

March 11, 2013

Mr. Nate Nemani
Project Manager
U.S. EPA, Region 5
Waste, Pesticide and Toxins Division
77 West Jackson Boulevard DW-8J
Chicago, Illinois 60604-3590

Dear Mr. Nemani:

Re: 2012 CA 750 Environmental Indicator Annual Monitoring Results
EPA ID #MID 041 793 340
RACER Nodular Facility - Saginaw, Michigan

This letter summarizes the CA 750 Environmental Indicators (EI) monitoring activities related to the Nodular Facility that is owned and operated by Revitalizing Auto Communities Environmental Response Trust (RACER) in Saginaw, Michigan.

The annual CA 750 EI monitoring was completed on November 7th and 8th, 2012.

No revisions were made to the 2012 EI monitoring program from the 2011 EI monitoring program; however, in accordance with the June 20, 2012 Michigan Department of Water Quality (MDEQ) correspondence regarding, "Evaluating Mercury in Groundwater Plumes Relative to the Groundwater/Surface Water Interface (GSI) Pursuant to Part 201", U.S. EPA method 245.1 (quantification level of 0.2 micrograms per Liter [$\mu\text{g/L}$]) replaced method 1631E (quantification level of 0.001 $\mu\text{g/L}$) to quantify the level of mercury in groundwater. This approach was developed based on consideration of the various contributions of mercury to Michigan's environment, which in surface water in Michigan is almost entirely comprised of atmospheric depositions. The MDEQ correspondence is presented in Attachment A. Groundwater samples collected as part of the annual CA 750 EI monitoring for mercury analysis were analyzed using method 245.1. All mercury results were non-detect.

Figure 1 presents databoxes for all RACER EI locations showing all data up to and including the 2012 EI results. As indicated on Figure 1:

- Ammonia was reported above the lowest applicable screening criterion (the GSI criterion of 2,120 $\mu\text{g/L}$) in five monitoring wells ranging in concentration from 4,800 $\mu\text{g/L}$ to 14,000 $\mu\text{g/L}$
- pH was reported above the lowest applicable screening criterion (the Non-Residential Drinking Water criterion of 8.5 S.U.) in one monitoring well at a level of 9.95 S.U.

In summary, the results of the 2012 EI monitoring results are generally consistent or lower than the data evaluated in the RCRA CA725 & CA750 Environmental Indicators Supporting Documentation dated September 17, 2003. The notable exception to the general consistency is Ammonia at MW-04757 (14,000 $\mu\text{g/L}$). The 2012 Ammonia result is two orders of magnitude higher than previous sample results at this



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well and above screening criterion (the GSI criterion of 2,120 µg/L). As a follow-up, RACER collected another ground water sample from MW-04757 on January 28, 2013 and analyzed the sample for Ammonia utilizing a field kit (Pocket Colorimeter™ II, Ammonia with a detection limit of 0.1 mg/L and a typical precision [95% confidence interval] of +/- 0.05 mg/L). The field kit reported a result of 400 µg/L for the sample, which is consistent with previous readings at this well. Another groundwater sample was collected from MW-04757 on March 11, 2013 and analyzed using the same Ammonia field kit. The field kit reported a result of 120 µg/L for the sample, which is consistent with previous readings at this well. Since the January and March sample results were consistent with previous data, the 2012 EI result for MW-04757 is believed to be anomalous and the EIs continue to be satisfied. Monitoring well MW-04757 will be sampled and analyzed for Ammonia as part of the 2013 annual monitoring event.

Based on the results of the annual EI monitoring conducted in 2012, RACER is proposing to modify the EI monitoring program for 2013. Table 1 presents the EI monitoring program and proposed modifications for the 2013 EI sampling event for your review. As indicated on Table 1, RACER is proposing that the following parameters be removed from the 2013 EI monitoring program since the most recent four consecutive rounds reported concentrations below the screening criteria:

- Hexavalent Chromium at MW-03945, MW-04051, MW-04250R, and MW-04257
- Ammonia at MW-04257
- Mercury at MW-03945 and MW-04051

Should you have any questions, please do not hesitate to call.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Michael R. Tomka

RC/ac/12
Encl.

cc: Grant Trigger, RACER
Dave Favero, RACER

**EI MONITORING PROGRAM AND PROPOSED MODIFICATIONS
NODULAR FACILITY, SAGINAW, MICHIGAN**

<i>IU</i>	<i>Location</i>	<i>Parameter</i>	<i>Monitoring Purpose</i>	<i>Propose to Eliminate from EI Monitoring</i>	<i>Comments</i>
G	MW-04250/MW-04250R	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-04250/MW-04250R	cyanide (total and amenable)	GSI	No	
G	MW-04250/MW-04250R	mercury	GSI	No	
G	MW-04250/MW-04250R	pH	GSI	No	
G	MW-04250/MW-04250R	ammonia	GSI	No	
G	MW-04757	cyanide (total and amenable)	GSI	No	
G	MW-04757	ammonia	GSI	No	
G	MW-04864	pH	GSI	No	
G	MW-04864	ammonia	GSI	No	
Wells added in 2007 per EPA's email request dated August 8, 2007.					
G	MW-03945	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-03945	cyanide (total and amenable)	GSI	No	
G	MW-03945	mercury	GSI	Yes	Mercury did not exceed criteria for four consecutive rounds, therefore mercury will be removed from future EI monitoring.
G	MW-03945	pH	GSI	No	
G	MW-03945	ammonia	GSI	No	
G	MW-04051	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-04051	cyanide (total and amenable)	GSI	No	
G	MW-04051	mercury	GSI	Yes	Mercury did not exceed criteria for four consecutive rounds, therefore mercury will be removed from future EI monitoring.
G	MW-04051	pH	GSI	No	
G	MW-04051	ammonia	GSI	No	
G	MW-04257	chromium, hexavalent	GSI	Yes	Hexavalent chromium did not exceed criteria for four consecutive rounds, therefore hexavalent chromium will be removed from future EI monitoring.
G	MW-04257	cyanide (total and amenable)	GSI	No	
G	MW-04257	pH	GSI	No	
G	MW-04257	ammonia	GSI	Yes	Ammonia did not exceed criteria for four consecutive rounds, therefore Ammonia will be removed from future EI monitoring.
G	MW-04765	chromium, hexavalent	GSI	No	
G	MW-04765	cyanide (total and amenable)	GSI	No	
G	MW-04765	pH	GSI	No	
G	MW-04765	ammonia	GSI	No	

Notes:

- Table updated to remove select parameters based on 4 consecutive rounds below criteria.
- Wells evaluated using most recent groundwater data compared to appropriate EI criteria.
- Since 2005 all samples for metals analyses have been collected using low flow sampling techniques and were unfiltered.
- GSI = Selected to monitor stability based on exceedances of groundwater surface water interface criteria in most recent samples.
- NA - Not applicable.

58502-T01(NEMA012)GN-WA001 FEB 28/2013

ATTACHMENT A



DEPARTMENT OF ENVIRONMENTAL QUALITY
POLICY AND PROCEDURE

Subject: Evaluating Mercury in Groundwater Plumes Relative
to the Groundwater/Surface Water Interface (GSI)
Pursuant to Part 201

Number: 09-014

Date: June 20, 2012

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Category: ☐ Internal/Administrative ☐ External/Non-Interpretive ☒ External/Interpretive

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

ISSUE:

Evaluation of mercury venting to surface waters via groundwater needs to be conducted relative to the environmental risks and standards available, considering Section 20120e of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

POLICY:

This policy will allow for the use of United States Environmental Protection Agency (USEPA) Method 245.1 to quantify the level of mercury in groundwater that is venting to surface waters as part of an evaluation of the GSI pathway. This method has a quantification level of 200 nanograms per liter (ng/l). If mercury is quantified above this level, a sequence of activities will occur to determine if the data are correct and what the source of mercury is, including response actions appropriate to achieve a goal of the surface water quality standard of 1.3 ng/l of mercury at the GSI. This approach recognizes that there may be practical limitations to achieving the surface water quality standard.

This approach was developed based on consideration of the various contributions of mercury to Michigan's environment and the environmental benefits that would occur with response actions. Currently, mercury loading to surface waters in Michigan is almost entirely comprised of atmospheric deposition. As a result, there has been essentially no change in fish tissue concentrations in Michigan over the past 30 years. The mercury concentration in fish appears to be greatly dependent on the mercury from atmospheric deposition. In Michigan, current air emissions of mercury are about 4,000 pounds per year, while National Pollutant Discharge Elimination System (NPDES) permitted point source wastewater facilities discharge less than 20 pounds per year. Further, the volume of venting groundwater contaminated by a mercury release (as defined in Part 201) is much less than the NPDES permitted point source discharges, so this GSI mercury loading is also much less and very minor relative to atmospheric loading of mercury. Therefore, if mercury is not quantified above the quantification

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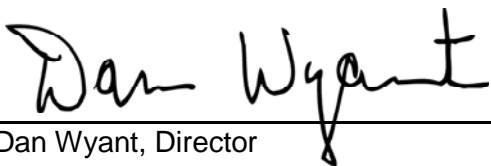
Date: June 20, 2012

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level of 200 ng/l in venting groundwater using USEPA Method 245.1, this is considered to be a *de minimis* condition pursuant to Section 20120e of Part 201 and activity beyond evaluations will not be required.

Furthermore, it was recognized that localized mercury contamination could still occur due to mercury releases to groundwater, and a mechanism is needed to determine when a response action would be necessary to address this issue. The use of USEPA Method 245.1 provides the ability to determine when a response action may be needed and addresses the issue of relative loadings and environmental benefit. USEPA Method 245.1 was the method used for many years to determine mercury levels in discharges and the environment, so the method is well understood and widely used in laboratories. The method is also less expensive, less labor intensive, and quicker to perform than other mercury methods that achieve lower quantification levels, thereby streamlining this process.

Approved:



Dan Wyant, Director