



November 20, 2013

Transmitted via E-mail

Mr. Christopher Black
U.S. Environmental Protection Agency, Region 5
Land and Chemicals Division
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: Revitalizing Auto Communities Environmental Response (RACER) Trust
Van Buren Landfill Site – Phase 1B Site Investigation Memo, dated October 7, 2013

Dear Mr. Black:

The Mannik & Smith Group (MSG) reviewed the November 13, 2013 comments from the U.S. Environmental Protection Agency (USEPA) to RACER Trust regarding the above-referenced report. MSG is submitting, on behalf of RACER Trust, the following response to the comments from the USEPA to aid in your review of the revised Phase 1B Site Investigation Memo, dated November 20, 2013, provided under separate cover.

GENERAL COMMENTS

USEPA Comment: The memo discusses the lithology of the area and introduces a gravel layer below the clay deposits that can be seen in some nearby deep well logs. In addition a review of water supply wells indicate lacustrine clay deposits overlie bedrock. The gravel deposits seen in the deep well logs seems to contradict the clay/shale contact statement. Please clarify this apparent contradiction.

The other concern is the nature of the clay and determining if there are any secondary areas of permeability in the clay such as fractures that would allow vertical flow to the lower gravel or shale deposits. Please provide data that concerning this issue.

MSG Response: *The sentence "A review of historical water supply well logs from the surrounding area indicates bedrock lays approximately 90 to 97 feet bgs and approximately 70 to 80 feet of lacustrine clay deposits overlie bedrock in the Site vicinity" was included first in our Phase 1A Site Investigation Report and was based on a review of a limited number of water well logs in the general vicinity of the site.*

Additional research was performed to identify water well and pump records located within one mile of the Site in support of the regional geologic cross-sections that are provided in the Phase 1B Site Investigation Memo. This additional research indicates in fact that the lacustrine clay deposits are underlain by approximately 8 to 13 feet of sand and gravel deposits which in turn are underlain by bedrock in the vicinity of the Site (the sentence from the Phase 1A report had been carried over into the Phase 1B memo). Considering that drinking water wells are routinely installed via mud rotary drilling methods and that the preparation of a detailed geological log is not a primary task of water well drillers there is a strong likelihood that the sand and gravel layer does exist even at those locations for which the well logs were reviewed as part of our Phase 1A Report preparation.

We are unaware of any regional literature/research regarding vertical fracturing on a scale and magnitude through an extensive lacustrine clay deposit that would result in an impact to an underlying water bearing zone. Taking this into account, we are proposing the collection of continuous soil samples of the lacustrine clay layer to a depth of 20 feet below the top of the layer from at least three of the locations that are part of the proposed additional investigation described in the revised Phase 1B Site Investigation Memo, dated November 20, 2013. An undisturbed Shelby tube sample would be collected at a pre-determined depth within these borings (e.g. all three collected at a depth of 10 feet below the top of the lacustrine clay layer). The undisturbed soil samples would be classified in accordance with ASTM D422 and their hydraulic conductivity determined in accordance with ASTM D5084.

SPECIFIC COMMENTS

1. USEPA Comment (Hydrogeology, Page 3): This section states: "Ground water flow, based on the August 7, 2013 data (Figure 10), appears to flow in a similar manner; from a ground water high in the central portion of the Site, towards the both the northwest and to the east / southeast." This seems to be groundwater flow in the waste and as the wells screened in the surrounding sands the groundwater flowing through the waste enters the sand deposits that surround the site. If so we have a source of contamination from the waste into the sands and possibly off site.

Also, the local effects from the landfill don't tell us the regional trends in that sand deposit and the potential flow direction away from the landfill and the perched groundwater in the waste. Please include the flow direction in the sand deposits outside the influence of the landfill.

MSG Response: Agreed taking into account the limited amount of data that is available to develop this hypothesis. The proposed investigation is intended to evaluate off-site migration as well as to provide additional on-site water level measurements in support of clarifying the water flow direction. The proposed investigation will be the first step in helping to provide data for evaluating flow outside of the influence of the landfill. After the proposed investigation is completed we will be able to recommend off-site locations to place monitoring wells and the data from those off-site wells will allow evaluation of ground water flow outside the influence of the landfill.

2. USEPA Comment (Ground Water Sample Results, Page 3): Please account for the seep sample results and the exceedances of Iron and Manganese from Table 3 and incorporate these results into the discussion of groundwater results.

MSG Response: We have updated the "Ground Water Sample Results" section of the memo to include a discussion of the seep sample laboratory analytical results and associated exceedances of Michigan Part 201 Drinking Water Aesthetic Criteria. We also have updated the "Hydrogeology" section of the memo to incorporate a discussion of the surface water elevations at the three surface water/seep sample locations. In summary, there were iron and manganese exceedances of Drinking Water Aesthetic Criteria at surface water/seep sample SW-3. There also was a very slight Drinking Water Aesthetic Criteria-based exceedance of manganese at surface water/seep sample SW-2. The iron concentrations at SW-3 are similar to the concentrations in water samples collected during several ground water monitoring events from monitoring well MW-5 which is located at the northwest corner of the RACER site.

3. USEPA Comment (Summary and Recommendations, Page 3): This section states: "Based on our review of the results from the investigation activities, it was our professional opinion that all available relevant and significant information on known and reasonably suspected releases to soil, ground water, surface water/sediments and air, subject to RCRA Corrective Action, had been considered in the EI determination and that there is a RCRIS status code for the Current Human Exposures Under Control EI event code of "YES". Thus, "Current Human Exposures" are expected to be "Under Control" at the facility under current and reasonably expected conditions." Please note that the EI determination is a task conducted by EPA and

the process of completing the form is conducted by the EPA project manager. The EI 725 is then reviewed by EPA's Human Health Risk Assessor and then the Section Chief who is to sign the EI form is briefed by staff. At this point, if inadequate information is available, EPA will ask the facility for additional data.

MSG Response: The intent was to provide a draft form that you could use as you see fit. On other corrective action projects in Region 5, RACER's consultants have provided the completed form to the EPA PM and the EPA PM has provided us with comments regarding inadequate data, etc., accepted the form as submitted or modified the form as they saw fit and then used the form.

4. USEPA Comment (Summary and Recommendations, Page 3): This section states: "We believe that the "any discharge of ground water to surface water is either insignificant or shown to be currently acceptable according to an appropriate interim assessment" criteria have been addressed." Please account for the seep data and how that is related to groundwater results.

MSG Response: As noted in the revised memo, there does not appear to be a correlation between surface water elevations at SW-1 and SW-3 and the surrounding ground water surface elevations as measured from the nearest monitoring wells and there does not appear to be a correlation in iron and manganese concentrations at SW-1 and SW-2 and the nearest monitoring wells. While the iron and manganese results at SW-3 suggest a potential off-site impact the exceedances are "aesthetic-based" not "health-based". So even if water from the seeps enter the storm water system and eventually discharges to a surface water body, the discharge would be insignificant.

5. USEPA Comment (Summary and Recommendations, Page 4): This section states: "Sampling and analytical testing parameters will be in general accordance with the SAP/QAPP, except for the elimination of analysis for semi-volatile organic compounds, pesticides and herbicides, and cyanide, as they have not been encountered at the Site. All temporary well ground water samples will be analyzed for metals and, due to the VOC detection in MW-10, temporary well locations adjacent to MW-10 (proposed soil borings SB-16, SB-17, SB-18, SB-21 and SB-22) will be sampled for VOCs and metals. Unfiltered samples will be also analyzed for metals depending on the turbidity measurement during the sample collection." Please amend the testing parameters to include SVOCs, the compounds naphthalene and phenanthrene is seen in the southwest corner of the site. Also include the seeps in the next round of sampling.

MSG Response: The specific purpose of this additional investigation is to determine the extent of MDEQ health-based drinking water cleanup criteria exceedances. There were no SVOC exceedances (including naphthalene and phenanthrene) in ground water samples collected in support of the Phase IB site investigation; naphthalene and phenanthrene were detected in a soil/waste sample from SB-7 at a depth of 10 to 11 feet bgs during the Phase IA investigation (the materials encountered in this soil boring loose black fill including glass, plastic, bricks and wood fragments overlying the native silty clay).

Also, surface water samples will be collected from the SW-1 through SW-3 locations during the next round of ground water sampling and analysis scheduled for February of 2014. Please note that an effort was made to collect surface water samples from these locations during our last round of ground water sampling that was completed last week. However, we were unable to collect samples since there was no water present at these locations similar to what occurred during our Phase 1A investigation.

If you have any additional comments or concerns regarding this letter, please feel free to contact the Mr. Francis J. Biehl, PE or myself.

Sincerely,



Mr. Michael J. Friedhoff, CPG
Project Geologist

Cc: Mr. Grant Trigger (RACER Trust)
Cc: Mr. David Favero (RACER Trust)