

Peter Quackenbush  
Michigan Department of Environmental Quality, RMD  
525 West Allegan Street  
Constitution Hall, North Atrium  
Lansing, Michigan 48909-7741

Arcadis of Michigan, LLC  
28550 Cabot Drive  
Suite 500  
Novi  
Michigan 48377  
Tel 248 994 2240  
Fax 248 994 2241  
[www.arcadis.com](http://www.arcadis.com)

Subject:  
Quarterly Progress Report – 2nd Quarter 2016  
Lansing Plants 2, 3, and 6 Industrial Land  
USEPA I.D.s MID980700827 and MID005356928  
2801 West Saginaw St., 2800 West Saginaw St., and 401 Verlinden St.  
Lansing, Michigan

Environment

Date:  
July 13, 2016

Dear Mr. Quackenbush:

Contact:  
Randy Christensen

Arcadis is submitting this Quarterly Progress Report on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust for Lansing Plants 2, 3, and 6, Industrial Land, in Lansing, Michigan (the Sites). Please note that recent quarterly progress report submittals have been in the form of project update presentations that RACER has shared with MDEQ during in person milestone update meetings. However, no such meetings have been scheduled recently so a formal written progress report has been prepared for this quarter. Future progress reports will be in the form of project update presentations whenever possible.

Phone:  
810.225.1940

Email:  
Randy.Christensen  
@arcadis.com

Our ref:  
B0064479.2016  
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This Quarterly Progress Report covers the period of April 1, 2016 through June 30, 2016. The following briefly summarizes the work performed, and project schedule for various activities.

## Work Performed

- On April 22, 2016 RACER submitted the Lower 1,4-Dioxane Supplemental Toe Investigation work plan to the Michigan Department of Environmental Quality (MDEQ) for review and approval.
  - The MDEQ subsequently approved the Lower 1,4-Dioxane Supplemental Toe Investigation work plan in an email sent on April 29, 2016.

- Between May 2, 2016, and May 20, 2016 the 2<sup>nd</sup> quarter 2016 interim groundwater monitoring event was completed. Work completed during this monitoring event included:
  - Groundwater samples were collected from a total of 129 groundwater monitoring wells. All samples collected were submitted to Merit Laboratories.
    - As part of this groundwater monitoring event a total of 7 monitoring wells were sampled employing no-purge sampling techniques.
  - Groundwater elevation data was obtained from a total of 169 monitoring wells.
  - Light Non-Aqueous Phase Liquid (LNAPL) thickness measurements were collected at 18 LNAPL monitoring well locations. Measurable LNAPL was present in a total of four (4) LNAPL monitoring wells
    - A total of 7.08 gallons of LNAPL was recovered from these 4 LNAPL monitoring wells.
- On May 18, 2016 a drinking water sample was collected from Lansing Township Well #3.
- On May 20, 2016 RACER submitted the Lower 1,4-Dioxane Propane Biosparge Pilot Test and Bioreactor Pilot Test Work Plans to the MDEQ for review and approval.
  - The MDEQ subsequently approved each of these work plans in a letter dated June 13, 2016.
- Between June 6, 2016 and June 17, 2016 the Plant 2 Supplemental Lower 1,4-Dioxane Toe Investigation was completed. Work completed during this investigation included:
  - A total of 15 soil borings were completed to depths ranging from 72-feet below ground surface (bgs) to 83-feet bgs.
  - From these soils borings a total of 67 soil samples and 15 groundwater samples were collected and submitted for analysis.
  - A total of 10 groundwater monitoring wells were installed at depths ranging from 72-feet to 83-feet bgs.
  - Groundwater samples were collected from each of the new monitoring wells and submitted for analysis.
  - The soil and groundwater samples collected were submitted to on on-site mobile lab with a percentage being submitted to Merit Laboratories. Analysis of all samples included VOCs and 1,4-dioxane.
- Between June 16, 2016 and June 17, 2016 Phase I of the Lower 1,4-Dioxane Biosparge Pilot Test was completed at Plant 2. Work completed during the phase 1 pilot study included;
  - Installation of one (1) air sparge well down to a depth of approximately 72-feet bgs.
  - Completion of a short duration air-only injection test into new sparge well using a mobile pilot test skid along with a rented air compressor. During this short duration air-only injection test the following data was collected;
    - Flow rate at which air was being supplied
    - Corresponding air pressure within the well;
    - Groundwater elevation of the air sparge well and nearby groundwater monitoring wells;
    - Dissolved oxygen (DO) levels in the air sparge well and nearby groundwater monitoring wells.
- On June 24, 2016 an additional 4 soil borings were completed at Plant 2.
  - One (1) boring was completed to a total depth of 15-feet bgs. Three (3) borings were completed to a total depth of 10-feet bgs.
  - From these 4 soil borings a total of 8 soils samples were collected.

- Each of these soils samples were submitted to Merit Laboratories for analysis of VOCs, 1,4-dioxane, SVOCs, polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH), diesel range organics (DRO), gasoline range organics (GRO), oil range organics (ORO) and metals.
- On June 27, 2016 RACER submitted the 2015-2016 Annual Groundwater Monitoring Report to the MDEQ. This report included an updated plume stability and geochemical conditions assessment.

### Problems Encountered

- No problems were encountered during 2<sup>nd</sup> quarter 2016.

### Project Schedule – Near-Term Milestone Activities Anticipated During the 3<sup>rd</sup> Quarter 2016

Activity	Schedule
MDEQ Milestone Meeting to discuss status of investigation activities and next steps	August 2016
Submit 2 <sup>nd</sup> Quarter 2016 Interim Groundwater Monitoring Report to MDEQ	August/September 2016
Submit Lower 1,4-Dioxane Supplemental Investigation Summary Report to MDEQ	August/September 2016
Complete 3 <sup>rd</sup> Quarter 2016 Interim Groundwater Monitoring Event	September 2016
Begin Phase 2 Lower 1,4-Dioxane Biosparge Pilot Test	September 2016
Begin Lower 1,4-Dioxane Bioreactor Pilot Test	September 2016

If you have any questions or comments regarding the information presented above, please contact Randy Christensen at [Randy.Christensen@Arcadis.com](mailto:Randy.Christensen@Arcadis.com) or at 517.819.8800.

Sincerely,  
Arcadis of Michigan, LLC



Randy Christensen  
Certified Project Manager

Copies:

Joe Rogers (MDEQ)  
John McCabe (MDEQ)  
Deborah R. Mackenzie-Taylor (MDEQ)  
Grant Trigger (RACER Trust)  
Dave Favero (RACER Trust)