13-35
MW-12-15
MW-12-16

0 200 400
SCALE IN FEET

LEGEND

EXISTING MONITORING WELLS

- PERCHED MONITORING WELL
- BEDROCK MONITORING WELL
- 2Q16 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

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SECOND QUARTER 2016 SAMPLING LOCATIONS E. 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 working\Quarterly GW Monitoring Report DRAFT.mxd PLOTTED: 8/3/2016 2:55:37 PM BY: dolexa

P2-MW-03	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	36

TW-15-12	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	21
1,1-Dichloroethene	7 µg/L	10

MW-13-43	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	310

MW-14-58	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	14
Vanadium	0.0045 mg/L	0.007

MW-15-72	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	190

MW-12-05	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	92
1,4-Dioxane (Resample)	7.2 µg/L	10

MW-14-54	Res DW	Concentration
Benzene	5 µg/L	550
Ethylbenzene	74 µg/L	860
Total Xylenes	280 µg/L	880

MW-12-01	Res DW	Concentration
Arsenic	0.01 mg/L	0.02
Arsenic (dissolved)	0.01 mg/L	0.013

MW-12-07	Res DW	Concentration
bis(2-Ethylhexyl)phthalate	6 µg/L	8

MW-13-51	Res DW	Concentration
Arsenic	0.01 mg/L	0.013
Arsenic (dissolved)	0.01 mg/L	0.009

TW-14-03	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	240

TW-15-13	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	340

PW-14-02	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	220

MW-13-45	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	49

MW-14-59	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	80
1,1-Dichloroethene	7 µg/L	18

MW-14-60	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	131
Vinyl Chloride	2 µg/L	9

MW-14-62	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	176

TW-14-02	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	132
1,4-Dioxane (Resample)	7.2 µg/L	2,780

PW-14-01	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	440

MW-12-08	Res DW	Concentration
Arsenic	0.01 mg/L	0.019
Arsenic (dissolved)	0.01 mg/L	0.019
Vanadium	0.0045 mg/L	0.02
Vanadium (dissolved)	0.0045 mg/L	0.021

MW-14-63 MW-12-02 P2-MW-01 P2-MW-03 MW-16-80 TW-14-03 TW-15-12 TW-14-03 MW-13-44 MW-13-43 TW-15-13 PW-14-02 MW-13-42 MW-15-73 MW-13-45 P2-SB-20 P2-SB-03 MW-14-59 MW-14-58 MW-16-83 MW-14-60 MW-16-82 LMW-12-02 LMW-12-08 LMW-14-14D PMW-PM LMW-12-07 MW-12-05 MW-15-72 LMW-12-03S/D MW-14-61 LMW-12-01 LMW-14 P2-SB-37 MW-12-06 MW-14-57 LMW-15-17D PMW-03 MW-12-09 MW-14-56 LMW-12-06 LMW-12-05 LMW-12-04 P2-SB-06 LMW-15-16D MW-14-62 MW-16-81 MW-16-79 MW-12-18 MW-14-55 MW-14-54 TW-14-02 MW-16-74 MW-16-78 TW-14-01 PW-14-01 MW-16-76 MW-12-01 MW-16-77 MW-16-75 MW-12-07 MW-12-08 P2-MW-02 MW-13-51 MW-13-52 MW-13-50 MW-13-53 MW-12-17 MW-03(2) MW-02(2) MW-01(2) MWBP-12-UST5-6 MWBP-10-UST5-6 P2-MW-04

N

0 200 400

SCALE IN FEET

LEGEND

EXISTING MONITORING WELLS

- NAPL MONITORING WELL
- PERCHED MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL; TEST MW
- BEDROCK MONITORING WELL
- 2Q16 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
* : EXTENT OF IMPACTS UPDATED BASED ON THE RESULTS OF ARCADIS 2015 LOWER 1,4-DIOXANE PLUME TOE INVESTIGATION AND 2016 SUPPLEMENTAL LOWER 1,4-DIOXANE PLUME TOE INVESTIGATION

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

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

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\working\Quarterly GW Monitoring Report DRAFT.mxd PLOTTED: 8/2/2016 10:11:20 PM BY: dolexa

MW-02-04(3)	Res DW	Concentration
Arsenic	0.01 mg/L	**0.031**
Arsenic (dissolved)	0.01 mg/L	0.01

MW-13-40	Res DW	Concentration
Arsenic	0.01 mg/L	**0.026**
Arsenic (dissolved)	0.01 mg/L	**0.027**

MW-13-41	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**12**
bis(2-Ethylhexyl)phthalate	6 µg/L	**13**
Arsenic	0.01 mg/L	**0.02**
Arsenic (dissolved)	0.01 mg/L	**0.02**

MW-04-03(3)	Res DW	Concentration
Vinyl Chloride	2 µg/L	**9**

UNK-10	Res DW	Concentration
Arsenic	0.01 mg/L	**0.012**

CH-14-RO	Res DW	Concentration
Chromium	0.1 mg/L	**12.9**
Chromium VI (hexavalent)	0.1 mg/L	**13**
Vanadium	0.0045 mg/L	**0.191**

UNK-09	Res DW	Concentration
Arsenic	0.01 mg/L	**0.012**

MW-13-28	Res DW	Concentration
Boron	0.5 mg/L	**0.66**

MW-12-21	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**360**
Boron	0.5 mg/L	**1.04**
Boron (dissolved)	0.5 mg/L	**1.04**

MW-13-22	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**170**

MW-91-5	Res DW	Concentration
Arsenic	0.01 mg/L	**0.011**
Arsenic (dissolved)	0.01 mg/L	**0.012**

TW-14-07	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**175**

TW-15-10	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**170**

MW-13-25	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**25**

TW-14-08	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**890**

MW-13-29	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**18**

TW-14-06	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**720**

TW-14-09	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**510**
Lead	0.004 mg/L	**0.013**
Lead (dissolved)	0.004 mg/L	<0.003

PW-14-03	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**450**

MW-13-32	Res DW	Concentration
Nickel	0.1 mg/L	**1.19**

MW-13-31	Res DW	Concentration
Lead	0.004 mg/L	**0.005**

MW-13-48	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**280**

MW-13-34	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**64**

MW-04-04
MW-91-4
MW-13-39B
MW-88-1
MW-12-04
MW-02-03(3)
MW-13-40
MW-02-04(3)
MW-04-03
MW-04-02
P3-SB-07
MW-02-02(3)
MW-93-1
MW-13-38
MW-13-41
MW-91-3
MW-91-2
MW-13-37
CH-14-RO
LMW-12-09
UNK-15
MW-05
MW-23
MW-19
UNK-09
UNK-10
MW-22
LMW-12-11
MW-12-19
LMW-12-10
P3-SB-28
MW-14-65
MW-15-71
MW-12-20
MW-13-26
MW-02-01(3)
MW-04-01(3)
MW-13-30
MW-91-5
MW-13-24
MW-12-21
MW-13-28
MW-13-22
MW-13-23
MW-13-27
MW-14-64
TW-15-10
TW-14-07
TW-14-06
TW-14-08
TW-14-09
TW-15-11
PW-14-03
MW-13-25
MW-13-29
MW-13-31
MW-13-32
MW-13-33
MW-91-6
MW-13-46
MW-13-47
MW-13-48
MW-13-34
MW-13-49

0 250 500
SCALE IN FEET

LEGEND

EXISTING MONITORING WELLS

- NAPL MONITORING WELL
- PERCHED MONITORING WELL
- DEEP OVERBURDEN MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL; TEST MW
- BEDROCK MONITORING WELL
- 2Q16 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

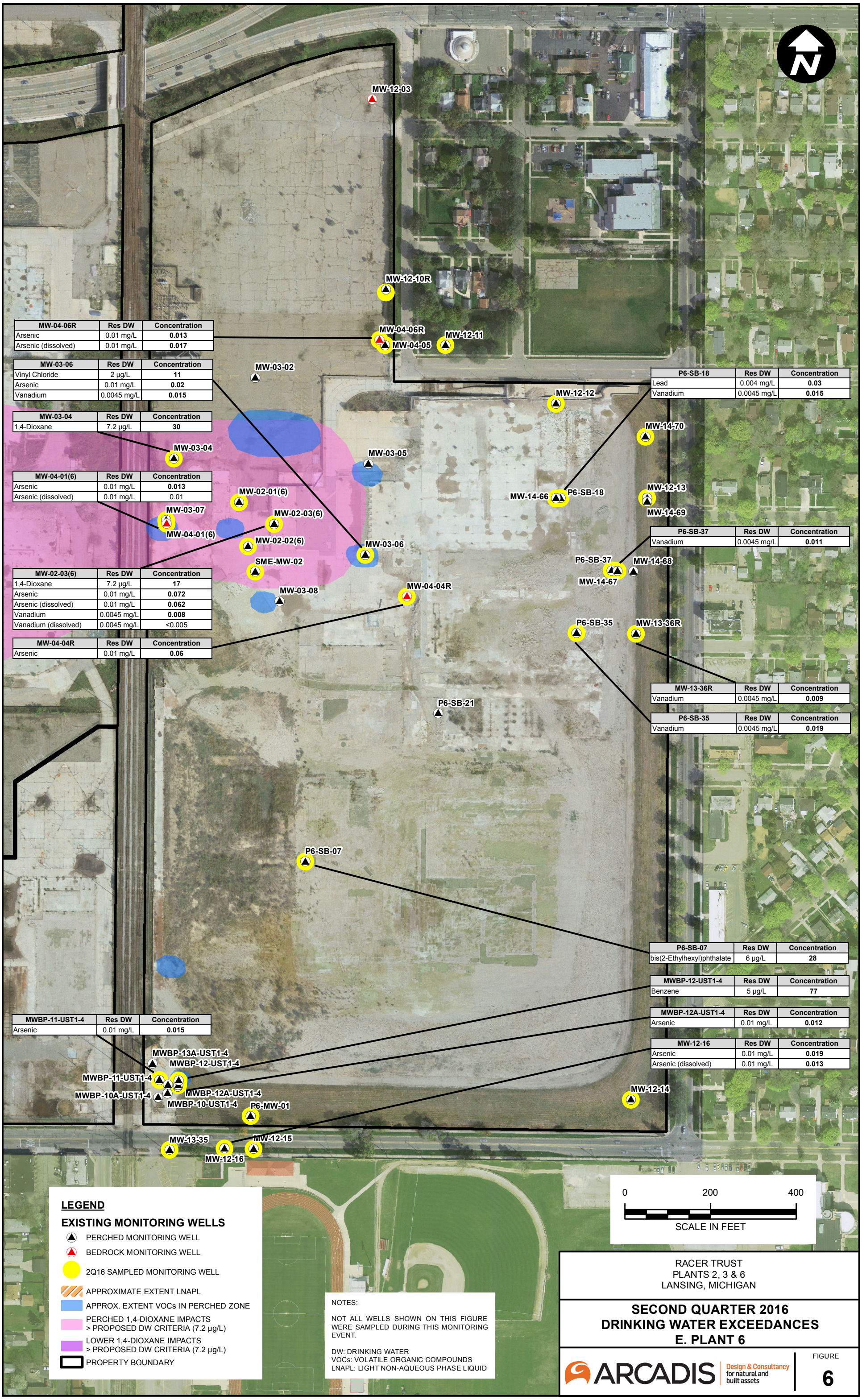
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SECOND QUARTER 2016 DRINKING WATER EXCEEDANCES PLANT 3

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5

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\working\Quarterly GW Monitoring Report DRAFT.mxd PLOTTED: 8/3/2016 2:55:37 PM BY: dolexa



MW-04-06R	Res DW	Concentration
Arsenic	0.01 mg/L	**0.013**
Arsenic (dissolved)	0.01 mg/L	**0.017**

MW-03-06	Res DW	Concentration
Vinyl Chloride	2 µg/L	**11**
Arsenic	0.01 mg/L	**0.02**
Vanadium	0.0045 mg/L	**0.015**

MW-03-04	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**30**

MW-04-01(6)	Res DW	Concentration
Arsenic	0.01 mg/L	**0.013**
Arsenic (dissolved)	0.01 mg/L	0.01

MW-02-03(6)	Res DW	Concentration
1,4-Dioxane	7.2 µg/L	**17**
Arsenic	0.01 mg/L	**0.072**
Arsenic (dissolved)	0.01 mg/L	**0.062**
Vanadium	0.0045 mg/L	**0.008**
Vanadium (dissolved)	0.0045 mg/L	<0.005

MW-04-04R	Res DW	Concentration
Arsenic	0.01 mg/L	**0.06**

P6-SB-18	Res DW	Concentration
Lead	0.004 mg/L	**0.03**
Vanadium	0.0045 mg/L	**0.015**

P6-SB-37	Res DW	Concentration
Vanadium	0.0045 mg/L	**0.011**

MW-13-36R	Res DW	Concentration
Vanadium	0.0045 mg/L	**0.009**

P6-SB-35	Res DW	Concentration
Vanadium	0.0045 mg/L	**0.019**

P6-SB-07	Res DW	Concentration
bis(2-Ethylhexyl)phthalate	6 µg/L	**28**

MWBP-12-UST1-4	Res DW	Concentration
Benzene	5 µg/L	**77**

MWBP-12A-UST1-4	Res DW	Concentration
Arsenic	0.01 mg/L	**0.012**

MW-12-16	Res DW	Concentration
Arsenic	0.01 mg/L	**0.019**
Arsenic (dissolved)	0.01 mg/L	**0.013**

MWBP-11-UST1-4	Res DW	Concentration
Arsenic	0.01 mg/L	**0.015**

LEGEND

EXISTING MONITORING WELLS

- PERCHED MONITORING WELL
- BEDROCK MONITORING WELL
- 2Q16 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

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SECOND QUARTER 2016 DRINKING WATER EXCEEDANCES E. PLANT 6

ARCADIS Design & Consultancy for natural and built assets

FIGURE 6

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\working\Quarterly GW Monitoring Report DRAFT.mxd PLOTTED: 8/3/2016 2:55:37 PM BY: dolexa

ATTACHMENT 1

Interim Groundwater Monitoring Plan – 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.

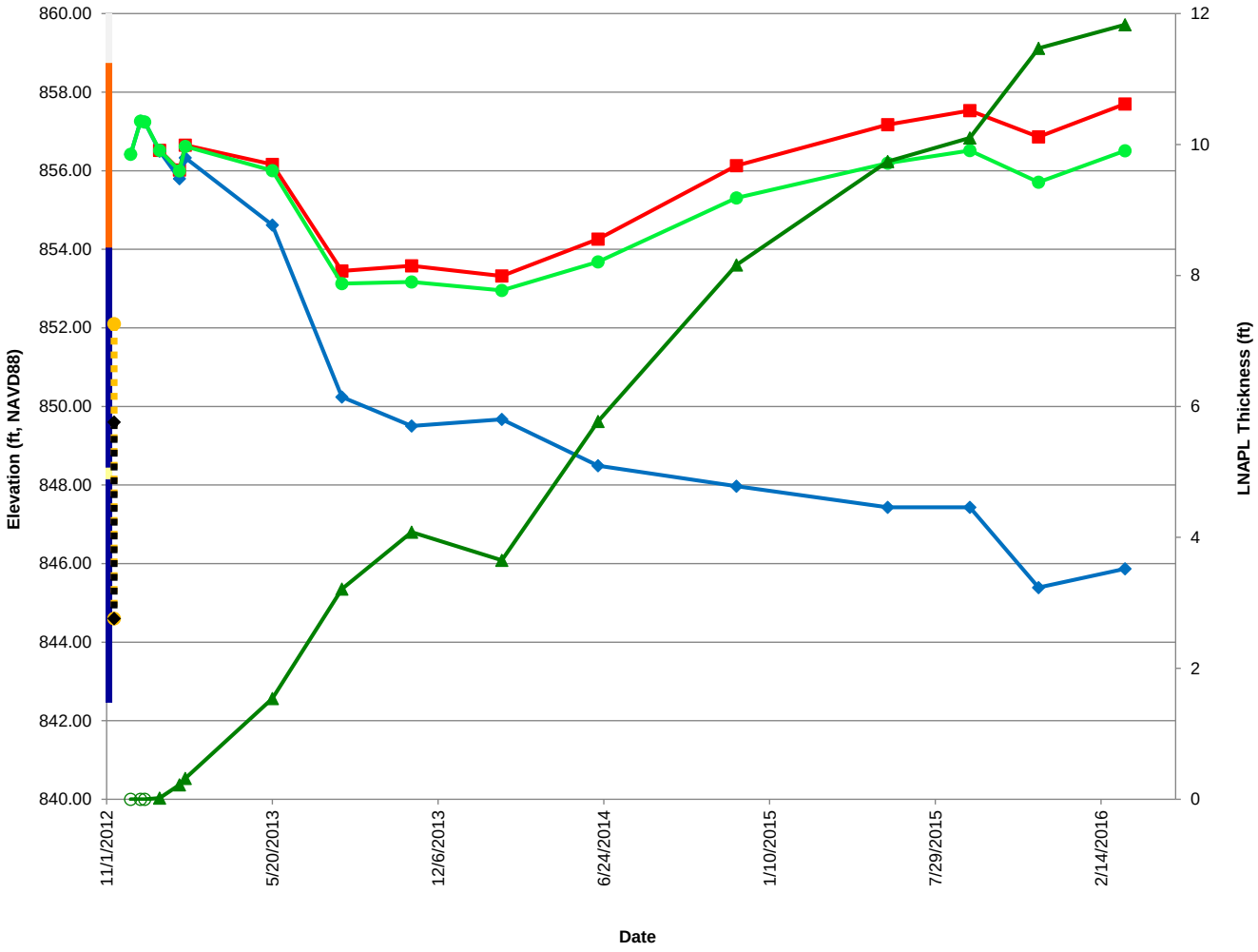
New wells will be added to the figures and incorporated into the semi-annual monitoring once 4 samples are collected and a COC list is determined

SA = semi-annual
Q = quarterly
A = annual

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

ATTACHMENT 2

LMW-2-10 Hydrograph



RACER Lansing
Lansing, MI

LMW-12-10 LNAPL HYDROGRAPH

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9

ATTACHMENT 3

Second Quarter 2016 Groundwater Sampling Logs

(on attached CD)

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 2	Tubing Length	20 [ft]
		Pump placement from TOC	13 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-01(2)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	206.27 [mL]
Well total depth	15.95 [ft]	Calculated Sample Rate	124 [sec]
Depth to top of screen	10.95 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	6.7 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:47:25	14.28	6.80	6132.80	29.42	0.43	54.07
	10:52:28	14.09	6.80	6149.96	24.47	0.43	54.11
	10:57:29	14.05	6.80	6149.79	20.85	0.42	54.37
	11:02:31	14.11	6.80	6166.40	16.85	0.40	54.11
	11:07:34	14.24	6.80	6171.02	14.81	0.40	53.98
Variance in last 3 readings	10:57:29	-0.04	0.00	-0.18	-3.63	-0.01	0.26
	11:02:31	0.06	0.00	16.62	-3.99	-0.02	-0.26
	11:07:34	0.13	0.00	4.61	-2.04	0.00	-0.13

Notes: Sample Time:1105
Pump Time:0900-1100
Parameters:VOC, 1,4 Dioxane, Methane, SVOC, Metals, Nitrate/Sulfate

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	25 [ft]
		Pump placement from TOC	16 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-03(2)	Final pumping rate	100 [mL/min]
Well diameter	0 [in]	Flowcell volume	228.59 [mL]
Well total depth	19.1 [ft]	Calculated Sample Rate	138 [sec]
Depth to top of screen	14.1 [ft]	Sample rate	300 [sec]
Screen length	5 [in]	Stabilized drawdown	0.6 [in]
Depth to Water	7 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:23:22	12.93	6.74	5782.07	2.98	1.40	34.93
	10:28:24	13.17	6.74	5773.69	1.52	1.31	24.54
	10:33:26	13.46	6.74	5762.18	1.47	1.25	23.22
	10:38:29	13.38	6.74	5728.20	1.76	1.19	25.62
	10:43:30	13.17	6.74	5675.35	2.00	1.14	30.07
Variance in last 3 readings	10:33:26	0.29	0.00	-11.51	-0.05	-0.07	-1.32
	10:38:29	-0.08	0.00	-33.98	0.29	-0.06	2.40
	10:43:30	-0.21	0.00	-52.85	0.23	-0.05	4.45

Notes: time:1046
pump time:850-1046
parameters:geochem svoc voc 1,4-Dixoxane metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	120 [ft]
		Pump placement from TOC	97 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-01	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	652.61 [mL]
Well total depth	111.1 [ft]	Calculated Sample Rate	392 [sec]
Depth to top of screen	86.1 [ft]	Sample rate	300 [sec]
Screen length	300 [in]	Stabilized drawdown	0.96 [in]
Depth to Water	81.13 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:01:03	19.90	7.06	2152.57	236.47	0.81	-118.37
	10:06:05	19.84	7.06	2154.25	216.72	0.81	-119.40
	10:11:07	19.91	7.06	2147.81	222.32	0.81	-120.25
	10:16:10	20.47	7.05	2152.47	211.60	0.80	-119.96
	10:21:12	21.95	7.04	2147.82	198.92	0.78	-118.33
Variance in last 3 readings	10:11:07	0.07	0.00	-6.44	5.61	-0.01	-0.86
	10:16:10	0.56	-0.01	4.67	-10.72	0.00	0.30
	10:21:12	1.49	-0.01	-4.65	-12.68	-0.03	1.63

Notes: time:1022
pump time:911-1022
parameters:voc14 metal svoc geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/3/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 2	Tubing Length	110 [ft]
		Pump placement from TOC	94 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-02	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	607.98 [mL]
Well total depth	101.25 [ft]	Calculated Sample Rate	365 [sec]
Depth to top of screen	81 [ft]	Sample rate	300 [sec]
Screen length	240 [in]	Stabilized drawdown	0 [in]
Depth to Water	72.25 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:23:17	19.80	6.99	1245.08	30.74	1.46	-73.80
	12:28:19	19.68	6.98	1235.38	32.18	1.09	-74.40
	12:33:21	19.16	6.99	1230.01	29.19	1.35	-72.98
	12:38:25	18.39	6.99	1227.16	40.07	1.31	-71.45
	12:43:26	19.94	6.98	1200.84	57.99	1.26	-73.54
Variance in last 3 readings	12:33:21	-0.52	0.00	-5.38	-2.99	0.26	1.41
	12:38:25	-0.77	0.00	-2.84	10.88	-0.04	1.54
	12:43:26	1.55	0.00	-26.33	17.91	-0.05	-2.10

Notes: Sample Time: 1250
Parameters: Vocs, 1,4 Dioxane, Geochem.
Purged: 2 gallons

In-Situ Inc.

Troll 9000 | Low-Flow System
5/17/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	100 [ft]
		Pump placement from TOC	95 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-05	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	563.34 [mL]
Well total depth	102 [ft]	Calculated Sample Rate	339 [sec]
Depth to top of screen	75 [ft]	Sample rate	300 [sec]
Screen length	25 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	76.88 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	9:13:39	13.30	6.98	3699.57	8.38	0.49	-216.21
	9:18:41	13.31	6.98	3695.89	8.23	0.45	-220.18
	9:23:43	13.59	6.98	3698.87	8.12	0.42	-221.63
	9:28:45	13.24	6.98	3710.17	8.09	0.41	-225.52
	9:33:47	13.32	6.98	3699.33	7.90	0.40	-225.36
Variance in last 3 readings	9:23:43	0.28	-0.01	2.98	-0.12	-0.03	-1.45
	9:28:45	-0.35	0.00	11.31	-0.03	-0.01	-3.89
	9:33:47	0.07	0.00	-10.84	-0.19	-0.01	0.16

Notes:
time: 0935
pump time: 40min
purge volume: 2.0
parameters: voc, 1 4 dioxane, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	100 [ft]
		Pump placement from TOC	90 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-06	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	563.34 [mL]
Well total depth	103.43 [ft]	Calculated Sample Rate	339 [sec]
Depth to top of screen	78.43 [ft]	Sample rate	300 [sec]
Screen length	300 [in]	Stabilized drawdown	1.32 [in]
Depth to Water	78.35 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:08:06	20.58	7.27	1007.61	6.29	0.73	-137.97
	13:13:09	20.58	7.27	1013.38	5.35	0.73	-140.71
	13:18:10	20.13	7.27	1006.55	5.57	0.72	-138.40
	13:23:12	20.51	7.28	1007.30	5.59	0.70	-139.82
	13:28:15	20.62	7.27	1008.98	5.84	0.72	-142.30
Variance in last 3 readings	13:18:10	-0.45	0.00	-6.83	0.21	-0.01	2.31
	13:23:12	0.37	0.00	0.75	0.03	-0.01	-1.42
	13:28:15	0.11	0.00	1.68	0.25	0.02	-2.48

Notes: time:1325
pump time:1158-1325
parameters:voc 1,4D geochem svoc metal

In-Situ Inc.

Troll 9000 | Low-Flow System
5/13/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	18 [ft]
		Pump placement from TOC	14 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-07	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	197.34 [mL]
Well total depth	17.7 [ft]	Calculated Sample Rate	119 [sec]
Depth to top of screen	12.7 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	6.68 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	9:30:12	9.99	7.38	831.10	15.18	6.26	-48.73
	9:35:14	10.11	7.37	831.26	15.70	6.26	-49.76
	9:40:16	10.20	7.37	830.29	15.07	6.26	-49.67
	9:45:19	10.21	7.36	829.21	15.40	6.32	-49.75
	9:50:21	10.24	7.36	829.11	15.93	6.32	-51.08
Variance in last 3 readings	9:40:16	0.09	0.00	-0.97	-0.63	0.01	0.09
	9:45:19	0.01	-0.01	-1.08	0.34	0.05	-0.08
	9:50:21	0.03	0.00	-0.10	0.53	0.01	-1.32

Notes: time: 0955
pump time: 1hr20min
purge volume: 4.0
parameters: voc, svoc, 1,4 dioxane, metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	29 [ft]
		Pump placement from TOC	24 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-08	Final pumping rate	200 [mL/min]
Well diameter	0 [in]	Flowcell volume	246.44 [mL]
Well total depth	27.39 [ft]	Calculated Sample Rate	74 [sec]
Depth to top of screen	22.39 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	5.84 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	16:27:54	12.74	6.82	16562.56	14.22	0.96	-276.21
	16:32:57	12.74	6.82	16541.14	13.62	0.16	-274.03
	16:37:59	12.85	6.82	16435.17	12.12	0.14	-273.40
	16:43:01	12.84	6.82	16674.18	11.68	0.15	-271.65
	16:48:03	12.64	6.81	16599.50	11.94	0.15	-271.86
Variance in last 3 readings	16:37:59	0.11	0.00	-105.97	-1.50	-0.03	0.63
	16:43:01	0.00	0.00	239.02	-0.44	0.01	1.75
	16:48:03	-0.20	-0.01	-74.68	0.26	0.00	-0.22

Notes:
time: 1650
pump time: 1hr50min
purge volume: 4.5
parameters: voc, 1,4 dioxane, svoc, total dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	30 [ft]
		Pump placement from TOC	20 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-09	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	250.9 [mL]
Well total depth	21.6 [ft]	Calculated Sample Rate	302 [sec]
Depth to top of screen	16.6 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.48 [in]
Depth to Water	13.26 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:35:19	13.43	6.70	4108.77	41.88	1.13	-12.91
	11:40:22	13.43	6.70	4069.96	37.42	1.24	-5.29
	11:45:24	13.49	6.70	4057.61	36.73	1.31	-5.59
	11:50:26	13.12	6.70	4095.65	37.42	1.39	-7.26
	11:55:28	13.95	6.70	4079.21	37.83	1.44	-8.75
Variance in last 3 readings	11:45:24	0.06	0.00	-12.35	-0.69	0.07	-0.30
	11:50:26	-0.37	0.00	38.04	0.69	0.08	-1.67
	11:55:28	0.83	-0.01	-16.44	0.41	0.05	-1.50

Notes: time:1200
pump time:1030-1200
parameters:voc 1,4D svoc metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	20 [ft]
		Pump placement from TOC	11.5 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-17	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	206.27 [mL]
Well total depth	14 [ft]	Calculated Sample Rate	124 [sec]
Depth to top of screen	9 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	5.85 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:23:29	13.72	7.73	632.19	11.44	2.21	-173.28
	13:28:31	13.72	7.72	625.06	11.20	2.19	-172.63
	13:33:34	13.66	7.71	619.27	7.45	2.17	-174.17
	13:38:37	13.97	7.71	610.95	7.37	2.14	-181.62
	13:43:38	14.02	7.70	608.74	5.58	2.09	-183.58
Variance in last 3 readings	13:33:34	-0.06	0.00	-5.78	-3.75	-0.01	-1.54
	13:38:37	0.31	-0.01	-8.32	-0.08	-0.04	-7.44
	13:43:38	0.05	-0.01	-2.21	-1.79	-0.04	-1.97

Notes: time:1345
pump time:1230-1345
parameters:geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/13/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	34 [ft]
		Pump placement from TOC	30 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-18	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	268.76 [mL]
Well total depth	34.8 [ft]	Calculated Sample Rate	162 [sec]
Depth to top of screen	29.8 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	22.94 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-100 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	11:56:34	12.63	7.07	2937.06	19.15	0.06	-314.43
	12:01:37	12.35	7.08	2932.06	20.54	0.05	-312.17
	12:06:38	12.60	7.08	2930.29	21.83	0.11	-278.12
	12:11:39	13.11	7.07	2938.17	23.01	0.09	-282.47
	12:16:43	13.26	7.07	2930.95	23.33	0.11	-298.59
Variance in last 3 readings	12:06:38	0.25	0.00	-1.78	1.29	0.07	34.05
	12:11:39	0.51	0.00	7.88	1.19	-0.03	-4.36
	12:16:43	0.15	0.00	-7.22	0.32	0.03	-16.12

Notes:
time:
pump time:
purge volume:
parameters: voc, svoc, 1 4 dioxane, total dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	85 [ft]
		Pump placement from TOC	77 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-43	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	496.39 [mL]
Well total depth	79.8 [ft]	Calculated Sample Rate	298 [sec]
Depth to top of screen	74.8 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.72 [in]
Depth to Water	71.25 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:20:54	11.28	6.59	3200.67	0.70	1.70	-16.89
	9:21:25	11.26	6.59	3200.96	0.99	1.64	-17.14
	9:23:43	11.19	6.59	3203.84	0.63	1.68	-18.00
	9:28:46	12.70	6.90	1.79	1.50	17.24	60.59
	9:33:47	14.00	7.11	1.74	1.78	16.29	69.08
Variance in last 3 readings	9:23:43	-0.07	0.00	2.88	-0.35	0.04	-0.85
	9:28:46	1.51	0.31	-3202.04	0.86	15.56	78.58
	9:33:47	1.29	0.21	-0.06	0.28	-0.94	8.49

Notes: time:923
pump time:800-923
parameters:voc 1,4-D, methane ,total fe as, total/diss manganese iron, sulfate,nitrate
Final reading should be the 9:23:43

In-Situ Inc.

Troll 9000 Low-Flow System
5/5/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	105 [ft]
		Pump placement from TOC	100 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-44	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	585.66 [mL]
Well total depth	119.3 [ft]	Calculated Sample Rate	703 [sec]
Depth to top of screen	94.3 [ft]	Sample rate	300 [sec]
Screen length	25 [ft]	Stabilized drawdown	3.36 [in]
Depth to Water	82.12 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:05:45	17.37	8.00	1309.82	27.02	1.10	-271.21
	11:10:48	17.72	8.00	1317.66	29.46	1.12	-283.22
	11:15:50	17.95	8.00	1322.07	30.07	1.06	-295.93
	11:20:51	18.28	7.99	1321.74	31.49	1.05	-301.87
	11:25:54	18.10	7.99	1323.19	33.52	1.01	-304.87
Variance in last 3 readings	11:15:50	0.23	0.00	4.41	0.61	-0.06	-12.71
	11:20:51	0.33	0.00	-0.33	1.42	-0.01	-5.95
	11:25:54	-0.17	0.00	1.45	2.03	-0.04	-2.99

Notes: time:1129
pump time:1038
parameters:voc, 1,4-D, total\diss as pb cr

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	85 [ft]
		Pump placement from TOC	76 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-45	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	496.39 [mL]
Well total depth	78.3 [ft]	Calculated Sample Rate	298 [sec]
Depth to top of screen	73.38 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	2.4 [in]
Depth to Water	70.38 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00
	13:31:20	12.88	7.37	1324.12	6.46	1.86	-178.47
	13:36:21	12.65	7.33	1325.62	10.49	1.11	-203.37
	13:41:23	12.52	7.31	1329.11	12.05	1.06	-211.25
	13:46:25	12.60	7.31	1329.39	9.01	1.09	-212.02
Variance in last 3 readings	13:36:21	-0.24	-0.04	1.50	4.02	-0.75	-24.90
	13:41:23	-0.13	-0.02	3.49	1.56	-0.05	-7.88
	13:46:25	0.09	-0.01	0.28	-3.04	0.03	-0.78

Notes: time:1350
pump time:1328-1350
parameters:voc 14

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	90 [ft]
		Pump placement from TOC	86 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-51	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	518.71 [mL]
Well total depth	89.84 [ft]	Calculated Sample Rate	623 [sec]
Depth to top of screen	84.84 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	4.2 [in]
Depth to Water	75.39 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:26:52	18.87	6.86	1687.30	14.70	0.81	-21.38
	13:31:55	18.77	6.86	1689.60	15.30	0.81	-21.94
	13:36:56	18.16	6.86	1698.83	15.26	0.84	-22.29
	13:41:57	17.85	6.86	1691.43	13.31	0.83	-22.63
	13:47:00	18.60	6.86	1693.33	13.51	0.80	-23.61
Variance in last 3 readings	13:36:56	-0.60	0.00	9.23	-0.04	0.02	-0.35
	13:41:57	-0.31	0.00	-7.40	-1.95	-0.01	-0.35
	13:47:00	0.74	0.00	1.90	0.20	-0.02	-0.98

Notes: time:1350
pump time:1108-1350
parameters:voc14 metal svoc

In-Situ Inc.

Troll 9000 | Low-Flow System
5/17/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	25 [ft]
		Pump placement from TOC	18 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-14-54	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	228.59 [mL]
Well total depth	19.04 [ft]	Calculated Sample Rate	138 [sec]
Depth to top of screen	14.04 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.84 [in]
Depth to Water	12.89 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [FNU]	DO [mg/L]	ORP [V]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:25:55	57.86	8.20	1253.35	4.60	7.89	-0.09
	11:30:57	59.28	8.20	1256.45	5.43	8.66	-0.09
	11:36:00	59.32	8.20	1242.04	8.12	9.05	-0.10
	11:41:02	59.81	8.21	1232.66	6.68	8.96	-0.11
	11:46:03	60.26	8.21	1221.10	7.75	8.34	-0.11
Variance in last 3 readings	11:36:00	0.04	0.00	-14.41	2.69	0.39	-0.01
	11:41:02	0.49	0.00	-9.38	-1.44	-0.08	-0.01
	11:46:03	0.45	0.00	-11.56	1.07	-0.62	-0.01

Notes: time:1153
pump time:1055-1153
parameters:voc select metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	30 [ft]
		Pump placement from TOC	19.5 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-14-55	Final pumping rate	60 [mL/min]
Well diameter	2 [in]	Flowcell volume	250.9 [mL]
Well total depth	20.1 [ft]	Calculated Sample Rate	251 [sec]
Depth to top of screen	15.1 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	16.2 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	16:14:32	17.65	7.24	730.90	16.60	6.37	-49.19
	16:19:34	18.32	7.25	731.66	12.12	6.24	-41.49
	16:24:36	18.24	7.25	731.71	13.40	6.29	-40.81
	16:29:38	17.41	7.26	733.74	12.82	6.49	-58.41
	16:34:40	17.00	7.25	730.40	11.64	6.54	-52.17
Variance in last 3 readings	16:24:36	-0.08	0.00	0.05	1.28	0.05	0.68
	16:29:38	-0.83	0.00	2.03	-0.58	0.20	-17.59
	16:34:40	-0.41	0.00	-3.35	-1.18	0.05	6.24

Notes: time:1635
pump time:1430-1635
parameters:voc select metal

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	82 [ft]
		Pump placement from TOC	77.75 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-14-56	Final pumping rate	0 [mL/min]
Well diameter	2 [in]	Flowcell volume	483 [mL]
Well total depth	78.95 [ft]	Calculated Sample Rate	14490 [sec]
Depth to top of screen	73 [ft]	Sample rate	300 [sec]
Screen length	5 [in]	Stabilized drawdown	0 [in]
Depth to Water	74.76 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:41:12	13.80	6.71	5976.50	4.69	14.90	238.54
	9:46:15	13.78	6.71	5965.44	5.30	14.96	240.13
	9:51:18	13.75	6.72	5965.72	5.31	14.91	239.83
	9:56:20	13.61	6.73	5967.34	6.57	14.87	239.65
	10:01:21	13.42	6.73	5916.04	5.97	15.30	244.61
Variance in last 3 readings	9:51:18	-0.03	0.01	0.28	0.01	-0.05	-0.30
	9:56:20	-0.15	0.01	1.62	1.26	-0.03	-0.18
	10:01:21	-0.18	0.01	-51.30	-0.60	0.43	4.96

Notes: time:1005
pump time:905-1005
parameters:voc 1,4 diox

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	26 [ft]
		Pump placement from TOC	17.5 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-14-57	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	233.05 [mL]
Well total depth	21.38 [ft]	Calculated Sample Rate	140 [sec]
Depth to top of screen	16.38 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	12.9 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:48:14	11.06	7.31	941.50	13.29	0.63	-172.62
	15:53:16	11.11	7.31	941.22	15.18	0.64	-169.15
	15:58:19	11.02	7.31	940.91	9.85	0.65	-170.14
	16:03:20	10.96	7.31	940.90	8.48	0.63	-167.27
	16:08:23	10.91	7.31	940.24	6.83	0.64	-164.37
Variance in last 3 readings	15:58:19	-0.09	0.00	-0.31	-5.33	0.01	-0.99
	16:03:20	-0.05	0.00	-0.02	-1.37	-0.02	2.86
	16:08:23	-0.06	0.00	-0.66	-1.66	0.01	2.91

Notes: time:1610
pump time:1420-1610
parameters:voc14 select metal

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	85 [ft]
		Pump placement from TOC	76 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-14-61	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	496.39 [mL]
Well total depth	77.45 [ft]	Calculated Sample Rate	298 [sec]
Depth to top of screen	72.45 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	73.06 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:00:54	19.03	7.08	1179.05	10.32	0.87	-73.74
	15:05:56	18.85	7.08	1176.24	10.22	0.83	-80.51
	15:10:58	19.13	7.07	1179.37	7.28	0.85	-78.37
	15:16:01	18.95	7.07	1177.52	5.66	0.83	-84.36
	15:21:03	19.36	7.06	1175.31	5.22	0.88	-87.19
Variance in last 3 readings	15:10:58	0.29	-0.01	3.13	-2.94	0.02	2.14
	15:16:01	-0.18	0.00	-1.85	-1.62	-0.01	-5.99
	15:21:03	0.42	-0.01	-2.21	-0.44	0.04	-2.82

Notes: time:1523
pump time:1443-1523
parameters:voc14

In-Situ Inc.

Troll 9000 | Low-Flow System
5/3/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	79 [ft]
		Pump placement from TOC	74 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-14-63	Final pumping rate	0 [mL/min]
Well diameter	2 [in]	Flowcell volume	469.61 [mL]
Well total depth	76.7 [ft]	Calculated Sample Rate	14089 [sec]
Depth to top of screen	71.7 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.48 [in]
Depth to Water	71.79 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:18:55	17.34	6.74	1586.29	84.33	1.51	141.58
	11:23:58	17.56	6.74	1622.18	73.15	1.59	134.14
	11:29:00	17.17	6.75	1595.11	61.20	1.65	132.21
	11:34:01	17.26	6.75	1582.93	60.57	1.78	128.35
	11:39:03	17.07	6.75	1565.79	57.14	1.70	128.72
Variance in last 3 readings	11:29:00	-0.39	0.00	-27.07	-11.96	0.06	-1.93
	11:34:01	0.09	0.00	-12.18	-0.62	0.13	-3.86
	11:39:03	-0.20	0.01	-17.14	-3.43	-0.08	0.37

Notes: time:1141
pump time: 1025-1141
parameters:voc 1,4 dioxane

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	72 [ft]
		Pump placement from TOC	66 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-15-72	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	438.37 [mL]
Well total depth	70 [ft]	Calculated Sample Rate	176 [sec]
Depth to top of screen	63 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	60.46 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	13:55:29	16.73	7.00	2439.84	16.97	0.13	-237.57
	14:00:31	16.88	6.99	2441.62	13.44	0.12	-239.45
	14:05:33	16.98	6.99	2439.21	15.78	0.12	-240.22
	14:10:35	16.90	6.99	2447.57	11.48	0.12	-242.91
	14:15:38	17.04	6.99	2452.07	12.43	0.11	-245.22
Variance in last 3 readings	14:05:33	0.10	0.00	-2.41	2.34	0.00	-0.77
	14:10:35	-0.07	0.00	8.35	-4.29	0.00	-2.69
	14:15:38	0.13	0.00	4.50	0.94	-0.01	-2.31

Notes:
time: 1420
pump time: 1hr20min
purge volume: 4.0
parameters: voc, 1 4 dioxane, svoc , total dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/13/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	90 [ft]
		Pump placement from TOC	78 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-15-73	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	518.71 [mL]
Well total depth	81.1 [ft]	Calculated Sample Rate	623 [sec]
Depth to top of screen	76.1 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	4.08 [in]
Depth to Water	76.27 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:39:45	14.06	6.89	5132.26	41.98	0.88	-166.32
	10:44:47	14.19	6.89	5138.08	40.00	0.89	-167.08
	10:49:48	13.70	6.89	5155.78	37.47	0.89	-168.11
	10:54:51	14.32	6.89	5139.20	37.23	0.88	-168.41
	10:59:54	14.44	6.89	5138.00	34.26	0.89	-168.88
Variance in last 3 readings	10:49:48	-0.49	0.01	17.70	-2.53	0.00	-1.03
	10:54:51	0.63	0.00	-16.58	-0.24	-0.01	-0.30
	10:59:54	0.11	0.00	-1.20	-2.97	0.00	-0.47

Notes: time:1105
pump time:908-1105
parameters:voc 14 svoc metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 2	Tubing Length	40 [ft]
		Pump placement from TOC	32 [ft]

Well Information:		**Pumping information:**	
Well ID	P2-MW-01	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	295.54 [mL]
Well total depth	34.78 [ft]	Calculated Sample Rate	178 [sec]
Depth to top of screen	29.78 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.84 [in]
Depth to Water	14.76 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:12:46	22.42	8.11	625.92	2.31	6.07	712.74
	15:17:48	21.35	8.06	630.08	2.53	6.24	717.75
	15:22:51	21.47	8.03	631.08	2.63	6.11	719.24
	15:27:54	21.78	8.01	629.98	3.31	5.98	719.67
	15:32:55	22.19	7.99	629.31	2.07	5.85	719.42
Variance in last 3 readings	15:22:51	0.12	-0.03	1.00	0.10	-0.13	1.50
	15:27:54	0.31	-0.03	-1.10	0.68	-0.13	0.43
	15:32:55	0.41	-0.02	-0.67	-1.24	-0.13	-0.26

Notes: Sample Time:1545
Pump Time:1445-1535
Parameters:VOC, 1,4 dioxane, SVOC, metals**

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	45 [ft]
		Pump placement from TOC	39 [ft]

Well Information:		**Pumping information:**	
Well ID	p2-mw-01	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	317.85 [mL]
Well total depth	40.2 [ft]	Calculated Sample Rate	382 [sec]
Depth to top of screen	35.2 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	37.33 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:46:15	12.20	7.03	889.38	4.16	0.76	-162.74
	8:51:16	12.37	7.03	904.59	7.35	0.69	-165.57
	8:56:18	12.38	7.04	915.06	2.00	0.65	-169.46
	9:01:20	12.40	7.04	926.30	1.82	0.62	-172.50
	9:06:23	12.51	7.05	937.00	1.46	0.63	-174.55
Variance in last 3 readings	8:56:18	0.01	0.01	10.46	-5.35	-0.04	-3.89
	9:01:20	0.02	0.00	11.25	-0.18	-0.03	-3.04
	9:06:23	0.12	0.01	10.69	-0.36	0.01	-2.05

Notes: time:909
pump time:815-909
parameters: voc 14 metals svocs

In-Situ Inc.

Troll 9000 Low-Flow System
5/3/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	29 [ft]
		Pump placement from TOC	25 [ft]

Well Information:		**Pumping information:**	
Well ID	p2-mw-03	Final pumping rate	0 [mL/min]
Well diameter	2 [in]	Flowcell volume	246.44 [mL]
Well total depth	27.2 [ft]	Calculated Sample Rate	7394 [sec]
Depth to top of screen	22.2 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	9.2 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:42:14	19.25	6.84	2005.81	106.73	1.19	67.56
	14:47:16	20.69	6.83	1959.27	140.10	1.19	60.71
	14:52:18	19.41	6.83	1993.08	152.90	1.26	54.85
	14:57:19	20.28	6.82	1980.42	348.04	1.23	47.65
	15:02:23	18.99	6.83	1996.76	178.14	1.32	50.59
Variance in last 3 readings	14:52:18	-1.29	0.00	33.81	12.79	0.07	-5.87
	14:57:19	0.87	-0.01	-12.66	195.14	-0.03	-7.20
	15:02:23	-1.29	0.01	16.34	-169.90	0.10	2.94

Notes: time:1508
pump time:1345-1508
parameters:voc 1,4 dio, svoc, metals**

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	30 [ft]
		Pump placement from TOC	19 [ft]

Well Information:		**Pumping information:**	
Well ID	p2-sb-03	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	250.9 [mL]
Well total depth	22.1 [ft]	Calculated Sample Rate	302 [sec]
Depth to top of screen	17.1 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	16.86 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:35:50	13.26	7.34	1061.95	1.66	2.25	-107.31
	10:40:53	13.20	7.30	1061.21	1.16	2.13	-113.95
	10:45:55	13.04	7.28	1061.34	1.30	1.95	-123.27
	10:50:58	12.99	7.26	1061.39	1.40	1.88	-122.03
	10:55:59	12.76	7.26	1062.52	1.22	1.92	-124.22
Variance in last 3 readings	10:45:55	-0.16	-0.02	0.14	0.14	-0.18	-9.33
	10:50:58	-0.05	-0.01	0.05	0.09	-0.08	1.24
	10:55:59	-0.23	-0.01	1.13	-0.18	0.05	-2.18

Notes: time:1059
pump time:1020
parameters:voc14, metals, svoc, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	19 [ft]
		Pump placement from TOC	14 [ft]

Well Information:		**Pumping information:**	
Well ID	p2-sb-20	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	201.81 [mL]
Well total depth	16.29 [ft]	Calculated Sample Rate	243 [sec]
Depth to top of screen	11.29 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	.81 [in]
Depth to Water	8.51 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:56:38	11.11	9.99	298.60	15.94	3.85	-181.10
	16:01:40	11.13	9.99	298.13	15.65	3.64	-166.77
	16:06:43	11.06	9.99	299.11	15.88	3.53	-185.47
	16:11:44	10.90	9.99	296.59	17.51	3.31	-208.95
	16:16:47	10.92	9.99	298.34	15.37	3.15	-219.18
Variance in last 3 readings	16:06:43	-0.07	0.00	0.98	0.23	-0.11	-18.70
	16:11:44	-0.16	0.00	-2.52	1.63	-0.22	-23.48
	16:16:47	0.01	0.01	1.75	-2.14	-0.16	-10.23

Notes: time:1420
pump time:1400-1618
parameters:voc 14 di

In-Situ Inc.

Troll 9000 | Low-Flow System
5/17/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	81 [ft]
		Pump placement from TOC	76 [ft]

Well Information:		**Pumping information:**	
Well ID	pw-14-01	Final pumping rate	100 [mL/min]
Well diameter	6 [in]	Flowcell volume	478.54 [mL]
Well total depth	82.85 [ft]	Calculated Sample Rate	288 [sec]
Depth to top of screen	76.8 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	67.89 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	11:33:31	14.69	7.04	1812.16	5.38	0.29	-246.27
	11:38:35	15.14	7.03	1810.94	5.74	0.27	-247.46
	11:43:36	15.40	7.02	1814.90	6.42	0.26	-250.57
	11:48:38	15.16	7.03	1805.96	5.35	0.24	-253.73
	11:53:41	15.29	7.02	1814.77	5.43	0.24	-253.61
Variance in last 3 readings	11:43:36	0.25	0.00	3.96	0.69	-0.01	-3.11
	11:48:38	-0.24	0.00	-8.93	-1.08	-0.01	-3.17
	11:53:41	0.14	0.00	8.81	0.08	-0.01	0.13

Notes:

time: 1155
pump time: 55min
purge volume: 3.5
parameters: voc, 1 4 dioxane

dup-05

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	88 [ft]
		Pump placement from TOC	83 [ft]

Well Information:		**Pumping information:**	
Well ID	pw-14-02	Final pumping rate	110 [mL/min]
Well diameter	6 [in]	Flowcell volume	509.78 [mL]
Well total depth	85.3 [ft]	Calculated Sample Rate	279 [sec]
Depth to top of screen	80.3 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	70.63 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:39:09	18.13	6.78	3092.73	61.41	1.14	-86.60
	14:44:11	18.05	6.78	3089.55	67.74	1.17	-95.67
	14:49:14	18.23	6.79	3096.30	88.78	1.20	-101.95
	14:54:17	18.14	6.78	3091.64	93.87	1.22	-106.95
	14:59:17	17.93	6.79	3100.88	89.82	1.25	-111.01
Variance in last 3 readings	14:49:14	0.18	0.00	6.76	21.04	0.02	-6.29
	14:54:17	-0.09	0.00	-4.66	5.09	0.03	-5.00
	14:59:17	-0.21	0.00	9.24	-4.04	0.02	-4.06

Notes: time:1502
pump time:1348-1502
parameters:voc 14 dioxane as cr na pb

In-Situ Inc.

Troll 9000 | Low-Flow System
5/17/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 2	Tubing Length	75 [ft]
		Pump placement from TOC	70 [ft]

Well Information:		**Pumping information:**	
Well ID	TW-14-02	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	451.76 [mL]
Well total depth	85.3 [ft]	Calculated Sample Rate	272 [sec]
Depth to top of screen	60.3 [ft]	Sample rate	300 [sec]
Screen length	300 [in]	Stabilized drawdown	7.56 [in]
Depth to Water	66.34 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:14:27	13.11	7.01	4.70	19.02	5.40	99.67
	10:19:29	13.06	6.96	3827.26	102.51	1.22	68.69
	10:24:32	13.09	6.95	3837.06	103.00	0.81	66.72
	10:26:25	12.97	6.95	3838.95	118.31	0.80	66.55
	10:31:27	12.93	6.95	3845.22	84.78	0.75	65.65
Variance in last 3 readings	10:24:32	0.02	-0.01	9.81	0.49	-0.41	-1.97
	10:26:25	-0.12	0.00	1.88	15.31	-0.01	-0.17
	10:31:27	-0.04	0.00	6.28	-33.53	-0.05	-0.90

Notes: Sample Time:1040
Pump Time:910-1034
Parameters:VOC, 1,4 dioxane, SVOC, metals**

In-Situ Inc.

Troll 9000 Low-Flow System
5/6/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	90 [ft]
		Pump placement from TOC	80 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-14-03	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	518.71 [mL]
Well total depth	83.1 [ft]	Calculated Sample Rate	312 [sec]
Depth to top of screen	78.1 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	5.52 [in]
Depth to Water	71.45 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:23:04	11.54	6.30	5891.14	7.84	0.75	-25.51
	8:28:06	11.62	6.30	5933.07	8.36	0.73	-29.99
	8:33:08	11.91	6.30	5956.68	5.64	0.67	-33.33
	8:38:11	12.23	6.30	5978.34	7.50	0.65	-36.91
	8:43:13	12.50	6.29	5999.49	7.45	0.63	-39.60
Variance in last 3 readings	8:33:08	0.29	0.00	23.61	-2.71	-0.06	-3.33
	8:38:11	0.32	0.00	21.66	1.86	-0.02	-3.58
	8:43:13	0.27	0.00	21.15	-0.05	-0.02	-2.69

Notes: time:845
pump time:750-845
parameters:voc 14 di

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	80 [ft]
		Pump placement from TOC	74 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-15-12	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	474.08 [mL]
Well total depth	78.35 [ft]	Calculated Sample Rate	285 [sec]
Depth to top of screen	73.35 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.84 [in]
Depth to Water	68.25 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:39:33	16.95	7.26	2062.24	350.56	6.89	193.16
	10:44:35	16.65	7.26	2059.43	309.79	6.92	194.99
	10:49:38	16.68	7.26	2063.25	355.54	6.91	196.38
	10:54:41	17.24	7.25	2075.37	393.95	6.80	197.66
	10:59:42	17.03	7.24	2072.38	278.30	6.77	199.24
Variance in last 3 readings	10:49:38	0.03	0.00	3.82	45.75	-0.02	1.40
	10:54:41	0.56	-0.01	12.12	38.41	-0.11	1.28
	10:59:42	-0.21	-0.01	-2.98	-115.65	-0.03	1.58

Notes: time: 1102
pump time:954-1102
parameters: voc 14 as cr pb

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 2	Tubing Length	95 [ft]
		Pump placement from TOC	83.5 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-15-13	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	541.03 [mL]
Well total depth	87.1 [ft]	Calculated Sample Rate	325 [sec]
Depth to top of screen	82.1 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	70.95 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:30:51	18.31	6.87	3197.19	2.80	0.72	-34.10
	12:35:52	19.99	6.86	3207.97	3.13	0.72	-40.08
	12:40:55	20.06	6.86	3205.11	2.67	0.71	-46.45
	12:45:57	19.63	6.86	3185.68	4.22	0.72	-50.59
	12:50:58	19.77	6.86	3211.10	2.46	0.71	-54.14
Variance in last 3 readings	12:40:55	0.07	0.00	-2.86	-0.46	0.00	-6.37
	12:45:57	-0.42	0.00	-19.43	1.55	0.00	-4.14
	12:50:58	0.14	0.00	25.42	-1.75	-0.01	-3.55

Notes: time:1253
pump time:1138-1153
parameters:voc 14 di Na

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	18 [ft]
		Pump placement from TOC	13 [ft]

Well Information:		**Pumping information:**	
Well ID	CH-14-RO	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	197.34 [mL]
Well total depth	14.8 [ft]	Calculated Sample Rate	237 [sec]
Depth to top of screen	10 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	7.09 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:20:18	18.04	7.15	1135.95	1.42	0.85	-29.31
	14:25:20	18.27	7.14	1131.28	1.08	0.69	-32.95
	14:30:21	18.12	7.14	1135.92	1.25	0.69	-34.40
	14:35:22	18.12	7.13	1132.83	1.38	0.70	-34.66
	14:40:23	18.12	7.13	1132.43	1.32	0.69	-34.79
Variance in last 3 readings	14:30:21	-0.15	0.00	4.64	0.17	0.00	-1.45
	14:35:22	0.00	0.00	-3.09	0.14	0.01	-0.26
	14:40:23	0.00	0.00	-0.41	-0.06	0.00	-0.13

Notes:

Time: 14:40
Pump Time: 25 minutes
Purge volume: .25 gallon
Parameters: VOC 8260, 1,4, dioxane, SVOC 8270, Total metals, dissolved Fe, Mn, Nitrate/Sulfate, Methane, Hexavalent Chromium

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	70 [ft]
		Pump placement from TOC	65 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-01(3)	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	429.44 [mL]
Well total depth	72.2 [ft]	Calculated Sample Rate	516 [sec]
Depth to top of screen	62 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0 [in]
Depth to Water	54.43 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:55:28	17.50	7.47	664.02	22.11	1.46	-61.89
	16:00:29	17.44	7.48	658.81	21.86	1.51	-62.79
	16:05:31	17.59	7.48	659.88	24.77	1.56	-64.84
	16:10:37	17.57	7.48	666.47	32.10	1.55	-64.63
	16:15:38	17.57	7.48	658.76	20.60	1.57	-64.54
Variance in last 3 readings	16:05:31	0.15	0.00	1.07	2.91	0.04	-2.05
	16:10:37	-0.02	0.00	6.59	7.33	-0.01	0.21
	16:15:38	0.00	0.00	-7.72	-11.50	0.03	0.09

Notes:

Time: 16:15
Pump Time: 60 minutes
Purge volume: .6 gallons
Parameters: Total and dissolved Mn, Fe, Nitrate/Sulfate, Methane

Stick up well, locked, turbidity didn't stabilize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Peristaltic Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	84 [ft]
		Pump placement from TOC	79 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-02(3)	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	491.93 [mL]
Well total depth	83.8 [ft]	Calculated Sample Rate	591 [sec]
Depth to top of screen	74 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	3.6 [in]
Depth to Water	68.44 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:55:27	12.58	6.55	5889.16	12.26	8.65	-97.04
	9:00:29	12.92	6.55	5889.26	20.27	8.26	-96.65
	9:05:32	12.73	6.55	5896.85	7.89	8.07	-96.86
	9:10:35	12.72	6.55	5903.36	8.52	7.64	-96.73
	9:15:36	12.76	6.55	5898.95	7.97	7.61	-96.73
Variance in last 3 readings	9:05:32	-0.19	0.00	7.58	-12.38	-0.20	-0.21
	9:10:35	-0.01	0.00	6.51	0.63	-0.43	0.13
	9:15:36	0.04	0.00	-4.41	-0.56	-0.03	0.00

Notes:

Time: 19:15
Pump Time: 45 minutes
Purge volume: .45 gallon

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals, dissolved Mn, Fe, Nitrate/Sulfate, Methane

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	bladder pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	89 [ft]
		Pump placement from TOC	84 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-03(3)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	514.25 [mL]
Well total depth	89.1 [ft]	Calculated Sample Rate	309 [sec]
Depth to top of screen	79 [ft]	Sample rate	309 [sec]
Screen length	120 [in]	Stabilized drawdown	1.2 [in]
Depth to Water	66.15 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:01:51	16.76	6.96	2647.25	22.29	5.78	-85.90
	14:07:02	16.71	6.96	2679.28	26.97	5.50	-86.11
	14:12:12	16.56	6.96	2684.71	15.58	5.25	-87.61
	14:17:25	16.59	6.96	2674.45	13.15	5.19	-87.82
	14:22:35	16.52	6.96	2675.24	9.85	5.12	-88.50
Variance in last 3 readings	14:12:12	-0.15	0.00	5.43	-11.39	-0.25	-1.50
	14:17:25	0.03	0.00	-10.27	-2.43	-0.06	-0.21
	14:22:35	-0.07	0.00	0.80	-3.31	-0.07	-0.68

Notes:

Time: 14:20
Pump Time: 65 minutes
Purge volume: 1.3 gallons

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	bladder pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	83 [ft]
		Pump placement from TOC	78 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-04(3)	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	487.47 [mL]
Well total depth	84.3 [ft]	Calculated Sample Rate	585 [sec]
Depth to top of screen	74 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	3.6 [in]
Depth to Water	66.07 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:55:05	17.52	6.93	3292.11	185.55	2.98	-8.25
	16:00:06	17.95	6.93	3301.29	98.09	3.17	-6.33
	16:05:07	18.08	6.93	3290.72	94.22	3.17	-6.38
	16:10:08	18.14	6.93	3284.83	77.63	3.18	-6.33
	16:15:10	18.18	6.93	3283.11	69.12	3.18	-6.38
Variance in last 3 readings	16:05:07	0.13	0.00	-10.57	-3.87	0.01	-0.04
	16:10:08	0.06	0.00	-5.89	-16.59	0.01	0.04
	16:15:10	0.04	0.00	-1.71	-8.51	0.00	-0.04

Notes:

Time: 16:15
Pump Time: 60 minutes
Purge volume: .6 gallon

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total and dissolved metals

Lid secure, turbidity didn't stabilize

In-Situ Inc.

Troll 9000 Low-Flow System
5/9/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Peristaltic Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	105 [ft]
		Pump placement from TOC	100 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-01(3)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	585.66 [mL]
Well total depth	104.6 [ft]	Calculated Sample Rate	352 [sec]
Depth to top of screen	95 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	1.44 [in]
Depth to Water	53.82 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:50:11	14.35	7.54	1095.62	2.67	2.96	-4.78
	13:55:14	13.69	7.55	1084.52	1.81	2.92	1.03
	14:00:17	13.65	7.55	1082.85	0.80	2.87	5.66
	14:05:19	13.80	7.54	1091.80	1.37	2.80	9.44
	14:10:20	14.09	7.54	1085.67	0.79	2.81	11.57
Variance in last 3 readings	14:00:17	-0.04	0.00	-1.68	-1.01	-0.05	4.63
	14:05:19	0.14	-0.01	8.95	0.57	-0.07	3.78
	14:10:20	0.29	0.00	-6.13	-0.59	0.01	2.13

Notes:

Time: 14:10
Pump Time: 35 minutes
Purge volume: .7 gallon

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals, dissolved Mn, Fe, Nitrate/Sulfate, Methane

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	bladder pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	87 [ft]
		Pump placement from TOC	82 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-03(3)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	505.32 [mL]
Well total depth	87.4 [ft]	Calculated Sample Rate	304 [sec]
Depth to top of screen	77.5 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	67.23 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:05:19	14.58	6.93	1261.29	8.86	0.37	-128.53
	12:10:22	14.94	6.91	1488.22	3.99	0.33	-129.24
	12:15:24	15.35	6.91	1551.23	1.66	0.31	-128.71
	12:20:25	15.40	6.91	1565.62	1.57	0.29	-128.91
	12:25:27	15.46	6.91	1566.29	1.91	0.28	-128.74
Variance in last 3 readings	12:15:24	0.41	0.00	63.02	-2.33	-0.03	0.53
	12:20:25	0.04	0.00	14.39	-0.09	-0.02	-0.20
	12:25:27	0.06	0.00	0.67	0.34	0.00	0.17

Notes:

Time: 12:25
Pump Time: 35 minutes
Purge volume: .7 gallon
Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals

Lid secure

In-Situ Inc.

Troll 9000 Low-Flow System
5/16/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	79 [ft]
		Pump placement from TOC	74 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-04(3)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	469.61 [mL]
Well total depth	81.6 [ft]	Calculated Sample Rate	282 [sec]
Depth to top of screen	71.5 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0.12 [in]
Depth to Water	61.8 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:59:45	14.23	6.93	1668.26	78.45	0.22	-99.30
	13:04:47	14.28	6.93	1674.38	87.74	0.23	-98.01
	13:09:49	14.50	6.93	1658.50	75.33	0.24	-98.05
	13:14:50	14.60	6.93	1659.68	75.58	0.24	-98.00
	13:19:52	14.71	6.92	1671.92	75.66	0.24	-97.95
Variance in last 3 readings	13:09:49	0.23	0.00	-15.89	-12.41	0.00	-0.04
	13:14:50	0.10	0.00	1.18	0.24	0.00	0.05
	13:19:52	0.11	0.00	12.24	0.09	0.00	0.05

Notes:

Time: 13:22
Pump Time: 70 minutes
Purge volume: 1.4 gallons

Parameters: Total and dissolved Mn, Fe, Nitrate/Sulfate, Methane

Lid secure, cap locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	17 [ft]
		Pump placement from TOC	11 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-05(3)	Final pumping rate	50 [mL/min]
Well diameter	4 [in]	Flowcell volume	192.88 [mL]
Well total depth	15.25 [ft]	Calculated Sample Rate	232 [sec]
Depth to top of screen	10 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.72 [in]
Depth to Water	3.78 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:55:20	11.21	7.18	2170.27	0.63	0.90	-37.91
	14:00:20	11.05	7.18	2169.75	0.69	0.83	-37.11
	14:05:22	11.10	7.18	2169.60	0.84	0.77	-37.43
	14:10:25	11.03	7.18	2168.79	0.92	0.74	-35.43
	14:15:27	11.02	7.18	2168.33	1.28	0.72	-34.11
Variance in last 3 readings	14:05:22	0.05	0.00	-0.16	0.15	-0.06	-0.31
	14:10:25	-0.08	0.00	-0.81	0.07	-0.03	2.00
	14:15:27	-0.01	0.00	-0.45	0.36	-0.02	1.32

Notes:

Time: 14:15
Pump Time: 25 minutes
Purge volume: .25 gallon

Parameters: VOC-8260, select metals

Lid secure, MSMSD

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	13 [ft]
		Pump placement from TOC	8 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-06(3)	Final pumping rate	50 [mL/min]
Well diameter	4 [in]	Flowcell volume	175.02 [mL]
Well total depth	11.55 [ft]	Calculated Sample Rate	211 [sec]
Depth to top of screen	6.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	1.2 [in]
Depth to Water	2.53 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:20:03	14.13	7.62	512.27	0.02	1.51	-11.39
	10:25:04	14.41	7.54	512.68	0.35	1.48	-8.03
	10:30:07	14.30	7.52	515.66	0.67	1.46	-7.19
	10:35:09	14.29	7.52	513.30	0.22	1.51	-7.19
	10:40:10	14.27	7.51	512.85	0.42	1.49	-7.44
Variance in last 3 readings	10:30:07	-0.11	-0.03	2.98	0.32	-0.02	0.84
	10:35:09	0.00	0.00	-2.35	-0.45	0.05	0.00
	10:40:10	-0.02	0.00	-0.45	0.20	-0.02	-0.26

Notes:

Time: 10:40
Pump Time: 30 minutes
Purge volume: .6 gallon

Parameters: VOC-8260

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	83 [ft]
		Pump placement from TOC	77 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-20	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	487.47 [mL]
Well total depth	79.4 [ft]	Calculated Sample Rate	293 [sec]
Depth to top of screen	74.4 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	70.53 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1 +/-10 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-0	+/-10
Last 5 Readings	14:29:25	17.38	6.87	1446.19	135.37	1.52	-65.72
	14:34:26	18.32	6.86	1465.32	135.43	1.53	-65.67
	14:39:29	18.59	6.84	1509.61	120.26	1.57	-65.84
	14:44:31	18.93	6.83	1545.89	112.07	1.51	-66.35
	14:49:32	19.16	6.83	1567.80	119.06	1.50	-66.48
Variance in last 3 readings	14:39:29	0.27	-0.01	44.29	-15.18	0.04	-0.17
	14:44:31	0.34	-0.01	36.29	-8.19	-0.06	-0.51
	14:49:32	0.23	-0.01	21.91	6.99	-0.01	-0.13

Notes:

time: 1450
pump time: 1hr15min
purge volume: 2.5 L

parameters: voc, svoc, dissolved/total metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	79 [ft]
		Pump placement from TOC	74 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-21	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	469.61 [mL]
Well total depth	78.05 [ft]	Calculated Sample Rate	188 [sec]
Depth to top of screen	73.05 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	69.88 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	14:28:22	17.40	6.75	1999.49	234.46	3.90	-105.41
	14:33:24	17.76	6.75	2011.33	300.71	3.51	-105.50
	14:38:26	18.93	6.74	2013.84	269.51	3.11	-105.19
	14:43:28	21.93	6.72	2025.61	231.85	2.74	-101.68
	14:48:30	18.77	6.74	1981.43	245.70	3.01	-101.88
Variance in last 3 readings	14:38:26	1.18	-0.01	2.51	-31.20	-0.40	0.30
	14:43:28	2.99	-0.03	11.77	-37.67	-0.37	3.52
	14:48:30	-3.16	0.02	-44.18	13.85	0.27	-0.20

Notes:

time: 1450
pump time: 1hr40min
purge volume: 4.5 L

parameters: voc, 1, 4-dioxane, svoc, total dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	97 [ft]
		Pump placement from TOC	93 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-22	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	549.95 [mL]
Well total depth	96.25 [ft]	Calculated Sample Rate	220 [sec]
Depth to top of screen	91.25 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	73.18 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	11:58:43	14.78	6.80	2070.11	47.37	0.22	-127.98
	12:03:45	14.97	6.80	2059.41	32.56	0.21	-128.39
	12:08:47	15.33	6.79	2068.49	19.33	0.20	-128.61
	12:13:49	15.53	6.79	2071.16	31.01	0.18	-128.22
	12:18:51	15.49	6.79	2069.41	14.85	0.18	-129.19
Variance in last 3 readings	12:08:47	0.35	0.00	9.09	-13.22	-0.01	-0.21
	12:13:49	0.21	0.00	2.67	11.67	-0.01	0.39
	12:18:51	-0.05	0.00	-1.75	-16.16	0.00	-0.97

Notes:

time: 1220
pump time: 1hr25mih
purge volume: 3.5 L

parameters: voc, 1, 4-dioxane, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	82 [ft]
		Pump placement from TOC	77 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-23	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	483 [mL]
Well total depth	77.5 [ft]	Calculated Sample Rate	580 [sec]
Depth to top of screen	72.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.6 [in]
Depth to Water	74.2 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:35:15	16.05	6.69	2089.41	403.02	1.09	-38.78
	14:40:17	16.00	6.68	2091.32	433.74	1.10	-39.94
	14:45:18	16.10	6.68	2095.27	361.59	1.09	-41.48
	14:50:19	16.19	6.68	2098.14	358.85	1.05	-42.29
	14:55:20	16.23	6.68	2099.49	398.79	1.02	-42.67
Variance in last 3 readings	14:45:18	0.10	0.00	3.95	-72.14	-0.01	-1.54
	14:50:19	0.09	0.00	2.87	-2.74	-0.04	-0.81
	14:55:20	0.03	0.00	1.35	39.94	-0.03	-0.38

Notes: Time: 14:55
Pump Time: 55 minutes

Parameters: VOC-8260, 1,4 dioxane, Geo Chem

Stick up well, locked,

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	76 [ft]
		Pump placement from TOC	73 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-24	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	456.22 [mL]
Well total depth	77.35 [ft]	Calculated Sample Rate	183 [sec]
Depth to top of screen	72.35 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	69.19 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	9:57:50	14.17	6.73	1962.78	2.49	0.15	-119.86
	10:02:52	14.32	6.73	1968.08	2.38	0.16	-120.76
	10:07:53	14.14	6.73	1974.05	2.67	0.13	-121.23
	10:12:56	14.41	6.72	1983.60	2.67	0.15	-121.19
	10:17:59	14.63	6.72	1980.10	2.90	0.15	-121.44
Variance in last 3 readings	10:07:53	-0.18	0.00	5.96	0.29	-0.03	-0.47
	10:12:56	0.26	0.00	9.55	-0.01	0.02	0.04
	10:17:59	0.23	0.00	-3.50	0.23	0.00	-0.25

Notes:

time: 1020
pump time: 1hr 5min
purge volume: 2.0

parameters: voc, 1,4-dioxane, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	77 [ft]
		Pump placement from TOC	72.5 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-25	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	460.69 [mL]
Well total depth	74.95 [ft]	Calculated Sample Rate	277 [sec]
Depth to top of screen	70 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	1.08 [in]
Depth to Water	69.9 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	16:10:32	11.70	6.68	2087.69	19.40	0.40	-88.78
	16:15:33	11.69	6.68	2083.22	26.70	0.40	-88.95
	16:20:35	11.65	6.68	2090.51	13.84	0.39	-89.13
	16:25:37	11.61	6.68	2087.92	14.59	0.38	-89.04
	16:30:38	11.59	6.68	2087.99	16.67	0.39	-89.04
Variance in last 3 readings	16:20:35	-0.04	0.00	7.29	-12.86	-0.01	-0.17
	16:25:37	-0.04	0.00	-2.58	0.76	-0.01	0.09
	16:30:38	-0.02	0.00	0.07	2.08	0.01	0.00

Notes:

Time: 16:30
Pump Time: 75 minutes

Parameters: VOC-8260, 1,4 dioxane, Geo Chem

Stick up well, locked, turbidity didn't stabilize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	81 [ft]
		Pump placement from TOC	76 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-26	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	478.54 [mL]
Well total depth	79.2 [ft]	Calculated Sample Rate	288 [sec]
Depth to top of screen	74 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	2.4 [in]
Depth to Water	69.39 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:35:18	16.34	6.80	1642.31	9.23	0.54	-111.09
	11:40:21	16.52	6.79	1624.14	5.72	0.48	-115.24
	11:45:23	16.70	6.79	1622.14	5.73	0.49	-115.15
	11:50:24	16.92	6.79	1621.42	5.86	0.49	-115.15
	11:55:26	17.15	6.79	1621.59	5.16	0.49	-115.20
Variance in last 3 readings	11:45:23	0.19	0.00	-2.00	0.01	0.01	0.09
	11:50:24	0.22	0.00	-0.72	0.12	0.00	0.00
	11:55:26	0.23	0.00	0.16	-0.70	0.00	-0.04

Notes:

Time: 11:55
Pump Time: 35 minutes

Parameters: VOC-8260, 1,4 dioxane, SVOC-8270, total metals

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	110 [ft]
		Pump placement from TOC	105 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-28	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	607.98 [mL]
Well total depth	116.1 [ft]	Calculated Sample Rate	365 [sec]
Depth to top of screen	100 [ft]	Sample rate	300 [sec]
Screen length	192 [in]	Stabilized drawdown	0.48 [in]
Depth to Water	73.86 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:50:27	12.96	11.39	754.58	1.46	2.46	-45.83
	8:55:28	13.17	11.40	756.19	0.55	1.99	-50.07
	9:00:30	13.86	11.37	755.81	0.44	1.82	-49.80
	9:05:33	13.76	11.33	754.70	0.58	1.76	-46.69
	9:10:35	13.80	11.32	754.71	0.50	1.73	-46.13
Variance in last 3 readings	9:00:30	0.69	-0.03	-0.38	-0.11	-0.18	0.27
	9:05:33	-0.09	-0.04	-1.11	0.14	-0.05	3.10
	9:10:35	0.04	-0.01	0.01	-0.08	-0.03	0.56

Notes:

Time: 9:10
Pump Time: 55 minutes
Purge volume: 1.1 gallons

Parameters: VOC-8260, 1,4 dioxane, SVOC-8270, total metals

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	78 [ft]
		Pump placement from TOC	73 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-29	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	465.15 [mL]
Well total depth	76.3 [ft]	Calculated Sample Rate	280 [sec]
Depth to top of screen	71 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	70.23 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:24:14	13.23	6.64	2666.15	217.68	5.26	19.68
	10:29:18	13.57	6.63	2660.02	254.41	8.40	-7.84
	10:34:20	13.80	6.64	2686.13	201.72	7.71	-4.08
	10:39:21	13.93	6.64	2678.40	199.91	7.61	-3.86
	10:44:23	14.04	6.64	2677.56	188.56	7.57	-3.69
Variance in last 3 readings	10:34:20	0.23	0.00	26.12	-52.69	-0.70	3.76
	10:39:21	0.13	0.00	-7.73	-1.81	-0.09	0.21
	10:44:23	0.11	0.00	-0.84	-11.36	-0.05	0.17

Notes:

Time: 10:45
Pump Time: 120 minutes

Parameters: VOC-8260, 1,4 dioxane, Geo Chem

Stick up well, locked, pump quit pumping during purge cycle

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	82 [ft]
		Pump placement from TOC	77 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-30	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	483 [mL]
Well total depth	79.85 [ft]	Calculated Sample Rate	580 [sec]
Depth to top of screen	75 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.96 [in]
Depth to Water	71.79 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:05:14	17.90	6.73	1628.00	85.28	1.16	-92.05
	13:10:15	17.96	6.73	1630.92	80.94	1.15	-91.97
	13:15:16	18.01	6.73	1630.86	80.19	1.13	-91.93
	13:20:18	18.04	6.73	1630.50	78.90	1.12	-91.93
	13:25:19	18.08	6.73	1630.80	76.08	1.11	-91.97
Variance in last 3 readings	13:15:16	0.04	0.00	-0.06	-0.75	-0.02	0.04
	13:20:18	0.04	0.00	-0.35	-1.29	-0.01	0.00
	13:25:19	0.03	0.00	0.30	-2.82	-0.01	-0.04

Notes:

Time: 13:25
Pump Time: 40 minutes

Parameters: VOC-8260, 1,4 dioxane

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Peristaltic Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	15 [ft]
		Pump placement from TOC	10 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-31	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	183.95 [mL]
Well total depth	12.8 [ft]	Calculated Sample Rate	111 [sec]
Depth to top of screen	8 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	7.02 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:40:34	14.26	6.79	1000.92	12.32	0.28	-48.20
	9:45:36	14.10	6.79	999.45	9.44	0.26	-54.13
	9:50:38	14.36	6.79	995.46	7.51	0.25	-55.15
	9:55:39	14.43	6.79	995.59	8.86	0.23	-56.77
	10:00:41	14.40	6.79	995.96	8.64	0.23	-56.64
Variance in last 3 readings	9:50:38	0.26	0.00	-3.99	-1.93	-0.01	-1.01
	9:55:39	0.07	0.00	0.13	1.35	-0.02	-1.62
	10:00:41	-0.03	0.00	0.37	-0.23	0.00	0.13

Notes:

Time: 10:00
Pump Time: 60 minutes
Purge volume: 1.2 gallons

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals, dissolved Mn, Fe, Nitrate/Sulfate, Methane

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Peristaltic Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	16 [ft]
		Pump placement from TOC	9.5 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-32	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	188.42 [mL]
Well total depth	12.65 [ft]	Calculated Sample Rate	114 [sec]
Depth to top of screen	7.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	1.32 [in]
Depth to Water	5.82 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:15:38	12.10	6.91	1470.41	6.51	0.45	-20.32
	11:20:40	12.29	6.93	1431.00	3.89	0.74	5.80
	11:25:43	12.98	6.94	1394.58	2.75	1.03	17.17
	11:30:46	12.94	6.95	1392.81	2.73	1.07	16.70
	11:35:47	12.89	6.95	1383.74	2.90	1.08	16.79
Variance in last 3 readings	11:25:43	0.69	0.02	-36.43	-1.14	0.29	11.38
	11:30:46	-0.04	0.00	-1.77	-0.02	0.04	-0.47
	11:35:47	-0.06	0.00	-9.07	0.17	0.01	0.09

Notes:

Time: 11:35
Pump Time: 50 minutes
Purge volume: 1 gallon

Parameters: Total Select metals

Stick up well, locked, DUP-06

In-Situ Inc.

Troll 9000 | Low-Flow System
5/9/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Peristaltic Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	21 [ft]
		Pump placement from TOC	16 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-33	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	210.73 [mL]
Well total depth	19.2 [ft]	Calculated Sample Rate	253 [sec]
Depth to top of screen	14 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	8.86 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:05:26	15.81	6.97	759.57	1.83	2.05	25.40
	12:10:28	15.17	6.97	761.46	1.69	2.04	25.06
	12:15:30	14.19	6.97	756.04	1.94	1.99	24.58
	12:20:33	14.93	6.97	758.98	1.79	1.88	25.89
	12:25:35	15.13	6.97	757.95	2.19	1.86	26.49
Variance in last 3 readings	12:15:30	-0.98	0.00	-5.43	0.25	-0.05	-0.49
	12:20:33	0.74	0.00	2.94	-0.16	-0.11	1.31
	12:25:35	0.20	0.00	-1.03	0.40	-0.02	0.60

Notes:

Time: 10:25
Pump Time: 30 minutes
Purge volume: .3 gallon

Parameters: Total Select metals, GeoChem

Stick up well, locked,

In-Situ Inc.

Troll 9000 | Low-Flow System
5/3/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	85 [ft]
		Pump placement from TOC	77 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-34	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	496.39 [mL]
Well total depth	79.85 [ft]	Calculated Sample Rate	298 [sec]
Depth to top of screen	75 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.96 [in]
Depth to Water	69.88 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:25:26	17.37	7.07	1654.08	25.16	0.26	-169.39
	15:30:27	17.27	7.07	1656.25	28.90	0.26	-169.26
	15:35:28	17.30	7.07	1649.61	25.76	0.26	-169.52
	15:40:28	17.27	7.07	1645.20	27.76	0.26	-169.52
	15:45:30	17.28	7.07	1648.60	27.23	0.26	-169.48
Variance in last 3 readings	15:35:28	0.04	0.00	-6.64	-3.14	0.00	-0.26
	15:40:28	-0.04	0.00	-4.41	2.00	0.00	0.00
	15:45:30	0.01	0.00	3.40	-0.53	0.00	0.04

Notes:

Time: 15:45
Pump Time: 45 minutes

Parameters: VOC-8260, 1,4 dioxane, Geo Chem

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	120 [ft]
		Pump placement from TOC	115 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-38	Final pumping rate	50 [mL/min]
Well diameter	4 [in]	Flowcell volume	652.61 [mL]
Well total depth	126.2 [ft]	Calculated Sample Rate	784 [sec]
Depth to top of screen	109 [ft]	Sample rate	300 [sec]
Screen length	204 [in]	Stabilized drawdown	3.48 [in]
Depth to Water	75.73 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:15:16	17.60	7.86	2006.15	11.96	0.59	-153.79
	10:20:18	17.67	7.86	2002.07	12.38	0.59	-152.94
	10:25:19	18.09	7.84	2011.24	13.54	0.50	-149.98
	10:30:21	18.26	7.84	2002.57	12.83	0.53	-150.11
	10:35:21	18.30	7.84	2005.05	12.84	0.52	-148.78
Variance in last 3 readings	10:25:19	0.42	-0.01	9.17	1.16	-0.09	2.96
	10:30:21	0.16	0.00	-8.66	-0.71	0.03	-0.13
	10:35:21	0.04	0.00	2.48	0.01	-0.01	1.33

Notes:

Time: 10:35
Pump Time: 40 minutes
Purge volume: .4 gallon

Parameters: VOC 8260, 1,4, dioxane

Stick up well, no cover

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	80 [ft]
		Pump placement from TOC	75 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-40	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	474.08 [mL]
Well total depth	78.7 [ft]	Calculated Sample Rate	569 [sec]
Depth to top of screen	73.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	66.32 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:55:01	15.65	6.87	7549.05	18.93	6.39	-62.08
	9:00:04	16.59	6.87	7606.76	24.16	6.05	-62.42
	9:05:05	17.27	6.87	7626.51	19.21	5.73	-64.98
	9:10:06	17.48	6.87	7609.83	18.71	5.65	-65.11
	9:15:07	17.24	6.87	7672.72	32.42	5.73	-65.36
Variance in last 3 readings	9:05:05	0.68	0.00	19.75	-4.95	-0.32	-2.56
	9:10:06	0.21	0.00	-16.67	-0.50	-0.08	-0.12
	9:15:07	-0.23	0.00	62.88	13.71	0.08	-0.25

Notes:

Time: 9:15
Pump Time: 60 minutes
Purge volume: .6 gallon

Parameters: VOC 8260, 1,4, dioxane, Total and dissolved select metals

Stick up well, locked, didn't meet maximum drawdown requirement, drawdown/turbidity didn't stabilize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	87 [ft]
		Pump placement from TOC	82 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-41	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	505.32 [mL]
Well total depth	84.7 [ft]	Calculated Sample Rate	304 [sec]
Depth to top of screen	80 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	66.28 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:40:37	16.96	7.07	6042.08	26.95	0.22	-111.91
	11:45:40	17.51	7.07	6042.05	27.27	0.22	-114.22
	11:50:42	18.06	7.06	6046.36	26.51	0.22	-115.46
	11:55:44	18.15	7.06	6047.82	26.40	0.23	-115.59
	12:00:46	18.19	7.06	6049.49	26.39	0.23	-115.67
Variance in last 3 readings	11:50:42	0.55	0.00	4.32	-0.76	0.00	-1.23
	11:55:44	0.09	0.00	1.45	-0.11	0.00	-0.13
	12:00:46	0.04	0.00	1.67	-0.01	0.00	-0.08

Notes:

Time: 12:00
Pump Time: 60 minutes
Purge volume: 1.2 gallons

Parameters: VOC 8260, 1,4, dioxane, SVOC 8270, total and dissolved metals

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	77 [ft]
		Pump placement from TOC	72 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-46	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	460.69 [mL]
Well total depth	75.3 [ft]	Calculated Sample Rate	277 [sec]
Depth to top of screen	70 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	67.98 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:35:26	12.26	6.74	2654.61	43.95	2.86	-61.52
	12:40:28	12.20	6.74	2652.16	43.80	3.00	-61.91
	12:45:31	12.05	6.74	2651.79	38.67	2.97	-62.21
	12:50:33	11.97	6.73	2654.67	38.93	2.98	-62.43
	12:55:35	11.97	6.74	2651.95	36.13	2.99	-62.34
Variance in last 3 readings	12:45:31	-0.15	0.00	-0.36	-5.13	-0.03	-0.31
	12:50:33	-0.08	0.00	2.88	0.26	0.01	-0.21
	12:55:35	0.01	0.00	-2.73	-2.80	0.01	0.08

Notes:

Time: 12:55
Pump Time: 70 minutes

Parameters: VOC-8260, 1,4 dioxane, SVOC-8270, total and dissolved metals

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	110 [ft]
		Pump placement from TOC	105 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-47	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	607.98 [mL]
Well total depth	113.6 [ft]	Calculated Sample Rate	365 [sec]
Depth to top of screen	101 [ft]	Sample rate	300 [sec]
Screen length	151 [in]	Stabilized drawdown	3.96 [in]
Depth to Water	68.92 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:55:23	12.50	7.14	2076.93	342.44	0.44	-148.78
	11:00:25	12.29	7.14	2093.58	310.28	0.42	-149.35
	11:05:27	12.24	7.14	2105.13	502.41	0.41	-149.36
	11:10:31	12.32	7.14	2101.11	473.73	0.40	-149.41
	11:15:32	12.36	7.14	2102.68	473.41	0.40	-149.45
Variance in last 3 readings	11:05:27	-0.05	0.00	11.55	192.13	-0.01	-0.01
	11:10:31	0.08	0.00	-4.01	-28.68	-0.01	-0.05
	11:15:32	0.03	0.00	1.56	-0.32	0.00	-0.04

Notes:

Time: 11:15
Pump Time: 35 minutes

Parameters: VOC-8260, 1,4 dioxane

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	85 [ft]
		Pump placement from TOC	78 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-48	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	496.39 [mL]
Well total depth	81.6 [ft]	Calculated Sample Rate	298 [sec]
Depth to top of screen	76.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	61.46 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:50:33	12.11	6.77	2210.52	75.60	0.30	-153.35
	9:55:35	12.10	6.77	2210.21	78.57	0.30	-153.57
	10:00:36	12.13	6.77	2209.92	64.82	0.30	-154.21
	10:05:37	12.11	6.77	2210.38	60.77	0.30	-154.38
	10:10:38	12.13	6.77	2210.68	58.78	0.29	-154.68
Variance in last 3 readings	10:00:36	0.02	0.00	-0.29	-13.75	0.00	-0.64
	10:05:37	-0.01	0.00	0.46	-4.05	0.00	-0.17
	10:10:38	0.02	0.00	0.31	-1.99	-0.01	-0.30

Notes:

Time: 10:10
Pump Time: 90 minutes

Parameters: VOC-8260, 1,4 dioxane

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/3/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	85 [ft]
		Pump placement from TOC	78 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-49	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	496.39 [mL]
Well total depth	81.6 [ft]	Calculated Sample Rate	596 [sec]
Depth to top of screen	76.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	70.18 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:59:30 AM	19.81	6.98	1755.37	5.84	0.99	-132.38
	14:04:31 AM	19.13	6.98	1745.44	6.29	0.95	-135.67
	14:09:33 AM	19.80	6.99	1763.15	6.85	0.88	-136.94
	14:14:35 AM	19.71	6.98	1775.69	7.58	0.86	-138.52
	14:19:37 AM	19.68	6.98	1783.09	9.11	0.84	-138.52
Variance in last 3 readings	14:09:33 AM	0.68	0.00	17.71	0.56	-0.06	-1.28
	14:14:35 AM	-0.09	-0.01	12.54	0.73	-0.03	-1.57
	14:19:37 AM	-0.03	0.00	7.39	1.53	-0.02	0.00

Notes: Time: 14:20
Pump Time: 30 minutes

Parameters: VOC-8260, 1,4 dioxane

didn't meet maximum drawdown requirement, drawdown didn't stabilize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	107 [ft]
		Pump placement from TOC	102 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-14-64	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	594.59 [mL]
Well total depth	106.3 [ft]	Calculated Sample Rate	238 [sec]
Depth to top of screen	101.3 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	73.29 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	12:36:03	16.82	7.02	1561.96	28.61	0.22	-87.19
	12:41:04	16.52	7.02	1555.89	31.09	0.20	-87.88
	12:46:08	16.43	7.02	1563.64	28.81	0.21	-88.86
	12:51:09	16.55	7.02	1560.71	113.77	0.20	-89.89
	12:56:12	17.91	7.01	1564.41	53.59	0.18	-90.92
Variance in last 3 readings	12:46:08	-0.09	0.00	7.75	-2.27	0.00	-0.98
	12:51:09	0.11	0.00	-2.94	84.96	-0.01	-1.03
	12:56:12	1.36	-0.01	3.70	-60.18	-0.02	-1.03

Notes: time: 1255
pump time: 1hr 25min
purge volume: 4.0

parameters: voc, 1,4-dioxane, total dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	14 [ft]
		Pump placement from TOC	10 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-14-65	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	179.49 [mL]
Well total depth	13.2 [ft]	Calculated Sample Rate	216 [sec]
Depth to top of screen	8.2 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	5.93 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	14:43:35	16.71	7.20	979.33	12.39	1.36	-227.81
	14:44:11	16.65	7.20	977.68	14.05	1.36	-228.96
	14:49:13	16.65	7.20	982.73	11.47	1.39	-234.39
	14:54:16	17.05	7.20	992.89	10.68	1.33	-238.32
	14:59:17	16.47	7.20	991.15	11.68	1.29	-244.31
Variance in last 3 readings	14:49:13	0.00	0.00	5.06	-2.58	0.03	-5.43
	14:54:16	0.40	0.00	10.15	-0.79	-0.06	-3.93
	14:59:17	-0.59	0.00	-1.74	1.00	-0.04	-5.99

Notes:

time: 1500
pump time: 1hr45min
purge volume: 1.5 l

parameters: voc, select metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	119 [ft]
		Pump placement from TOC	114.3 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-15-71	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	648.15 [mL]
Well total depth	118.3 [ft]	Calculated Sample Rate	389 [sec]
Depth to top of screen	113 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	71.06 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:18:28	17.49	6.98	1710.99	265.55	0.62	-101.15
	12:23:30	17.45	6.98	1714.41	405.13	0.60	-100.68
	12:28:32	17.62	6.97	1708.69	312.28	0.60	-100.34
	12:33:34	17.58	6.98	1710.95	697.89	0.61	-99.49
	12:38:36	17.52	6.97	1722.19	373.31	0.60	-99.23
Variance in last 3 readings	12:28:32	0.17	0.00	-5.72	-92.84	0.00	0.34
	12:33:34	-0.05	0.00	2.26	385.61	0.00	0.85
	12:38:36	-0.06	0.00	11.23	-324.58	0.00	0.26

Notes:

time: 1235
pump time: 1 hr 40 min
purge volume: 4.5 L

parameters: voc, svoc, total/dissolved metals

turbidity was high. collected total and dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	64 [ft]
		Pump placement from TOC	59 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-19	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	402.66 [mL]
Well total depth	64.3 [ft]	Calculated Sample Rate	484 [sec]
Depth to top of screen	54 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	3.48 [in]
Depth to Water	54.88 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:05:54	12.60	7.60	644.62	42.07	3.63	0.07
	13:10:56	12.60	7.58	694.11	50.85	3.33	0.12
	13:15:57	12.86	7.58	700.54	27.49	3.14	0.76
	13:21:01	13.14	7.58	700.05	21.60	3.02	2.43
	13:26:03	13.36	7.58	699.87	18.13	2.94	3.46
Variance in last 3 readings	13:15:57	0.25	0.00	6.43	-23.37	-0.19	0.64
	13:21:01	0.28	0.00	-0.49	-5.89	-0.12	1.67
	13:26:03	0.22	0.00	-0.18	-3.47	-0.08	1.03

Notes:

Time: 13:25
Pump Time: 60 minutes
Purge volume: .6 gallon

Parameters: VOC-8260, 1,4 dioxane

Lid secure, turbidity didn't stabilize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Peristaltic Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	63 [ft]
		Pump placement from TOC	58 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-22	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	398.2 [mL]
Well total depth	63.4 [ft]	Calculated Sample Rate	239 [sec]
Depth to top of screen	53.5 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0.48 [in]
Depth to Water	53.89 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:10:24	13.02	6.93	2622.84	39.47	1.93	-5.23
	9:15:27	13.00	6.94	2632.41	48.16	1.96	-4.29
	9:20:29	12.98	6.95	2635.05	33.55	1.91	-3.40
	9:25:30	13.01	6.95	2630.81	33.70	1.88	-3.57
	9:30:32	13.02	6.95	2631.11	35.78	1.86	-3.74
Variance in last 3 readings	9:20:29	-0.02	0.01	2.65	-14.61	-0.05	0.89
	9:25:30	0.03	0.00	-4.24	0.16	-0.03	-0.17
	9:30:32	0.02	0.00	0.30	2.07	-0.02	-0.17

Notes:

Time: 9:30
Pump Time: 75 minutes
Purge volume: 1.5 gallons

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals, dissolved metals, Nitrate/Sulfate, Methane

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	61 [ft]
		Pump placement from TOC	56 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-23	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	389.27 [mL]
Well total depth	61.35 [ft]	Calculated Sample Rate	234 [sec]
Depth to top of screen	51 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0.48 [in]
Depth to Water	52.93 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:35:11	11.88	7.19	1368.59	73.17	1.52	-50.44
	15:40:13	11.93	7.20	1370.61	47.40	1.58	-50.09
	15:45:16	11.89	7.20	1372.49	38.30	1.66	-48.64
	15:50:18	11.80	7.20	1367.45	37.79	1.71	-48.00
	15:55:20	11.77	7.20	1371.21	35.91	1.78	-46.93
Variance in last 3 readings	15:45:16	-0.04	0.00	1.88	-9.10	0.08	1.46
	15:50:18	-0.09	0.00	-5.04	-0.52	0.05	0.64
	15:55:20	-0.03	0.00	3.76	-1.87	0.07	1.07

Notes:

Time: 15:55
Pump Time: 50 minutes
Purge volume: 1 gallon

Parameters: VOC-8260, 1,4 dioxane, GeoChem

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	75 [ft]
		Pump placement from TOC	70 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-91-2	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	451.76 [mL]
Well total depth	76.6 [ft]	Calculated Sample Rate	272 [sec]
Depth to top of screen	67 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	3.72 [in]
Depth to Water	62.53 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:15:26	19.11	7.19	1667.26	16.13	0.45	-107.85
	13:20:29	19.15	7.18	1661.53	6.44	0.42	-109.57
	13:25:31	19.53	7.17	1671.80	10.03	0.38	-110.30
	13:30:32	20.19	7.17	1656.76	4.79	0.36	-111.72
	13:35:34	20.75	7.17	1654.72	3.69	0.35	-111.29
Variance in last 3 readings	13:25:31	0.38	-0.01	10.27	3.59	-0.04	-0.73
	13:30:32	0.66	0.00	-15.04	-5.24	-0.02	-1.42
	13:35:34	0.56	0.00	-2.04	-1.10	-0.01	0.43

Notes:

Time: 13:35
Pump Time: 35 minutes
Purge volume: .7 gallon

Parameters: VOC 8260, 1,4, dioxane, total and dissolved Fe, Mn, Nitrate/Sulfate, Methane, Total Select Metals, Hexavalent Chromium

Lid secure

In-Situ Inc.

Troll 9000 Low-Flow System
5/13/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	117 [ft]
		Pump placement from TOC	112 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-91-3	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	639.22 [mL]
Well total depth	119.15 [ft]	Calculated Sample Rate	384 [sec]
Depth to top of screen	107 [ft]	Sample rate	300 [sec]
Screen length	144 [in]	Stabilized drawdown	3.6 [in]
Depth to Water	72.65 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:40:13	16.96	7.27	1003.43	3.74	1.13	-50.98
	10:45:13	17.27	7.28	998.24	9.24	1.23	-47.86
	10:50:16	17.57	7.28	997.73	7.24	1.25	-47.70
	10:55:18	17.74	7.28	998.10	6.90	1.24	-47.49
	11:00:19	18.05	7.28	995.64	7.46	1.23	-47.32
Variance in last 3 readings	10:50:16	0.30	0.00	-0.50	-2.01	0.01	0.16
	10:55:18	0.17	0.00	0.37	-0.34	-0.01	0.21
	11:00:19	0.31	0.00	-2.46	0.56	-0.01	0.17

Notes:

Time: 11:00
Pump Time: 30 minutes
Purge volume: .6 gallon

Parameters: VOC 8260, 1,4, dioxane, SVOC 8270, total metals

Stick up well, locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	130 [ft]
		Pump placement from TOC	124 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-91-4	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	697.25 [mL]
Well total depth	130.75 [ft]	Calculated Sample Rate	419 [sec]
Depth to top of screen	116 [ft]	Sample rate	300 [sec]
Screen length	180 [in]	Stabilized drawdown	3.96 [in]
Depth to Water	63.53 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:05:40	12.78	7.09	1436.54	1.83	0.35	-124.13
	11:10:41	13.01	7.08	1453.60	2.58	0.32	-124.63
	11:15:43	13.13	7.08	1466.54	4.54	0.30	-125.31
	11:20:45	13.34	7.07	1478.53	8.26	0.28	-125.77
	11:25:46	13.27	7.07	1482.84	8.88	0.28	-125.69
Variance in last 3 readings	11:15:43	0.13	-0.01	12.94	1.96	-0.02	-0.68
	11:20:45	0.20	-0.01	11.99	3.72	-0.02	-0.46
	11:25:46	-0.07	0.00	4.31	0.62	0.00	0.09

Notes:

Time: 11:25
Pump Time: 55 minutes
Purge volume: 1.1 gallons

Parameters: Total and dissolved Mn, Fe, Nitrate/Sulfate, Methane

Lid secure, cap locked

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	123 [ft]
		Pump placement from TOC	118 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-91-5	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	666 [mL]
Well total depth	126.55 [ft]	Calculated Sample Rate	400 [sec]
Depth to top of screen	112.5 [ft]	Sample rate	300 [sec]
Screen length	180 [in]	Stabilized drawdown	0 [in]
Depth to Water	67.19 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-1 %
Last 5 Readings	9:10:06	12.99	7.13	1288.82	13.00	0.45	-100.29
	9:15:07	13.71	7.12	1288.54	13.10	0.44	-100.46
	9:20:09	12.55	7.13	1288.92	47.85	0.55	-99.04
	9:25:12	12.58	7.13	1285.17	37.23	0.59	-98.48
	9:30:14	12.80	7.13	1286.80	30.46	0.57	-98.35
Variance in last 3 readings	9:20:09	-1.16	0.01	0.38	34.75	0.11	1.42
	9:25:12	0.03	0.00	-3.76	-10.62	0.03	0.56
	9:30:14	0.22	0.00	1.63	-6.77	-0.02	0.13

Notes: time: 0930
pump time: 1hr 30 min
purge volume: 4.5 L

parameters: voc, 1, 4-d, svoc, total /dissolved metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	86 [ft]
		Pump placement from TOC	81.3 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-91-6	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	500.86 [mL]
Well total depth	96.35 [ft]	Calculated Sample Rate	301 [sec]
Depth to top of screen	81.3 [ft]	Sample rate	300 [sec]
Screen length	180 [in]	Stabilized drawdown	0.6 [in]
Depth to Water	65.37 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:10:16	12.83	7.02	1496.43	4.33	0.78	-103.19
	14:15:17	12.92	7.01	1496.62	3.70	0.63	-109.69
	14:20:19	12.91	7.01	1495.92	3.65	0.53	-113.74
	14:25:21	12.92	7.01	1496.40	4.47	0.52	-114.13
	14:30:21	12.94	7.01	1497.26	3.91	0.52	-114.34
Variance in last 3 readings	14:20:19	-0.01	0.00	-0.70	-0.05	-0.10	-4.06
	14:25:21	0.01	0.00	0.48	0.82	-0.01	-0.38
	14:30:21	0.02	0.00	0.86	-0.56	0.00	-0.21

Notes:

Time: 14:30
Pump Time: 25 minutes

Parameters: VOC-8260, 1,4 dioxane

Lid secure

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	22 [ft]
		Pump placement from TOC	16.5 [ft]

Well Information:		**Pumping information:**	
Well ID	P3-SB-07	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	215.2 [mL]
Well total depth	19.65 [ft]	Calculated Sample Rate	259 [sec]
Depth to top of screen	14.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	8.75 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:50:08	14.33	7.34	966.41	6.60	1.93	-51.11
	10:55:11	14.25	7.30	965.33	5.98	1.72	-48.16
	11:00:12	14.23	7.29	964.07	3.30	1.61	-48.30
	11:05:15	14.16	7.28	965.28	3.83	1.56	-46.68
	11:10:17	14.16	7.28	964.88	3.71	1.57	-46.55
Variance in last 3 readings	11:00:12	-0.03	-0.01	-1.26	-2.68	-0.11	-0.13
	11:05:15	-0.07	-0.01	1.21	0.53	-0.05	1.62
	11:10:17	0.00	0.00	-0.40	-0.12	0.01	0.13

Notes:

Time: 11:10
Pump Time: 25 minutes
Purge volume: .25 gallons

Parameters: Total and dissolved Mn, Fe, Nitrate/Sulfate, Methane

Stick up well, locked, didn't meet maximum drawdown requirement, drawdown didn't stabilize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	12 [ft]
		Pump placement from TOC	8 [ft]

Well Information:		**Pumping information:**	
Well ID	p3-sb-28	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	170.56 [mL]
Well total depth	10.35 [ft]	Calculated Sample Rate	205 [sec]
Depth to top of screen	5.35 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	5.38 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	8:40:38	14.89	7.92	385.61	5.60	0.84	-226.33
	8:45:40	14.93	7.91	390.46	5.91	0.74	-231.64
	8:50:42	14.89	7.90	390.56	6.83	0.68	-239.00
	8:55:46	14.87	7.90	392.75	6.14	0.66	-243.32
	9:00:46	14.72	7.90	396.13	6.54	0.69	-244.18
Variance in last 3 readings	8:50:42	-0.04	-0.01	0.10	0.92	-0.06	-7.36
	8:55:46	-0.02	0.00	2.18	-0.70	-0.02	-4.32
	9:00:46	-0.15	0.00	3.38	0.40	0.03	-0.86

Notes:

time: 0905
pump time: 1hr5min
purge volume: 3.0

parameters: geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	86.09 [ft]
		Pump placement from TOC	81 [ft]

Well Information:		**Pumping information:**	
Well ID	pw-14-03	Final pumping rate	150 [mL/min]
Well diameter	6 [in]	Flowcell volume	501.26 [mL]
Well total depth	94.3 [ft]	Calculated Sample Rate	201 [sec]
Depth to top of screen	79 [ft]	Sample rate	300 [sec]
Screen length	183 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	75.92 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	9:51:11	13.63	6.81	3293.89	16.21	6.11	-157.67
	9:56:14	13.71	6.80	3287.81	15.42	5.68	-158.74
	10:01:16	13.69	6.80	3293.52	16.14	5.30	-159.56
	10:06:18	13.65	6.80	3292.16	15.48	4.94	-159.94
	10:11:20	13.72	6.80	3294.34	6.95	4.60	-160.97
Variance in last 3 readings	10:01:16	-0.01	0.00	5.71	0.72	-0.38	-0.81
	10:06:18	-0.05	0.00	-1.36	-0.66	-0.36	-0.39
	10:11:20	0.07	0.00	2.18	-8.53	-0.34	-1.03

Notes: time: 1015
pump time: 2hr25min
purge volume: 4.5 L

parameters: voc, 1, 4 dioxane

DUP-09

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	91 [ft]
		Pump placement from TOC	86 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-14-06	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	523.17 [mL]
Well total depth	89.3 [ft]	Calculated Sample Rate	210 [sec]
Depth to top of screen	84.3 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	13.68 [in]
Depth to Water	74.89 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-10	+/-1	+/-10	+/-10	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	12:05:27	14.04	6.68	3666.85	91.13	0.12	-159.32
	12:10:30	14.02	6.68	3657.07	63.36	0.12	-159.96
	12:15:32	14.10	6.67	3661.63	94.62	0.12	-159.88
	12:20:33	14.09	6.67	3662.75	75.88	0.13	-161.12
	12:25:35	14.10	6.67	3657.35	85.25	0.13	-160.69
Variance in last 3 readings	12:15:32	0.08	0.00	4.56	31.26	0.00	0.09
	12:20:33	-0.01	0.00	1.12	-18.73	0.01	-1.24
	12:25:35	0.01	0.00	-5.40	9.36	0.00	0.43

Notes:

time: 1230
pump time: 1hr25min
purge volume: 4 L

parameters: 1, 4 dioxane, total dissolved As and Pb

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	91 [ft]
		Pump placement from TOC	87 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-14-07	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	523.17 [mL]
Well total depth	91.35 [ft]	Calculated Sample Rate	210 [sec]
Depth to top of screen	96.35 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	6 [in]
Depth to Water	74.8 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-1 %	+/-10 %
Last 5 Readings	14:00:05	11.96	6.69	3502.17	60.74	0.17	-180.65
	14:05:07	11.98	6.69	3497.53	45.85	0.16	-182.45
	14:10:10	12.08	6.69	3496.22	51.73	0.15	-184.59
	14:15:12	12.00	6.69	3496.38	38.79	0.14	-187.59
	14:20:13	12.07	6.69	3502.78	39.94	0.14	-189.81
Variance in last 3 readings	14:10:10	0.10	0.00	-1.31	5.88	-0.01	-2.14
	14:15:12	-0.08	0.00	0.16	-12.94	-0.01	-3.00
	14:20:13	0.07	0.00	6.39	1.15	-0.01	-2.23

Notes:

time: 1420
pump time: 1hr20min
purge volume: 4.0 l

parameters: voc, 1 4 dioxane

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	91 [ft]
		Pump placement from TOC	86 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-14-08	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	523.17 [mL]
Well total depth	91.45 [ft]	Calculated Sample Rate	210 [sec]
Depth to top of screen	96.45 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	13.68 [in]
Depth to Water	74.96 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	16:00:06	12.38	6.22	6134.75	36.92	0.40	-253.88
	16:05:09	12.47	6.22	6156.40	40.85	0.39	-256.23
	16:10:11	12.28	6.22	6092.36	51.42	0.39	-258.37
	16:15:12	12.29	6.22	6186.35	56.10	0.39	-260.81
	16:20:15	12.16	6.22	6324.55	49.22	0.38	-265.22
Variance in last 3 readings	16:10:11	-0.20	0.00	-64.04	10.58	0.00	-2.14
	16:15:12	0.01	-0.01	93.99	4.68	-0.01	-2.44
	16:20:15	-0.13	0.01	138.20	-6.89	0.00	-4.41

Notes:

time: 1615
pump time: 1hr20min
purge volume: 4.0 l

parameters: voc, 1 4 dioxane

In-Situ Inc.

Troll 9000 Low-Flow System
5/11/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	91 [ft]
		Pump placement from TOC	87 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-14-09	Final pumping rate	150 [mL/min]
Well diameter	2 [in]	Flowcell volume	523.17 [mL]
Well total depth	91.85 [ft]	Calculated Sample Rate	210 [sec]
Depth to top of screen	96.85 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	75.4 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	9:39:16	13.66	6.42	3944.08	1813.85	0.13	-315.05
	9:44:18	13.83	6.41	3962.39	1525.01	0.12	-331.39
	9:55:42	14.25	6.42	3960.32	1119.46	0.13	-347.21
	10:00:44	14.75	6.42	3952.90	1242.80	0.13	-352.42
	10:05:46	15.49	6.42	3947.66	1942.64	0.14	-367.17
Variance in last 3 readings	9:55:42	0.43	0.01	-2.07	-405.54	0.01	-15.82
	10:00:44	0.50	0.00	-7.42	123.33	0.00	-5.21
	10:05:46	0.73	0.00	-5.24	699.84	0.01	-14.75

Notes: time:
pump time:
purge volume:

parameters:

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 3	Tubing Length	96 [ft]
		Pump placement from TOC	91 [ft]

Well Information:		**Pumping information:**	
Well ID	tw-15-10	Final pumping rate	150 [mL/min]
Well diameter	4 [in]	Flowcell volume	545.49 [mL]
Well total depth	94.5 [ft]	Calculated Sample Rate	219 [sec]
Depth to top of screen	89.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	9.96 [in]
Depth to Water	75.28 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	12:13:59	15.19	6.50	3717.10	43.40	0.23	-282.50
	12:19:01	15.34	6.50	3728.38	43.08	0.21	-286.34
	12:24:03	15.37	6.49	3741.46	35.72	0.21	-290.23
	12:29:05	15.42	6.49	3759.35	42.62	0.20	-292.40
	12:34:07	15.57	6.49	3764.60	45.52	0.20	-292.36
Variance in last 3 readings	12:24:03	0.04	0.00	13.08	-7.37	0.00	-3.89
	12:29:05	0.05	0.00	17.89	6.91	-0.01	-2.18
	12:34:07	0.15	0.00	5.26	2.90	0.00	0.04

Notes:

time: 1235
pump time: 1hr30min
purge volume: 4.0 L

parameters: voc, 1 4 dioxane

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	bladder pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	17 [ft]
		Pump placement from TOC	12 [ft]

Well Information:		**Pumping information:**	
Well ID	UNK-09	Final pumping rate	50 [mL/min]
Well diameter	4 [in]	Flowcell volume	192.88 [mL]
Well total depth	15.25 [ft]	Calculated Sample Rate	232 [sec]
Depth to top of screen	10 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.6 [in]
Depth to Water	2.58 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:55:28	11.96	7.59	436.69	0.44	0.47	-88.54
	11:00:30	11.94	7.58	437.46	0.38	0.43	-91.93
	11:05:31	11.98	7.58	439.06	0.49	0.40	-96.38
	11:10:34	11.97	7.57	441.29	0.37	0.39	-100.88
	11:15:36	11.95	7.57	444.06	0.35	0.38	-104.00
Variance in last 3 readings	11:05:31	0.04	0.00	1.60	0.11	-0.03	-4.45
	11:10:34	-0.02	-0.01	2.23	-0.12	-0.02	-4.50
	11:15:36	-0.01	0.00	2.77	-0.01	-0.01	-3.13

Notes:

Time: 11:15
Pump Time: 45 minutes
Purge volume: .45 gallon

Parameters: VOC-8260, 1,4 dioxane,SVOC-8270, total metals

no lid

In-Situ Inc.

Troll 9000 Low-Flow System
5/6/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	17 [ft]
		Pump placement from TOC	12 [ft]

Well Information:		**Pumping information:**	
Well ID	UNK-10	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	192.88 [mL]
Well total depth	15.35 [ft]	Calculated Sample Rate	232 [sec]
Depth to top of screen	10 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	2.51 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:35:09	15.84	7.39	718.96	5.85	0.34	-130.64
	12:40:11	15.82	7.39	716.08	7.87	0.31	-133.27
	12:45:14	15.93	7.38	724.96	5.48	0.29	-135.21
	12:50:16	15.91	7.38	721.40	7.26	0.28	-137.40
	12:55:17	15.88	7.39	721.08	4.85	0.27	-139.07
Variance in last 3 readings	12:45:14	0.11	0.00	8.88	-2.39	-0.02	-1.94
	12:50:16	-0.02	0.00	-3.56	1.78	-0.01	-2.19
	12:55:17	-0.03	0.00	-0.32	-2.40	-0.01	-1.67

Notes:

Time: 12:55
Pump Time: 30 minutes
Purge volume: .3 gallon

Parameters: VOC-8260, total metals

No lid, didn't meet maximum drawdown requirement, drawdown didn't stabize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Bill Cobern	Pump Model/Type	Bladder Pump
Company Name	Arcadis	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 3	Tubing Length	13 [ft]
		Pump placement from TOC	8 [ft]

Well Information:		**Pumping information:**	
Well ID	UNK-11	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	175.02 [mL]
Well total depth	11.75 [ft]	Calculated Sample Rate	211 [sec]
Depth to top of screen	6.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	4.01 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:45:27	15.11	7.14	762.23	25.92	0.65	-110.99
	11:50:29	15.17	7.14	752.32	24.67	0.69	-108.72
	11:55:31	15.38	7.14	734.61	25.02	0.80	-104.15
	12:00:32	15.41	7.14	734.67	24.45	0.81	-103.81
	12:05:33	15.48	7.14	733.99	25.49	0.81	-103.68
Variance in last 3 readings	11:55:31	0.21	0.00	-17.71	0.36	0.11	4.58
	12:00:32	0.03	0.00	0.07	-0.57	0.01	0.34
	12:05:33	0.07	0.00	-0.69	1.04	0.00	0.13

Notes:

Time: 12:05
Pump Time: 60 minutes
Purge volume: .6 gallon

Parameters: VOC-8260

Lid secure, didn't meet maximum drawdown requirement, drawdown didn't stabize

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	47 [ft]
		Pump placement from TOC	37 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-01(6)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	326.78 [mL]
Well total depth	40.1 [ft]	Calculated Sample Rate	197 [sec]
Depth to top of screen	35 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	27.48 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:21:58	11.69	7.28	4702.53	12.84	0.52	-127.83
	11:27:02	11.95	7.27	4741.68	12.02	0.49	-127.88
	11:32:05	11.68	7.27	4774.99	10.26	0.50	-127.66
	11:37:07	11.80	7.26	4793.15	39.88	0.50	-127.92
	11:42:14	12.20	7.26	4810.38	12.30	0.48	-128.48
Variance in last 3 readings	11:32:05	-0.27	0.00	33.31	-1.76	0.00	0.21
	11:37:07	0.11	0.00	18.16	29.63	0.00	-0.26
	11:42:14	0.40	0.00	17.23	-27.58	-0.02	-0.56

Notes: Sample Time: 11:50

Parameters: Geochem
Purged: 2 gallons

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	50 [ft]
		Pump placement from TOC	40 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-02(6)	Final pumping rate	75 [mL/min]
Well diameter	2 [in]	Flowcell volume	340.17 [mL]
Well total depth	43.41 [ft]	Calculated Sample Rate	273 [sec]
Depth to top of screen	35 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	7.2 [in]
Depth to Water	29.82 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:41:10	14.55	6.96	4504.29	13.46	1.54	-30.69
	10:46:16	14.53	6.96	4504.17	7.58	1.68	-30.01
	10:51:19	14.51	6.96	4511.63	7.64	1.74	-29.58
	10:56:21	14.68	6.97	4557.54	6.15	1.81	-29.88
	11:01:23	14.97	6.97	4555.28	5.60	1.82	-29.88
Variance in last 3 readings	10:51:19	-0.02	0.00	7.46	0.06	0.07	0.43
	10:56:21	0.17	0.00	45.91	-1.49	0.06	-0.30
	11:01:23	0.29	0.00	-2.26	-0.55	0.01	0.00

Notes: Sample Time: 1105
Pump Time: 1015

Parameters: Geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	55 [ft]
		Pump placement from TOC	40 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-02-03(6)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	362.49 [mL]
Well total depth	44.63 [ft]	Calculated Sample Rate	218 [sec]
Depth to top of screen	35 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	15.6 [in]
Depth to Water	31 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:59:22	24.00	6.77	8775.77	649.49	1.09	-61.09
	15:04:24	22.68	6.78	8744.94	507.74	1.02	-59.94
	15:09:25	23.02	6.78	8753.46	396.05	1.02	-60.96
	15:14:28	22.45	6.78	8806.89	363.30	1.07	-61.13
	15:19:30	22.35	6.78	8767.07	284.28	1.07	-61.47
Variance in last 3 readings	15:09:25	0.34	-0.01	8.52	-111.68	0.00	-1.03
	15:14:28	-0.57	0.01	53.44	-32.76	0.06	-0.17
	15:19:30	-0.11	0.00	-39.82	-79.02	-0.01	-0.34

Notes: Sample Time: 1520
Pump Time: 1415

Parameters: Voc, 1-4 DIOXANE, Select Metals *, Geochem.
DUP-10_050516

In-Situ Inc.

Troll 9000 Low-Flow System
5/11/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	50 [ft]
		Pump placement from TOC	40 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-03-04	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	340.17 [mL]
Well total depth	42.7 [ft]	Calculated Sample Rate	205 [sec]
Depth to top of screen	37.7 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	2.28 [in]
Depth to Water	22.49 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:54:13	18.63	7.13	1836.55	15.69	1.06	-16.41
	14:59:14	17.68	7.14	1830.96	11.84	1.10	-14.23
	15:04:17	17.16	7.14	1818.59	12.24	1.15	-12.48
	15:09:19	17.03	7.14	1794.65	7.77	1.19	-10.64
	15:14:21	16.78	7.14	1777.38	9.09	1.20	-9.01
Variance in last 3 readings	15:04:17	-0.52	0.00	-12.37	0.40	0.05	1.75
	15:09:19	-0.13	0.00	-23.94	-4.47	0.04	1.84
	15:14:21	-0.26	0.00	-17.27	1.31	0.01	1.62

Notes: Sample Time:1525
Pump Time:1420-1517

Parameters:VOC, 1,4 dioxane, geochem, Dup-11

In-Situ Inc.

Troll 9000 | Low-Flow System
5/13/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	50 [ft]
		Pump placement from TOC	39 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-03-06	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	340.17 [mL]
Well total depth	40.58 [ft]	Calculated Sample Rate	205 [sec]
Depth to top of screen	35.28 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	1.32 [in]
Depth to Water	36.23 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:48:07	17.47	6.79	12110.09	5.88	1.32	29.49
	11:53:09	18.04	6.79	12093.44	6.06	1.39	32.10
	11:58:11	17.86	6.80	12125.07	3.97	1.49	34.16
	12:03:13	17.63	6.80	12149.72	4.20	1.61	36.12
	12:08:15	17.91	6.80	12078.00	4.25	1.63	38.26
Variance in last 3 readings	11:58:11	-0.17	0.01	31.64	-2.09	0.10	2.05
	12:03:13	-0.24	0.00	24.65	0.23	0.11	1.97
	12:08:15	0.28	0.00	-71.72	0.06	0.03	2.14

Notes: Sample Time:1215
Pump Time:1105-1215

Parameters:VOC, 1,4 dioxane, SVOC, metals**

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	44 [ft]
		Pump placement from TOC	34 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-03-07	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	313.39 [mL]
Well total depth	40.51 [ft]	Calculated Sample Rate	377 [sec]
Depth to top of screen	30.51 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	12.32 [in]
Depth to Water	26.05 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:08:52	9.66	7.24	1191.23	1.50	0.90	-82.04
	9:13:55	9.96	7.24	1193.10	1.28	0.84	-82.94
	9:18:56	10.64	7.24	1189.81	0.96	0.79	-83.88
	9:23:58	11.32	7.24	1193.34	1.01	0.75	-84.39
	9:29:01	10.72	7.25	1192.60	1.30	0.76	-84.64
Variance in last 3 readings	9:18:56	0.67	0.00	-3.29	-0.32	-0.05	-0.94
	9:23:58	0.68	0.00	3.53	0.06	-0.04	-0.51
	9:29:01	-0.60	0.01	-0.74	0.29	0.01	-0.25

Notes: Sample Time: 0935

Parameters: Geochem
Purged: 1.5

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	94 [ft]
		Pump placement from TOC	84 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-01(6)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	536.56 [mL]
Well total depth	87.98 [ft]	Calculated Sample Rate	322 [sec]
Depth to top of screen	78 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	1.2 [in]
Depth to Water	76.45 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:20:10	11.37	7.03	950.92	53.40	2.85	1.58
	14:25:12	11.37	7.03	955.91	68.90	2.61	0.73
	14:30:14	11.38	7.03	954.85	44.63	2.47	0.26
	14:35:16	11.24	7.03	954.69	56.04	2.36	-0.04
	14:40:18	11.22	7.03	950.02	41.81	2.24	-0.73
Variance in last 3 readings	14:30:14	0.01	0.00	-1.05	-24.27	-0.14	-0.47
	14:35:16	-0.14	0.00	-0.16	11.41	-0.11	-0.30
	14:40:18	-0.02	0.00	-4.67	-14.23	-0.12	-0.69

Notes: Sample Time: 1443

Parameters: Vocs, 1,4-Dioxane, SVOCS, Geochem (MS/MSD)
Purged: 3.5

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	115 [ft]
		Pump placement from TOC	105 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-04R	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	630.3 [mL]
Well total depth	113.73 [ft]	Calculated Sample Rate	379 [sec]
Depth to top of screen	88.73 [ft]	Sample rate	300 [sec]
Screen length	300 [in]	Stabilized drawdown	0.08 [in]
Depth to Water	82.9 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:08:59	25.61	6.99	1233.02	26.94	4.41	32.34
	14:14:02	25.31	6.98	1233.05	24.87	4.26	29.77
	14:19:04	24.94	6.98	1231.13	13.46	4.04	27.20
	14:24:06	24.75	6.98	1227.81	16.95	3.96	25.87
	14:29:08	24.65	6.98	1229.80	9.86	3.85	25.15
Variance in last 3 readings	14:19:04	-0.37	-0.01	-1.92	-11.41	-0.22	-2.57
	14:24:06	-0.19	0.00	-3.31	3.50	-0.08	-1.33
	14:29:08	-0.10	0.00	1.99	-7.09	-0.11	-0.73

Notes: Sample Time:1440
Pump Time:1220-1431

Parameters:VOC, 1,4 dioxane, SVOC, metals, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/4/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	35 [ft]
		Pump placement from TOC	25 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-05(6)	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	273.22 [mL]
Well total depth	29.63 [ft]	Calculated Sample Rate	164 [sec]
Depth to top of screen	20 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	10.81 [in]
Depth to Water	10.74 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:11:24	10.95	6.95	8150.81	5.21	0.73	-84.18
	8:16:26	10.94	6.95	8147.93	4.37	0.67	-83.07
	8:21:30	10.94	6.96	8147.31	3.15	0.62	-82.13
	8:26:30	10.91	6.96	8154.56	1.82	0.63	-81.53
	8:31:32	10.79	6.97	8163.66	1.21	0.56	-80.72
Variance in last 3 readings	8:21:30	0.01	0.00	-0.62	-1.21	-0.05	0.94
	8:26:30	-0.04	0.00	7.25	-1.33	0.01	0.60
	8:31:32	-0.12	0.01	9.10	-0.61	-0.06	0.81

Notes: Sample Time: 0835

Parameters: Vocs, 1,4-Dioxane, SVOCS, Metals, Geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/3/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	0 [ft]
		Pump placement from TOC	75 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-04-06	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	117 [mL]
Well total depth	78 [ft]	Calculated Sample Rate	71 [sec]
Depth to top of screen	70 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0 [in]
Depth to Water	72.2 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	16:35:03	16.36	7.49	3538.14	43.65	1.16	-190.98
	16:40:05	16.56	7.48	3545.73	50.55	1.11	-190.47
	16:45:07	17.05	7.46	3540.52	42.61	1.09	-187.73
	16:50:10	16.99	7.43	3585.22	44.06	1.10	-183.92
	16:55:12	17.02	7.39	3611.54	43.91	1.06	-179.51
Variance in last 3 readings	16:45:07	0.49	-0.02	-5.20	-7.94	-0.03	2.74
	16:50:10	-0.07	-0.03	44.70	1.45	0.01	3.81
	16:55:12	0.03	-0.04	26.31	-0.15	-0.04	4.41

Notes: Sample Time: 17:00

Parameters: Vocs, 1,4 Dioxane, Metals, SVOCs, Geochem
Purged: 2.25

In-Situ Inc.

Troll 9000 | Low-Flow System
5/3/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	25 [ft]
		Pump placement from TOC	14 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-10R	Final pumping rate	75 [mL/min]
Well diameter	2 [in]	Flowcell volume	228.59 [mL]
Well total depth	17.97 [ft]	Calculated Sample Rate	183 [sec]
Depth to top of screen	12.97 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	10.29 [in]
Depth to Water	10.12 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:24:47	19.30	6.81	2273.28	12.01	1.62	43.73
	14:29:49	18.97	6.81	2251.26	10.47	1.53	42.78
	14:34:52	19.38	6.81	2249.83	9.27	1.50	49.97
	14:39:55	19.36	6.81	2250.15	8.82	1.43	53.61
	14:44:56	19.54	6.81	2242.73	9.74	1.40	55.06
Variance in last 3 readings	14:34:52	0.41	0.00	-1.44	-1.20	-0.03	7.19
	14:39:55	-0.02	0.00	0.33	-0.44	-0.07	3.64
	14:44:56	0.18	0.00	-7.42	0.91	-0.03	1.45

Notes: Sample Time: 14:50
Pump Time: 50 min

Parameters: Geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	17 [ft]
		Pump placement from TOC	13 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-12-11	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	192.88 [mL]
Well total depth	16.8 [ft]	Calculated Sample Rate	232 [sec]
Depth to top of screen	11.8 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	1.32 [in]
Depth to Water	3.4 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	10:48:13	13.20	6.71	6253.78	15.02	-0.01	-363.41
	10:53:16	13.31	6.71	6209.43	14.37	-0.01	-366.41
	10:58:17	13.26	6.72	6187.34	15.06	-0.02	-366.03
	11:03:18	13.32	6.71	6177.19	13.25	-0.02	-366.33
	11:08:21	13.20	6.71	6171.87	13.42	-0.01	-368.54
Variance in last 3 readings	10:58:17	-0.05	0.00	-22.09	0.69	-0.01	0.38
	11:03:18	0.05	0.00	-10.15	-1.81	0.00	-0.30
	11:08:21	-0.11	0.00	-5.32	0.17	0.00	-2.22

Notes: time: 1110
pump time: 1hr20min
purge volume: 3.0

parameters: voc, 1 4 dioxane, svoc, metals, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	19 [ft]
		Pump placement from TOC	14 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-12	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	201.81 [mL]
Well total depth	17.21 [ft]	Calculated Sample Rate	122 [sec]
Depth to top of screen	12.21 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	NA [in]
Depth to Water	6.03 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	16:41:12	9.58	7.64	701.36	70.83	0.52	129.89
	16:46:14	9.64	7.64	700.87	81.18	0.51	129.68
	16:51:16	9.65	7.63	700.21	63.58	0.49	129.64
	16:56:18	9.63	7.63	700.75	78.47	0.47	129.77
	16:58:02	9.63	7.63	699.59	68.92	0.47	129.42
Variance in last 3 readings	16:51:16	0.01	-0.01	-0.66	-17.60	-0.02	-0.04
	16:56:18	-0.01	-0.01	0.54	14.88	-0.01	0.13
	16:58:02	0.00	0.00	-1.16	-9.55	-0.01	-0.34

Notes: Sample Time:1705
Pump Time:1555-1700

Parameters:VOC, select metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	45 [ft]
		Pump placement from TOC	23 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-13	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	317.85 [mL]
Well total depth	25.4 [ft]	Calculated Sample Rate	191 [sec]
Depth to top of screen	20.4 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	NA [in]
Depth to Water	9.46 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:07:06	19.29	7.32	1449.18	13.69	4.40	0.75
	10:12:09	18.89	7.32	1437.94	11.71	4.14	0.57
	10:17:10	18.75	7.33	1463.20	5.76	3.86	1.17
	10:22:12	18.86	7.33	1452.72	9.72	3.50	1.34
	10:24:42	19.26	7.32	1435.18	6.80	3.31	0.66
Variance in last 3 readings	10:17:10	-0.13	0.01	25.26	-5.95	-0.28	0.60
	10:22:12	0.11	0.00	-10.48	3.96	-0.36	0.17
	10:24:42	0.40	-0.01	-17.54	-2.92	-0.18	-0.69

Notes: Sample Time:1035
Pump Time:750-1026

Parameters:VOC, 1,4 dioxane, SVOC, metals**, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	90 [ft]
		Pump placement from TOC	30.5 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-14	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	518.71 [mL]
Well total depth	32.08 [ft]	Calculated Sample Rate	312 [sec]
Depth to top of screen	27.08 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.36 [in]
Depth to Water	24.17 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	13:59:05	9.72	6.88	1293.00	28.95	2.53	157.54
	14:04:11	9.57	6.89	1295.48	30.90	2.82	160.11
	14:09:11	9.63	6.89	1292.85	30.93	2.96	162.21
	14:14:14	9.32	6.90	1293.59	30.73	3.10	164.35
	14:19:16	9.24	6.90	1290.34	32.83	3.16	166.10
Variance in last 3 readings	14:09:11	0.07	0.00	-2.63	0.02	0.14	2.10
	14:14:14	-0.32	0.00	0.74	-0.19	0.14	2.14
	14:19:16	-0.08	0.00	-3.25	2.10	0.06	1.75

Notes: Sample Time:1425
Pump Time:1300-1420

Parameters:VOC, 1,4 dioxane, methane, SVOC, metals, nitrate/sulfate, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	36 [ft]
		Pump placement from TOC	21 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-15	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	277.68 [mL]
Well total depth	22.69 [ft]	Calculated Sample Rate	167 [sec]
Depth to top of screen	17.69 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.84 [in]
Depth to Water	19.83 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:06:19	16.06	6.85	1375.36	13.01	0.79	2.91
	12:11:21	16.34	6.85	1370.78	10.32	0.73	1.72
	12:16:23	17.29	6.84	1365.46	6.78	0.68	0.86
	12:21:25	18.75	6.84	1351.77	7.66	0.63	-0.59
	12:26:27	19.53	6.84	1363.76	7.21	0.67	-3.03
Variance in last 3 readings	12:16:23	0.94	-0.01	-5.32	-3.55	-0.05	-0.86
	12:21:25	1.46	-0.01	-13.69	0.88	-0.05	-1.45
	12:26:27	0.78	0.00	11.99	-0.44	0.04	-2.44

Notes: Sample Time:1235
Pump Time:1135-1228

Parameters:geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	45 [ft]
		Pump placement from TOC	30 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-12-16	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	317.85 [mL]
Well total depth	32.2 [ft]	Calculated Sample Rate	191 [sec]
Depth to top of screen	27.2 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	23.35 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:58:40	13.76	7.15	2318.91	38.64	7.18	44.50
	10:03:42	14.28	7.12	2308.74	39.53	6.93	43.26
	10:08:44	13.86	7.11	2295.87	35.08	6.82	42.28
	10:13:46	13.72	7.10	2285.97	32.34	6.63	41.51
	10:18:49	14.13	7.09	2278.76	29.23	6.54	40.35
Variance in last 3 readings	10:08:44	-0.42	-0.01	-12.87	-4.45	-0.11	-0.98
	10:13:46	-0.14	-0.01	-9.91	-2.74	-0.19	-0.77
	10:18:49	0.40	-0.01	-7.21	-3.10	-0.09	-1.16

Notes: Sample Time:1030
Pump Time820-1022

Parameters:VOC, 1,4 dioxane, SVOC, metals**, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	32 [ft]
		Pump placement from TOC	28 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-35	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	259.83 [mL]
Well total depth	29.5 [ft]	Calculated Sample Rate	156 [sec]
Depth to top of screen	24.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	23.9 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	14:29:36	15.14	6.97	1917.96	9.00	1.15	-275.35
	14:34:41	15.20	6.97	1903.65	8.91	1.04	-275.74
	14:39:44	15.17	6.97	1896.91	7.95	0.95	-275.74
	14:44:46	15.14	6.97	1885.90	7.70	0.87	-274.51
	14:54:09	19.36	7.48	1.50	3.91	8.85	-92.91
Variance in last 3 readings	14:39:44	-0.03	0.00	-6.75	-0.96	-0.09	0.00
	14:44:46	-0.03	0.00	-11.00	-0.25	-0.08	1.24
	14:54:09	4.22	0.51	-1884.40	-3.79	7.97	181.60

Notes:

time: 1450
pump time: 2hr
purge volume: 5.5

parameters: select metals
The final reading is the 14:44 reading.

In-Situ Inc.

Troll 9000 Low-Flow System
5/9/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	15 [ft]
		Pump placement from TOC	8 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-13-36R	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	183.95 [mL]
Well total depth	9.85 [ft]	Calculated Sample Rate	111 [sec]
Depth to top of screen	4.85 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.12 [in]
Depth to Water	5.18 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00
	15:38:16	14.83	11.75	1360.50	24.14	0.81	-50.76
	15:43:17	14.60	11.80	1392.54	17.77	0.59	-61.84
	15:48:20	14.73	11.81	1412.07	9.40	0.56	-62.31
	15:53:22	14.64	11.84	1432.01	6.09	0.57	-61.03
Variance in last 3 readings	15:43:17	-0.23	0.05	32.04	-6.36	-0.22	-11.08
	15:48:20	0.13	0.02	19.53	-8.37	-0.03	-0.47
	15:53:22	-0.10	0.02	19.94	-3.30	0.01	1.28

Notes: Sample Time:1605
Pump Time:1520-1557

Parameters:select metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	100 [ft]
		Pump placement from TOC	95 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-50	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	563.34 [mL]
Well total depth	109.84 [ft]	Calculated Sample Rate	339 [sec]
Depth to top of screen	84.84 [ft]	Sample rate	300 [sec]
Screen length	300 [in]	Stabilized drawdown	0.96 [in]
Depth to Water	85.42 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	15:54:36	17.40	7.08	1175.60	4.56	1.22	-59.29
	15:59:37	17.96	7.06	1178.89	3.18	1.01	-68.06
	16:04:40	18.21	7.05	1183.32	5.39	0.91	-74.56
	16:09:43	18.20	7.04	1186.91	3.28	0.87	-79.72
	16:14:45	18.07	7.04	1184.98	3.14	0.85	-83.91
Variance in last 3 readings	16:04:40	0.25	-0.01	4.43	2.21	-0.10	-6.49
	16:09:43	-0.02	0.00	3.59	-2.11	-0.04	-5.17
	16:14:45	-0.13	0.00	-1.93	-0.14	-0.02	-4.19

Notes: time:1616
pump time:1542-1616

parameters:voc14

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	95 [ft]
		Pump placement from TOC	79 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-52	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	541.03 [mL]
Well total depth	82.1 [ft]	Calculated Sample Rate	325 [sec]
Depth to top of screen	72.1 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0 [in]
Depth to Water	71.2 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:52:29	17.28	7.01	2097.99	88.68	5.65	24.59
	14:57:31	16.83	7.01	2081.17	79.35	5.54	20.96
	15:02:34	16.42	7.02	2064.32	67.13	5.51	21.64
	15:07:35	16.29	7.02	2042.28	76.95	5.38	22.57
	15:12:37	16.09	7.02	2026.40	74.00	5.35	20.33
Variance in last 3 readings	15:02:34	-0.41	0.00	-16.85	-12.21	-0.03	0.68
	15:07:35	-0.13	0.00	-22.05	9.82	-0.13	0.93
	15:12:37	-0.20	0.00	-15.88	-2.96	-0.03	-2.24

Notes: time:1520
pump time:1350-1515

parameters:voc14 geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	90 [ft]
		Pump placement from TOC	83 [ft]

Well Information:		**Pumping information:**	
Well ID	mw-13-53	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	518.71 [mL]
Well total depth	85.4 [ft]	Calculated Sample Rate	312 [sec]
Depth to top of screen	80.4 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	77.89 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:56:53	14.14	6.85	1537.42	15.67	1.81	34.09
	10:01:56	14.29	6.86	1539.85	17.48	1.85	33.57
	10:06:58	14.55	6.86	1541.54	14.29	1.83	33.57
	10:12:01	14.82	6.86	1545.61	12.70	1.90	34.79
	10:17:02	15.10	6.86	1549.26	17.07	1.96	35.32
Variance in last 3 readings	10:06:58	0.26	0.00	1.69	-3.20	-0.03	0.00
	10:12:01	0.28	0.00	4.07	-1.58	0.07	1.21
	10:17:02	0.27	0.00	3.65	4.37	0.06	0.53

Notes: time:1020
pump time:857-1020

parameters:voc 14 msmsd

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	30 [ft]
		Pump placement from TOC	19.5 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-14-66	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	250.9 [mL]
Well total depth	22.23 [ft]	Calculated Sample Rate	151 [sec]
Depth to top of screen	17.23 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	5.24 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	9:39:34	10.08	7.36	1298.16	11.29	0.59	531.22
	9:44:36	10.27	7.36	1299.54	12.31	0.58	531.56
	9:49:39	10.52	7.36	1303.44	10.15	0.58	533.06
	9:54:41	10.78	7.37	1306.45	12.33	0.57	532.59
	9:59:43	10.98	7.37	1306.56	7.12	0.57	534.48
Variance in last 3 readings	9:49:39	0.25	0.00	3.90	-2.16	0.01	1.50
	9:54:41	0.25	0.00	3.01	2.17	-0.01	-0.47
	9:59:43	0.21	0.00	0.12	-5.21	0.00	1.88

Notes: Sample Time:
Pump Time:

Parameters:

In-Situ Inc.

Troll 9000 | Low-Flow System
5/13/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	30 [ft]
		Pump placement from TOC	16 [ft]

Well Information:		**Pumping information:**	
Well ID	MW-14-67	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	250.9 [mL]
Well total depth	20.84 [ft]	Calculated Sample Rate	151 [sec]
Depth to top of screen	15.84 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0 [in]
Depth to Water	4.94 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:15:29	13.26	8.11	994.37	13.02	3.02	179.60
	10:20:31	13.23	8.05	1076.59	4.70	2.87	180.67
	10:25:34	13.44	8.00	1122.58	1.25	2.70	180.93
	10:30:36	13.73	7.96	1171.74	3.47	2.54	181.15
	10:35:38	13.79	7.93	1198.27	5.26	2.40	181.53
Variance in last 3 readings	10:25:34	0.21	-0.04	46.00	-3.45	-0.17	0.26
	10:30:36	0.29	-0.04	49.16	2.22	-0.15	0.21
	10:35:38	0.06	-0.03	26.53	1.79	-0.14	0.39

Notes: Sample Time:1045
Pump Time:820-1038

Parameters:VOC, 1,4 dioxane, select metals*

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	45 [ft]
		Pump placement from TOC	35 [ft]

Well Information:		**Pumping information:**	
Well ID	template	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	317.85 [mL]
Well total depth	38.5 [ft]	Calculated Sample Rate	382 [sec]
Depth to top of screen	33.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	2.52 [in]
Depth to Water	31.28 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:19:50	15.19	6.98	3930.37	11.03	0.87	-8.66
	10:24:53	15.27	6.98	3942.04	6.04	0.92	-7.92
	10:29:54	15.31	6.98	3940.98	4.97	0.90	-8.99
	10:34:56	15.18	6.98	3950.58	7.82	0.92	-4.75
	10:39:58	15.25	6.98	3944.34	4.63	0.91	-6.29
Variance in last 3 readings	10:29:54	0.04	0.00	-1.06	-1.08	-0.02	-1.07
	10:34:56	-0.13	0.00	9.60	2.85	0.02	4.24
	10:39:58	0.07	0.00	-6.24	-3.19	-0.01	-1.54

Notes: time:1043
pump time:920-1043

parameters:voc14 select metal

In-Situ Inc.

Troll 9000 Low-Flow System
5/9/2016 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	15 [ft]
		Pump placement from TOC	10 [ft]

Well Information:		**Pumping information:**	
Well ID	MWBP-11-UST1-4	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	183.95 [mL]
Well total depth	11.22 [ft]	Calculated Sample Rate	111 [sec]
Depth to top of screen	6.22 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	3.48 [in]
Depth to Water	2.51 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	14:16:46	13.55	10.34	1038.94	8.64	0.66	-74.98
	14:21:49	13.47	10.32	1036.18	4.52	0.63	-74.00
	14:23:23	13.45	10.31	1045.15	-0.34	0.63	-73.44
	14:28:25	13.08	10.30	1041.51	0.88	0.62	-73.06
	14:33:27	13.01	10.27	1046.03	0.20	0.62	-71.00
Variance in last 3 readings	14:23:23	-0.01	-0.01	8.97	-4.85	0.00	0.56
	14:28:25	-0.37	0.00	-3.64	1.22	-0.01	0.39
	14:33:27	-0.06	-0.03	4.52	-0.68	0.00	2.05

Notes: Sample Time:1445
Pump Time:1315-1437

Parameters:VOC, Select metals

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	38 [ft]
		Pump placement from TOC	33.5 [ft]

Well Information:		**Pumping information:**	
Well ID	MWBP-12A-UST1-4	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	286.61 [mL]
Well total depth	36.72 [ft]	Calculated Sample Rate	172 [sec]
Depth to top of screen	31.72 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.24 [in]
Depth to Water	30.08 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	8:55:39	11.08	6.82	3710.59	1.42	2.27	-31.41
	9:00:41	11.13	6.82	3713.00	3.71	2.15	-30.17
	9:05:45	11.31	6.82	3715.38	0.38	1.78	-29.15
	9:10:47	11.44	6.82	3718.18	-0.09	1.78	-28.25
	9:15:50	11.57	6.82	3719.63	1.89	1.65	-26.88
Variance in last 3 readings	9:05:45	0.18	0.00	2.38	-3.34	-0.37	1.03
	9:10:47	0.13	0.00	2.80	-0.47	0.00	0.90
	9:15:50	0.12	0.00	1.45	1.98	-0.13	1.37

Notes: Sample Time:925
Pump Time:820-917

Parameters:VOC, 1,4 dioxane, methane, SVOC, metals**, nitrate/sulfate

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	20 [ft]
		Pump placement from TOC	10 [ft]

Well Information:		**Pumping information:**	
Well ID	MWBP-12-UST-1-4	Final pumping rate	100 [mL/min]
Well diameter	4 [in]	Flowcell volume	206.27 [mL]
Well total depth	11.24 [ft]	Calculated Sample Rate	124 [sec]
Depth to top of screen	15 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	0 [in]
Depth to Water	6.83 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:13:29	16.14	7.25	2154.40	4.07	1.82	-55.37
	12:18:30	16.53	7.24	2065.81	2.80	1.96	-49.30
	12:23:31	16.25	7.24	1999.80	3.06	2.12	-44.16
	12:28:34	16.49	7.24	1966.62	2.28	2.18	-40.78
	12:33:36	16.25	7.24	1942.73	0.73	2.26	-38.34
Variance in last 3 readings	12:23:31	-0.28	0.00	-66.01	0.26	0.16	5.13
	12:28:34	0.23	0.00	-33.18	-0.78	0.07	3.38
	12:33:36	-0.24	0.00	-23.89	-1.55	0.07	2.44

Notes: Sample Time: 1240
Pump Time: 1153

Parameters: Vocs, 1-4 Dioxane, SVOCS, Metals **

In-Situ Inc.

Troll 9000 | Low-Flow System
5/11/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cliff walls	Pump Model/Type	bladder geotech
Company Name	pmenv	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	45 [ft]
		Pump placement from TOC	36 [ft]

Well Information:		**Pumping information:**	
Well ID	mwbp-12-ust-6	Final pumping rate	50 [mL/min]
Well diameter	2 [in]	Flowcell volume	317.85 [mL]
Well total depth	38.5 [ft]	Calculated Sample Rate	382 [sec]
Depth to top of screen	33.5 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.48 [in]
Depth to Water	32.61 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:30:43	15.21	6.87	2601.85	14.97	0.71	-56.18
	11:35:46	15.12	6.87	2631.18	9.48	0.69	-67.00
	11:40:48	14.93	6.87	2661.68	12.44	0.68	-73.24
	11:45:49	14.75	6.87	2661.08	7.12	0.65	-79.28
	11:50:52	15.13	6.87	2673.56	8.35	0.65	-81.85
Variance in last 3 readings	11:40:48	-0.19	0.00	30.50	2.96	-0.01	-6.24
	11:45:49	-0.17	0.00	-0.60	-5.32	-0.03	-6.03
	11:50:52	0.38	0.00	12.48	1.23	0.00	-2.57

Notes: time:1153
pump time:1110-1153

parameters:geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/10/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	36 [ft]
		Pump placement from TOC	31 [ft]

Well Information:		**Pumping information:**	
Well ID	P6-MW-01	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	277.68 [mL]
Well total depth	31.2 [ft]	Calculated Sample Rate	167 [sec]
Depth to top of screen	26.2 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	1.2 [in]
Depth to Water	29.19 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:33:32	10.93	6.98	1682.01	19.97	0.66	11.68
	11:38:34	11.01	6.98	1682.35	15.98	0.62	11.08
	11:43:35	11.05	6.98	1682.24	13.59	0.62	10.53
	11:48:38	11.03	6.98	1681.98	9.86	0.62	10.48
	11:53:40	11.07	6.98	1683.67	8.36	0.60	10.36
Variance in last 3 readings	11:43:35	0.05	0.00	-0.11	-2.39	-0.01	-0.56
	11:48:38	-0.02	0.00	-0.26	-3.73	0.00	-0.04
	11:53:40	0.04	0.00	1.70	-1.50	-0.01	-0.13

Notes: Sample Time:1200
Pump Time:1040-1155

Parameters:Geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/6/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	25 [ft]
		Pump placement from TOC	20 [ft]

Well Information:		**Pumping information:**	
Well ID	P6-SB-07	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	228.59 [mL]
Well total depth	23.62 [ft]	Calculated Sample Rate	138 [sec]
Depth to top of screen	15 [ft]	Sample rate	300 [sec]
Screen length	120 [in]	Stabilized drawdown	10.2 [in]
Depth to Water	5.75 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	10:47:19	14.83	7.64	512.18	28.75	2.47	-84.92
	10:52:22	15.07	7.64	515.22	12.00	2.34	-85.04
	10:57:24	15.11	7.64	514.90	14.37	2.22	-86.62
	11:02:25	15.22	7.65	513.48	14.63	2.11	-87.01
	11:07:28	15.15	7.65	514.69	13.93	2.03	-87.26
Variance in last 3 readings	10:57:24	0.05	0.00	-0.32	2.37	-0.12	-1.58
	11:02:25	0.11	0.00	-1.42	0.27	-0.11	-0.38
	11:07:28	-0.07	0.00	1.21	-0.71	-0.08	-0.25

Notes:

Sample Time: 1110
Pump Time: 0911

Parameters: Vocs, 1-4 Dioxane, SVOCS, Metals **
Purged: 4 gal

In-Situ Inc.

Troll 9000 | Low-Flow System
5/12/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	cooper zilio	Pump Model/Type	bladder pump
Company Name	arcadis	Tubing Type	ldpe
Project Name	racer lansing	Tubing Diameter	0.17 [in]
Site Name	plant 6	Tubing Length	14 [ft]
		Pump placement from TOC	8.5 [ft]

Well Information:		**Pumping information:**	
Well ID	p6-sb-18	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	179.49 [mL]
Well total depth	12.18 [ft]	Calculated Sample Rate	108 [sec]
Depth to top of screen	8 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	0.33 [in]
Depth to Water	4.24 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-1	+/-1	+/-10	+/-1	+/-10
			+/-10 %	+/-10 %	+/-10 %	+/-10 %	+/-10 %
Last 5 Readings	15:28:08	18.06	10.99	408.95	6.92	1.52	-232.95
	15:33:12	18.03	11.02	414.33	6.77	1.44	-235.26
	15:38:12	17.95	11.06	418.06	5.93	1.42	-238.21
	15:43:14	17.67	11.08	418.59	5.93	1.38	-240.69
	15:48:17	17.96	11.07	419.57	5.90	1.35	-239.79
Variance in last 3 readings	15:38:12	-0.08	0.04	3.74	-0.85	-0.02	-2.95
	15:43:14	-0.28	0.02	0.53	0.00	-0.04	-2.48
	15:48:17	0.29	-0.01	0.98	-0.03	-0.04	0.90

Notes: time: 1550
pump time: 35min
purge volume: 0.5

parameters: select metals, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/16/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	TM	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	30 [ft]
		Pump placement from TOC	9.5 [ft]

Well Information:		**Pumping information:**	
Well ID	P6-SB-35	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	250.9 [mL]
Well total depth	11.96 [ft]	Calculated Sample Rate	151 [sec]
Depth to top of screen	6.96 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	4.8 [in]
Depth to Water	3.8 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	11:05:26	15.85	10.62	314.82	3.31	3.89	602.16
	11:10:27	16.03	10.63	313.98	0.95	4.00	604.35
	11:15:29	16.37	10.63	315.88	-2.05	4.04	606.14
	11:20:32	16.32	10.64	317.83	-1.75	3.94	607.94
	11:25:35	16.46	10.65	317.62	1.33	3.82	608.93
Variance in last 3 readings	11:15:29	0.34	0.00	1.90	-3.00	0.04	1.80
	11:20:32	-0.05	0.01	1.95	0.30	-0.09	1.80
	11:25:35	0.14	0.02	-0.21	3.08	-0.12	0.98

Notes: Sample Time:1135
Pump Time:1035-1127

Parameters:select metals*, geochem

In-Situ Inc.

Troll 9000 | Low-Flow System
5/5/2016 | ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	RH	Pump Model/Type	Bladder Pump
Company Name	PM ENV	Tubing Type	LDPE
Project Name	Racer Lansing	Tubing Diameter	0.17 [in]
Site Name	Plant 6	Tubing Length	45 [ft]
		Pump placement from TOC	35 [ft]

Well Information:		**Pumping information:**	
Well ID	SME-MW-02	Final pumping rate	75 [mL/min]
Well diameter	2 [in]	Flowcell volume	317.85 [mL]
Well total depth	37.25 [ft]	Calculated Sample Rate	255 [sec]
Depth to top of screen	33 [ft]	Sample rate	300 [sec]
Screen length	60 [in]	Stabilized drawdown	40.68 [in]
Depth to Water	30.04 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-1 +/-3 %	+/-1 +/-10 %	+/-1 +/-10 %	+/-10
Last 5 Readings	12:28:17	19.11	7.08	2815.18	23.85	3.92	74.45
	12:33:18	19.22	7.08	2832.29	22.49	3.96	76.42
	12:38:20	18.93	7.08	2855.23	23.16	4.09	79.07
	12:43:22	18.75	7.08	2881.46	24.57	4.15	81.21
	12:48:25	18.80	7.08	2896.18	22.93	4.07	82.67
Variance in last 3 readings	12:38:20	-0.29	0.00	22.95	0.67	0.13	2.65
	12:43:22	-0.18	0.00	26.23	1.41	0.06	2.14
	12:48:25	0.05	0.00	14.72	-1.64	-0.08	1.45

Notes: Sample Time: 1250
Pump Time: 1142

Parameters: Geochem

ATTACHMENT 4

No Purge Pilot Study Data

(on attached CD)

TABLE A4-1
MW-14-58 No-Purge Pilot Study Results
May 2016
2nd Quarter 2016 No-Purge Sampling Pilot Study
RACER Trust Plant 2 - Lansing, Michigan

Location ID:		MW-14-58	MW-14-58	MW-14-58	MW-14-58	MW-14-58	MW-14-58	MW-14-58
Date Collected:		09/17/14	12/10/14	03/25/15	06/03/15	12/03/15	Low Flow	05/17/16
Sample Name:	Units	MW-14-58_091714	MW-14-58_121014	MW-14-58_032515	MW-14-58_060315	MW-14-58_120315	Geometric Mean	MW-14-58_051716
Volatile Organics								
1,4-Dioxane	ug/L	25	58	54	46	24	38.67	14
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Inorganics								
Arsenic	ug/L	11	5	7	8	8	7.56	6
Nickel	ug/L	19	15	17	16	14	16.11	23
Vanadium	ug/L	11	<5	7	<5	<5	8.77	7

Notes:

* Geometric mean taken from the results of the last 5 samples. Non-detects are included as detection limits (i.e. <5 = 5).

ug/L - micrograms per liter

TABLE A4-2
MW-14-58 No-Purge Pilot Study Results
May 2016
2nd Quarter 2016 No-Purge Sampling Pilot Study
RACER Trust Plant 2 - Lansing, Michigan

Location ID:		MW-14-59	MW-14-59	MW-14-59	MW-14-59	MW-14-59	MW-14-59	MW-14-59
Date Collected:		09/18/14	12/10/14	03/25/15	06/04/15	12/04/15	Low Flow	05/17/16
Sample Name:	Units	MW-14-59_091814	MW-14-59_121014	MW-14-59_032515	MW-14-59_060415	MW-14-59_120415	Geometric Mean	MW-14-59_051716
Volatile Organics								
1,4-Dioxane	ug/L	270	280	220	200	200	231.53	80
1,1-Dichloroethane	ug/L	17	15	12	11	12	13.22	11
1,1-Dichloroethene	ug/L	28	34	30	21	39	29.77	18
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1

Notes:

* Geometric mean taken from the results of the last 5 samples. Non-detects are included as detection limits (i.e. <5 = 5).

ug/L - micrograms per liter

TABLE A4-3
MW-14-58 No-Purge Pilot Study Results
May 2016
2nd Quarter 2016 No-Purge Sampling Pilot Study
RACER Trust Plant 2 - Lansing, Michigan

Location ID:		MW-14-60	MW-14-60	MW-14-60	MW-14-60	MW-14-60	MW-14-60	MW-14-60
Date Collected:		09/19/14	12/10/14	03/27/15	06/04/15	12/07/15	Low Flow	05/17/16
Sample Name:	Units	MW-14-60_091914	MW-14-60_121014	MW-14-60_032715	MW-14-60_060415	MW-14-60_120715	Geometric Mean	MW-14-60_051716
Volatile Organics								
1,4-Dioxane	ug/L	200 Y	178	158	160	150	161.18	131
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	3	3	3	3	2	2.77	9
Chloroethane	ug/L	7	19	22	18	5	12.14	36
Inorganics								
Manganese	ug/L	258	330	371	399	331	334.24	414

Notes:

* Geometric mean taken from the results of the last 5 samples. Non-detects are included as detection limits (i.e. <5 = 5).

ug/L - micrograms per liter

Lab and Validation Data Qualifiers:

Y = Elevated reporting limit due to high target concentration.

TABLE A4-4
MW-14-58 No-Purge Pilot Study Results
May 2016
2nd Quarter 2016 No-Purge Sampling Pilot Study
RACER Trust Plant 2 - Lansing, Michigan

Location ID:		MW-14-62	MW-14-62	MW-14-62	MW-14-62	MW-14-62	MW-14-62	MW-14-62
Date Collected:		09/19/14	12/11/14	03/27/15	06/09/15	12/09/15	Low Flow	05/17/16
Sample Name:	Units	MW-14-62_091914	MW-14-62_121114	MW-14-62_032715	MW-14-62_060915	MW-14-62_120915	Geometric Mean	MW-14-62_051716
Volatile Organics								
1,4-Dioxane	ug/L	58	230 Y	169	48	67	93.77	176
1,1-Dichloroethane	ug/L	78	252 Y	185	56	66	106.09	235 Y
1,1-Dichloroethene	ug/L	<1	5 Y	<1	<1	<1	1.38	5 Y
Vinyl chloride	ug/L	2	5 Y	2	<1	<1	1.82	5 Y
Chloroethane	ug/L	7	12 Y	9	6	4	7.11	10 Y

Notes:

* Geometric mean taken from the results of the last 5 samples. Non-detects are included as detection limits (i.e. <5 = 5).

ug/L - micrograms per liter

Lab and Validation Data Qualifiers:

Y = Elevated reporting limit due to high target concentration.

TABLE A4-5
MW-14-58 No-Purge Pilot Study Results
May 2016
2nd Quarter 2016 No-Purge Sampling Pilot Study
RACER Trust Plant 2 - Lansing, Michigan

Location ID:		MW-14-70	MW-14-70	MW-14-70	MW-14-70	MW-14-70	MW-14-70	MW-14-70
Date Collected:		09/18/14	12/05/14	03/25/15	06/05/15	12/07/15	Low Flow	05/16/16
Sample Name:	Units	MW-14-70_091814	MW-14-70_120514	MW-14-70_032515	MW-14-70_060515	MW-14-70_120715	Geometric Mean	MW-14-70_051616
Volatile Organics								
1,4-Dioxane	ug/L	5	5	5	5	3	4.51	3
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Inorganics								
Arsenic	ug/L	<2	<2	<2	<2	<2	<2	<2
Nickel	ug/L	16	42	25	7	9	16.03	9
Vanadium	ug/L	6	5	9	5	5	5.83	5

Notes:

* Geometric mean taken from the results of the last 5 samples. Non-detects are included as detection limits (i.e. <5 = 5).

ug/L - micrograms per liter

TABLE A4-6
MW-14-58 No-Purge Pilot Study Results
May 2016
2nd Quarter 2016 No-Purge Sampling Pilot Study
RACER Trust Plant 2 - Lansing, Michigan

Location ID:		P6-SB-37	P6-SB-37	P6-SB-37	P6-SB-37	P6-SB-37	P6-SB-37	P6-SB-37
Date Collected:		02/20/14	06/24/14	12/08/14	06/08/15	12/03/15	Low Flow	05/16/16
Sample Name:	Units	P6-SB-37 (022014)	P6-SB-37_062414	P6-SB-37_120814	P6-SB-37_060815	P6-SB-37_120315	Geometric Mean	P6-SB-37_051616
Inorganics								
Arsenic	ug/L	<2	7 [7]	5	4	3	3.91	<2
Nickel	ug/L	12	<5 [<5]	<5	<5	<5	12.00	<5
Vanadium	ug/L	4	28 [28]	27	17	13	12.43	11

Notes:

[ ] Bracketed values represent duplicate results.

* Geometric mean taken from the results of the last 5 samples. Non-detects are included as detection limits (i.e. <5 = 5).

ug/L - micrograms per liter

Figure A4-1: 1,4-Dioxane No-Purge Comparison
RACER Lansing Plants 2 & 6