CONESTOGA-ROVERS
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July 14, 2014 Reference No. 012607

Mr. Greg Rudloff
U.S. Environmental Protection Agency, Region 5
Land and Chemicals Division
77 West Jackson Blvd., LU-9J
Chicago, Illinois 60604-3590

Dear Mr. Rudloff:

RE: 1st Semi-Annual 2014 Progress Report
Performance-Based Administrative Order on Consent
Docket Number RCRA-05-2011-0025
13000 Eckles Road Site, Livonia, Michigan
USEPA ID No. MID 005 356 621

In accordance with the Performance-Based Administrative Order on Consent between the U.S. Environmental Protection Agency Region 5 (USEPA) and Revitalizing Auto Communities Environmental Response Trust (RACER), please find the attached progress report for the 1st half of 2014 (January 1, 2014 through June 30, 2014).

Please contact Grant Trigger or Jeff Crum (regarding soil vapor related matters), or Dave Favero or myself (regarding system operation and groundwater matters) if you would like to discuss further. Thank you.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Christopher J. Meincke, P.E.

KTA/13/Det.
Attachment A: 1st Semi-Annual 2014 Progress Report

cc: Christina Rose Bush, MDCH
Grant Trigger, RACER
Dave Favero, RACER
Richard Conforti, MDEQ
Jeff Crum, Hamp, Mathews & Associates
Livonia Civic Center Library

ATTACHMENT A

1st SEMI-ANNUAL 2014 PROGRESS REPORT
PERFORMANCE-BASED ADMINISTRATIVE ORDER ON CONSENT
13000 ECKLES ROAD SITE, LIVONIA, MICHIGAN
JANUARY 1, 2014 TO JUNE 30, 2014

DESCRIPTION OF WORK COMPLETED

- Continued operation of the Area 1 French Drain Collection Trench and Groundwater Treatment system.
- Submitted a 2nd Semi-Annual 2013 Progress Report dated January 15, 2014 to USEPA.
- Collected groundwater samples from Area 1 monitoring wells for the 3-month post-injection groundwater monitoring for the Sodium Dithionite Pilot Study on February 4, 2014.
- Performed groundwater elevation and LNAPL thickness measurement activities at AOI 21 monitoring wells on February 6 and June 30, 2014.
- Submitted a Semi-Annual Report for Special Discharge Permit SD6-94508 dated March 14, 2014 to the City of Detroit Water and Sewerage Department for the period of September 2013 through February 2014.
- Completed groundwater recovery tests inside and outside of the Area 1 Barrier wall utilizing pressure transducers on March 1, 2014 through March 14, 2014. The recovery tests were conducted to evaluate barrier wall conditions for the Zero Valent Iron Permeable Reactive Barrier Treatability Study and to update the groundwater flow and transport model.
- Participated in a conference call with USEPA on April 14, 2014 to review and discuss the Area 1 in-situ remediation alternatives, Zero Valent Iron Permeable Reactive Barrier Treatability Study and the groundwater flow and transport model.
- Abandoned seven on-Site monitoring wells that were located within the interior of the property on April 16, 2014 and temporarily removed the AOI 39 Permanent Marker. The abandonment activities were approved by the USEPA on April 14, 2014. The wells were abandoned in order to facilitate soil filling and grading activities. RACER will submit an evaluation of the effect of removing MW-33-4S, MW-G-1S, MW-G-2S, and MW2-01 from the GMP and a revised GMP to USEPA for approval. The AOI 39 Permanent Marker will be reinstalled following soil moving activities and approval by USEPA of the proposed location.
- Soil filling and grading activities associated with redevelopment of the Site were initiated in April 2014.
- Submitted the draft cost estimate for the 2014 budget amendment for USEPA review on June 6, 2014.
- Continued evaluation of potential cost savings and remedial alternatives to decrease the long-term OM&M costs associated with the Area 1 Groundwater Collection and Treatment System.
- Continued operation and maintenance of vapor mitigation system.

DATA COLLECTED

- Groundwater elevation and LNAPL thickness measurements from AOI 21 monitoring wells are included on attached Figure 1.
- Groundwater sample results associated with the Sodium Dithionite Pilot Study Injections (pre- and post-monitoring) have not been included in this Semi-Annual Report. They will be reported and submitted under a separate cover.

PROBLEMS ENCOUNTERED

- None.

ESTIMATED PERCENT COMPLETE AND INFORMATION SUMMARY FOR SELECTED ACTIVITIES

- O&M of the Groundwater Pump & Treat System (GWTP, Barrier Wall, Cover) 13%

  Continued operation of the Area 1 French Drain Collection Trench and Groundwater Treatment system. Submitted appropriate discharge reports as per the Special Discharge Permit. (Percent complete estimated as 3.5 years complete of 27 years estimated in the May 2010 RCES.)

- Long-Term Groundwater Monitoring 100%

  Long-Term Groundwater Monitoring Plan scheduled to be complete after 5 years of continued stability/reduction in off-Site/boundary concentrations (2006 through 2010). Sampling activities are currently planned to continue pending USEPA approval to cease monitoring.

- Maintenance of the AOI 39 Dust Control Plan 100%
- Restrictive Covenants 100%
- Vapor Intrusion Investigation 75%

  Undergoing RACER review and awaiting further clarification ofUSEPA's vapor intrusion approach to address potential short-term effects from trichloroethylene (TCE) vapor intrusion.

- Installation of Vapor Mitigation System 100%

  Installation completed and system updated September 2012. System performance monitoring is being implemented at pre-scheduled time periods, though some delay in the schedule occurred due to home foreclosure and achieving contact with new homeowners. Latest system performance monitoring completed November 2013.

- Operation, Maintenance and Performance Monitoring of Vapor Mitigation System on-going
- Pilot Tests - Alternative Chemicals & Target In-Situ Treatment Injection 75%

  Objective was to design, implement and evaluate a pilot test to use alternative chemicals in the wastewater treatment process that could reduce treatment system operating time

and/or operating costs. Also, design and implement an in-situ stabilization treatment in Area 1 that could also reduce treatment system operating time and long-term monitoring duration.

The Area 1 field pilot test was conducted in November and December 2010. Based on an evaluation of the pilot test results, additional pilot study injection and monitoring activities were recommended to determine if full-scale on-site implementation would significantly reduce dissolved concentrations of chromium and nickel and allow for the groundwater treatment plant activities to be reduced or eliminated.

The groundwater treatment plant optimization activities have not been conducted due to health and safety concerns associated with handling, storing, and mixing the proposed replacement chemicals.

Additional cost and remedial alternative evaluations were performed in 2013. Additional Area 1 Characterization activities have been implemented. A laboratory treatability study was performed using site groundwater to evaluate the effectiveness of utilizing a permeable reactive barrier wall (PRB) with zero valent iron (ZVI) to treat Area 1 groundwater if the existing groundwater collection and treatment system operations are ceased. Groundwater modeling activities were also performed to evaluate the optimal location and number of PRBs and the effects on groundwater flow inside and outside of the Area 1 Barrier Wall.

An additional field pilot test injection was completed in November 2013 and monitoring activities were completed through February 2014 with an additional monitoring event proposed in the 2014 Annual EA Budget Amendment No. 1 Request, as well as additional Pilot Injections proposed in the northern portion of the Area 1 chromium and nickel-impacted groundwater plume.

- Groundwater Treatment System Decommissioning & Removal 0%

  Anticipated to be completed in 2037 per May 2010 RCES.
- Completion Report & Well Abandonment 0%

  Anticipated to be completed in 2037 per May 201 RCES.

SUMMARY OF CONTACTS WITH INTERESTED PARTIES

- A prospective purchaser has initiated due diligence activities.
- Soil filling and grading activities have been initiated by the prospective purchaser preparing the Site for future construction/redevelopment.

CHANGES IN PERSONNEL

- None

PROJECTED WORK FOR NEXT REPORTING PERIOD
(JULY 2014 THROUGH DECEMBER 2014)

- Coordination with USEPA and MDCH with the goal of removing subslab and near-slab soil gas ports from residences.
- Conduct a vapor mitigation performance evaluation at Home 7, and submit a summary of the performance results and any system modifications, if needed, to USEPA.
- Continued operation of the Area 1 French Drain Collection Trench and Groundwater Treatment system.
- Evaluate the ZVI PRB Laboratory Study and Groundwater Model Results.
- Perform groundwater sampling activities in accordance with the revised Groundwater Monitoring Plan.
- Complete quarterly groundwater elevation and LNAPL thickness measurements from AOI 21 monitoring wells.
- Prepare a work plan for the additional Area 1 in-situ pilot/remediation activities. Injection of a solution of sodium dithionite and/or sodium sulfide in up to 86 locations to treat dissolved chromium and/or nickel in groundwater.
- Continue evaluation of potential cost savings and remedial alternatives to decrease the long-term OM&M costs associated with the Area 1 Groundwater Collection and Treatment System.
- Update the Groundwater Flow and Transport Model and use to evaluate identified alternative treatment and flow options.
- Continued support of redevelopment activities.
- Prepare summaries of meetings, data reviews, or conference calls with USEPA, as appropriate.
- Prepare the 2nd 2014 Semi-Annual Progress Report.

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Attachments:
Exhibit A – LNAPL Thickness Measurements

EXHIBIT A

LNAPL THICKNESS MEASUREMENTS

MW-21-4S	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	12/14/10	3/11/11	6/13/11	9/20/11	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.00	0.18	0.33	0.00	0.00	0.00	0.20	0.19	0.32	0.54	0.02	0.33	0.31	0.11	0.04	0.03	0.07	0.00	0.15	0.00	0.52	0.21	0.04	0.01	0.00	0.00	0.00

MW-21-1S	12/6/05	12/12/06	2/9/07	4/3/07	8/6/07	9/11/07	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	12/14/10	3/11/11	6/13/11	9/20/11	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.10	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.17	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.54	0.01	0.00	0.01	0.00	0.00	0.00

MW-A1-16S	12/6/05	12/12/06	2/9/07	4/3/07	8/6/07	9/11/07	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	40526	40613	40707	40806	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.12	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MW-21-3S	12/6/05	12/12/06	2/9/07	4/3/07	8/6/07	9/11/07	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	40526	40613	40707	40806	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.00	0.05	0.00	0.00	0.10	0.20	0.39	0.00	0.01	0.31	0.24	0.01	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.00	0.00	0.01	0.04	0.05	0.03	0.08	0.17	0.68	0.24	0.80	0.50	0.59

MW-21-6S	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	12/14/10	3/11/11	6/13/11	9/20/11	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	1.30	0.00	1.26	0.21	0.17	1.14	0.77	1.15	1.95	0.14	0.00	0.84	0.48	0.00	0.03

MW-21-5S	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	12/14/10	3/11/11	6/13/11	9/20/11	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MW-21-2S	12/6/05	12/12/06	2/9/07	4/3/07	8/6/07	9/11/07	12/11/07	2/27/08	6/11/08	9/29/08	12/16/08	3/3/09	6/16/09	9/23/09	11/25/09	2/19/10	6/11/10	9/8/10	40526	40613	40707	40806	11/18/11	3/20/12	6/7/12	9/6/12	1/2/13	3/28/13	5/13/13	9/30/13	11/22/13	2/6/14	6/30/14
LNAPL Thickness (feet)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

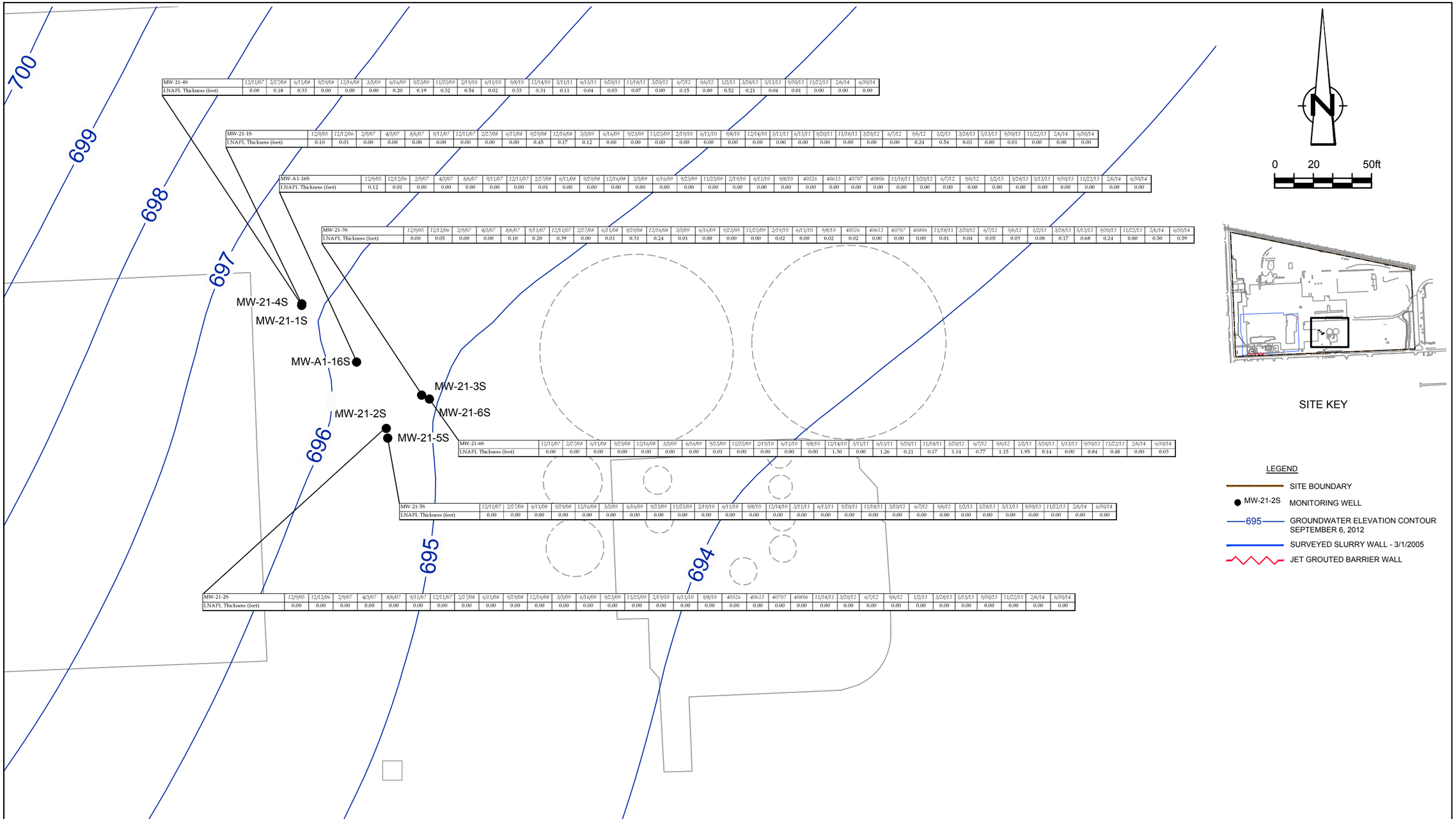

figure 1

LNAPL THICKNESS MEASUREMENTS - AOI 21
1st 2014 SEMI ANNUAL REPORT
13000 ECKLES ROAD SITE
Livonia, Michigan

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