



To: John Fournier, City of Ann Arbor Assistant City Administrator

Cc: Derek Delacourt, City of Ann Arbor Community Services Administrator

From: Patti McCall, CPG, PWS

Date: June 26, 2019

Subject: Review of Initial Soil Analytical Data, Leslie Science and Nature Center, Ann Arbor, MI

Twelve soil borings were completed at Leslie Science and Nature Center (LSNC) to understand the potential surface and subsurface soil impacts at the site (Figure 1). While planning a new playscape for the facility, LSNC staff identified an unnatural depression in a wooded area where there are no play structures and no programming occurs. Near-surface soil was targeted for sampling because of the known pesticide application in the apple orchard. Arsenic is known to be associated with such activities. In addition, a concrete structure behind the DTE Energy House was also targeted for sampling because of its unknown history. After reviewing information regarding historical site practices and reviewing historical aerials the initial sampling was completed.

The analytical results are included in Table 1: Soil Analytical Results, and are compared to Michigan Department of Environment, Great Lakes and Energy *Attachment 1 Residential and Non-Residential Part 201 Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 Risk-Based Screening Levels*, dated June 25, 2018 (Part 201 Criteria). Because the LSNC is not a residential property where people would spend a significant number of hours throughout a 24-hour day and over a 30-year period, the non-residential direct contact criteria is also included on the table in the far-right column.

Review of the analytical data indicates that many parameters were diluted because of difficulty analyzing the soil on the instrument (green shaded cells on Table 1). Dilution increases the method detection limit and reporting limits. Many of these samples will be re-analyzed or a new sample will be collected this week. There were also several parameters that were estimated between the method detection limit and the reporting limit. These are identified with a 'J' qualifier and indicate that a concentration was detectable on the instrument but is considered non-detect.

Four samples (HA-19-01-0-1', HA-19-03-0-1', HA-19-05-0-1' and HA-19-07-0-1') were collected from the depression in the wooded area at a depth of 1-foot below ground surface. The depression contains several heavy metals in excess of Part 201 Criteria, including arsenic, copper, lead, mercury, selenium and silver. Arsenic and lead were also detected at concentrations above residential direct contact. Lead was detected at a concentration above the non-residential direct contact criteria.

Results of the surface soil samples (GP-19-01-0.5-1.5', GP-19-02-0.5-1.5', GP-19-05-0.5-1.5', GP-19-06-0-1' and GP-19-07-0-1') collected behind the DTE Energy House indicate residential direct contact exceedances of arsenic. Other volatile constituents are detected at depths between 4.5 – 5.5 feet and between 11 and 14 feet below ground surface, primarily north of the DTE Energy House. These are not direct contact exceedances.

Further investigation is currently being completed this week to delineate the near surface arsenic concentrations and to delineate other impacts at the site. While the facility is being investigated, interim measures have been implemented to reduce exposure. These include covering the bare soil areas onsite with wood chips and preventing public access by fencing-off areas with known concentrations above residential direct contact.