MEMORANDUM

TO:	James Innes	cc:	David Favero – RACER TRUST
FROM:	Anthony Finch		
RE:	RACER Trust Hemphill Road Industrial Land Burton, MI – Onsite Investigation		
FILE:	15388/62653		
DATE:	April 13, 2016		

O'Brien & Gere Engineers, Inc. (O'Brien & Gere) has prepared this memo on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER Trust) to propose onsite investigation activities to further assess the potential presence of non-aqueous phase liquid (LNAPL) and assess the extent of lead impacted subsurface soil at the southern portion of the RACER Trust Hemphill Road Industrial Land Site (HRIL- formerly known as Burton Parcel).

LNAPL ASSESSMENT

The LNAPL was previously delineated at the offsite properties to the south and east of the HRIL Site in 2014. In order to evaluate the extent of the LNAPL onsite and assess the area of residual LNAPL to be included in a Declaration of Restrictive Covenant (DRC), additional monitoring wells are proposed.

In July 2012, a Work Plan was submitted to the MDEQ which outlined the methods to be implemented to assess the potential presence of LNAPL offsite to the east and south of the HRIL Site. These methods will be used to install the proposed wells. The locations of the proposed wells are shown on Figure 1.

Soil borings will be installed using 4.25" ID hollow-stem augers (HSA) or a hydraulic probe to assess subsurface conditions for the potential presence of LNAPL. O'Brien & Gere will install a minimum of three soil borings to evaluate the extent of LNAPL observed in monitoring wells OBG MW-4S and MW-401. The locations of the proposed soil borings are shown on Figure 1. Groundwater monitoring wells that have previously been installed at the HRIL are also depicted on Figure 1.

An O'Brien & Gere geologist will be on-site during boring advancement to describe soil samples. Additionally, soils will be screened using a photoionization detector (PID). The geologist will place one representative sample from each soil core section for PID headspace screening. Due to the true continuous sampling of the system, accurate depictions of the stratigraphy and lithology of the overburden are obtained (minimal sloughing). For the purposes of this investigation, waste fill will be defined as non-native materials such as glass, asphalt, concrete, metal, rubber, and plastic observed in a continuous layer of 6 inches in thickness or more. Field screening will also be performed for the presence of LNAPL using an ultraviolet light and/or Sudan® dye test. If field screening indicates the presence of LNAPL, the boring location(s) will be abandoned and a new boring will be installed outward from the original boring location approximately 10 ft.

The soil borings are proposed to be completed as monitoring wells to assess the potential presence of LNAPL. The monitoring wells will be installed in accordance with the following methods: monitoring wells will be installed through the HSAs that extend to the bottom of the boring. The monitoring wells will be constructed of 2-in diameter flush-joint PVC casing and a 10-ft length of 0.010-in slot stainless steel well screen. A 10 ft screen length will be used to allow for seasonal water table fluctuation and to optimize the allowance of LNAPL into the well. The well screen and riser assembly will be placed into the casing to the desired depth and a washed graded silica sand pack will be placed around the well screen and shall extend a minimum of one 1-2 ft above the top of the screen. Coarse granular bentonite will then be added to the annular space to approximately two ft above the sand pack. The HSAs will be removed as appropriate during sand pack and bentonite placement. A cement/bentonite grout will then be added during the extraction of the remaining HSAs to just below grade where the monitoring wells will be completed. A standup protective casing will be installed over the monitoring

wells. A weep hole will be drilled in the bottom of the standup protective casing to allow accumulated water to drain. The monitoring well identification will be clearly marked on the inside and the outside of the protective casing cap.

Newly installed monitoring wells will be developed to remove fine-grained materials that may have entered the well or sand pack during construction. The monitoring well will be pumped until the water is relatively silt-free or no further change is noted; and the temperature, pH, turbidity, and specific electrical conductance readings have stabilized to within 10 percent or until the well produces relatively clear, sediment-free water, to the extent practical. Groundwater will be collected in a glass jar to evaluate relative turbidity and to measure and record temperature, pH, turbidity, and specific electrical conductance.

Prior to well development, the equipment that will enter the monitoring well will be cleaned using a laboratory grade detergent and tap water rinse, or steam cleaned. Soil cuttings and well development water will be contained in 55-gal Department of Transportation (DOT)-approved drums and staged at the HRIL Site pending disposal. A composite sample of each of the contained soil and development water will be collected and analyzed for waste characterization (TCLP VOCs, TCLP metals and ignitability, reactivity and corrosivity).

Subsequent to monitoring well installation, a location and elevation survey will be performed to establish top-of-casing, grade elevations and horizontal control for the newly installed wells.

LEAD ASSESSMENT

The lead impacted subsurface soil was identified during an investigation to assess the extent of the waste fill observed at the Site. The previous investigation results indicated concentrations of lead above the MDEQ Nonresidential Direct Contact Criteria in subsurface soil at depths ranging from 2 to 10 ft below grade (fbg). Additional assessment of the subsurface soil is proposed to the north and south of these borings to further assess the extent of the lead detected in subsurface soils to allow for further evaluation of the area with lead exceedances above MDEQ Nonresidential Direct Contact Criteria to be included in a DRC.

Up to six hydraulic probe locations are proposed as shown on **Figure 1**. Soil borings will be advanced utilizing direct push drilling techniques (Geoprobe®) using 5-ft long, 1.5 in diameter Macro-Core® samplers, with soil cores collected continuously from grade to the bottom of each boring (target depth at each boring is 15 fbg). Once the desired depth is reached for each run, the Macro-Core® sampler will be retracted from the borehole, detached from the drill rods, and the acetate sleeve liner will be removed. The liner will be cut length-wise to allow for observation of the subsurface soil.

An O'Brien & Gere geologist will be on-site during boring advancement to describe the soil samples. A portion of select depth soil cores will be collected and sent to a laboratory. Two soil samples will be collected from each boring at depths consistent with the nearest impacted boring. The soil samples from the borings nearest to the previously detected impacted soil will be analyzed and the soil samples from the two northern borings will be held at the lab pending results of the two boring to the south of these. The soil samples will be analyzed for the presence of lead by EPA Method 6010. The soil cuttings will be contained in a 55-gal DOT approved drum and staged at the HRIL Site pending disposal.

Subsequent to completing the field activities and receipt of analytical data, a brief summary report will be prepared and submitted to the MDEQ documenting the results of the onsite investigation.

Please contact David Favero with RACER Trust at 734-879-9525 or Anthony Finch at 248-477-5701 if you have any questions.

FIGURE 1

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LEGEND

- SOIL BORING LOCATION
- MONITORING WELL
- LEAD SOIL CONCENTRATION EXCEEDING MDEQ DIRECT CONTACT CRITERIA
- PROPOSED SOIL BORING LOCATION (Lead Assessment)
- PROPOSED MONITORING WELL (LNAPL assessment)

RACER TRUST
HEMPHILL ROAD INDUSTRIAL LAND
BURTON, MICHIGAN

PROPOSED SAMPLE LOCATIONS

0 20 40 60 80
Feet

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O'BRIEN & GERE ENGINEERS, INC.

APRIL 2016
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