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From:
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Date:
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ARCADIS Project No.:
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Subject:
RACER Trust Employee Development Center Site– Additional Post-Corrective Action
Activity Details Pertaining to Proposed Well Depth and Screening Intervals

ARCADIS has prepared this memorandum on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Employee Development Center (EDC) located at 65 East University Drive in Pontiac, Michigan (Site). This memorandum is to supplement and provide additional information regarding the proposed Post-Corrective Action Activities presented in the *Excavation Activities Summary Report* as requested by the Michigan Department of Environmental Quality (MDEQ) on November 8, 2012. MDEQ has requested additional information pertaining to the target depth and screening intervals of the proposed monitoring wells as part of the Post-Corrective Action activities. In determining screen intervals and well locations, ARCADIS has considered available site knowledge including analyte distribution (vertical and horizontal) and the Site's specific geology/hydrogeology.

Following the soil removal activities, soil and groundwater impacts remaining at the Site include low concentrations of volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tert butyl ether (MTBE), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-methylnaphthalene, naphthalene, and trace concentrations of chlorinated VOCs (CVOCs) including vinyl chloride, 1,2-dichloroethane (1,2-DCA), 1,2-dichloropropane (1,2-DCP), trichloroethene (TCE), and tetrachloroethene (PCE) which exist above MDEQ Part 201 Non-Residential Drinking Water (DW) and/or Groundwater Surface Water Interface (GSI) Risk-Based Screening Levels (RBSLs). Soil and groundwater sampling results indicate impacts have been vertically defined to concentrations below MDEQ Part 201

Non-Residential GSI, Volatilization to Indoor Air (VIA), and Direct Contact (DC) RBSLs and horizontally defined to concentrations below MDEQ Part 201 Non-Residential DW, GSI, VIA, and DC RBSLs.

Based on borings completed to date, the perched groundwater zone is present due to the presence of a low permeable clay layer present at a depth ranging from approximately 5 to 18 feet bgs. The perched groundwater zone is underlain by continuous clay, as observed during drilling and excavation activities, that extends to a minimum depth of approximately 25 feet bgs, the maximum depth explored during Site investigations. Investigation results and observations during the remedial activities indicate that the continuous clay layer serves as a barrier to vertical migration of contamination. Therefore, the proposed monitoring wells will be installed with a screen interval set no deeper than 8 to 18 feet bgs. However, the well screen intervals may be adjusted during installation activities based on the following information:

Proposed Monitoring Wells within the Right-Of Way of Mill Street

Although historical and current soil and groundwater analytical results indicate there are concentrations of the previously mentioned VOCs and CVOCs at the Site above MDEQ Part 201 Non-Residential DW and/or GSI RBSLs, no CVOCs impacts have been detected at the Site boundary and have not been detected at any of the off-site soil borings or monitoring wells.

Based on the known VOC impacts at the western property boundary, the proposed monitoring wells located within the right-of way of Mill Street will be installed with well screen intervals at approximately 3 to 13' bgs. This interval will bisect the water column to allow for fluctuations in the groundwater table. However, the well screen interval will be adjusted if necessary based on field observations of the water table, lithology, and field screening impacts, if observed.

Proposed Monitoring Wells within Excavation Limits and Along Augusta Relief Drain

Based on monitoring well construction logs for existing and former wells in the vicinity of the proposed monitoring well locations within the excavation limits and along the western edge of the Augusta Relief Drain, well screen intervals were installed from 3 to 13 feet bgs and 8 to 18 feet bgs. The existing and former monitoring well screens were installed to bisect the water column to allow for fluctuation in the groundwater table and also extend to the top of the continuous clay layer. Although historical and current soil and groundwater analytical results indicate there are concentrations of the previously mentioned VOCs and CVOCs at the Site above MDEQ Part 201 Non-Residential DW and/or GSI RBSLs, the existing monitoring wells surrounding the excavation area will be utilized for the assessment the vertical groundwater impacts.

Since the demolition of the Site building in July 2010, groundwater water levels at these wells have increased approximately 2 to 5 feet completed at the Site. Additionally, the groundwater levels at the Site will have likely been influenced by the excavation, backfilling, and surface restoration activities as

described in the *Excavation Activities Summary Report*. Based on the unknown nature of the current groundwater surface elevation, well screen intervals will be selected during installation activities. However, the well screen intervals will be installed in an attempt to bisect the water column to allow for fluctuations in the groundwater table.