

EXECUTIVE SUMMARY

Assessment

A Phase I - Environmental Site Assessment (Phase I ESA) was carried out for the property addressed 413 March Road in the City of Ottawa. The purpose of this environmental assessment was to research the past and current use of the site and adjacent properties and identify any environmental concerns with the potential to have impacted the subject property.

The following potential environmental concerns were identified during the Phase I ESA:

- A former waste oil storage area, located in the southwest corner of the subject site (borehole BH1).
- A former underground fuel oil storage tank nest, reportedly located adjacent to the east side of the subject building (boreholes BH3 and BH6).
- A designated area for lead pouring and sandblasting, located within the southeast corner of the subject building (borehole BH2).
- Two (2) chemical storage rooms, located within the subject building (boreholes BH4, BH5, BH6, BH7, BH8, BH9, and BH10).

A Phase II ESA was recommended and subsequently conducted on the subject site, as detailed below.

Soil

A total of ten (10) boreholes (BH1-BH10) were placed on the subject property on October 29, October 30, and December 11, 2019. During the field drilling program, faint petroleum hydrocarbon odours were detected from the soil samples recovered from borehole BH5. The results of a preliminary vapour screening analysis identified soil vapour concentrations ranging from 0 to 128 ppm, with the higher concentrations indicating a potential for petroleum hydrocarbon impacted soil.

A total of ten (10) soil samples, one from each borehole, were submitted to for laboratory analysis of either BTEX, VOCs, metals, and/or PHCs F₁-F₄ parameters. All parameter concentrations identified in the soil samples are considered to be in compliance with the selected MECP Table 3 standards, with two (2) exceptions. The concentration of PHCs F₁ and F₂ in the soil sample analysed from borehole BH5 was in excess of the MECP Table 3 standards.

Groundwater

Groundwater samples were recovered from the monitoring wells installed in boreholes BH1-BH9 on November 6, December 17, and December 18, 2019. No unusual visual or olfactory observations were noted during the groundwater sampling program. A total of nine (9) groundwater samples were submitted for laboratory testing of either BTEX, VOCs, metals, and/or PHCs (F₁-F₄) parameters. All BTEX, VOC, and PHC results were non-detect, and as a result, are considered to be in compliance with the selected MECP Table 3 standards. All detected metal parameter concentrations are in compliance with the selected MECP Table 3 standards.

Recommendations

Soil

According to the initial borehole analytical testing results, the soil sample recovered at a depth of 1.50 m to 2.10 m in borehole BH5 was determined to be impacted with petroleum hydrocarbon contaminants. The source of these contaminants could not be verified, although it is considered likely to be the result of a nearby chemical storage room or a possible diesel fuel spill in the nearby loading bay areas. All groundwater samples were determined to be clean from the initial boreholes placed on-site.

To delineate this area, boreholes BH7-BH10 were placed in the general vicinity of borehole BH5. No impacted soil was identified in the additional boreholes placed in this area. Furthermore, all groundwater samples were determined to be clean from these boreholes.

As a result, it is of our opinion that the extent of the petroleum hydrocarbon contamination is limited to a small localized area in the vicinity of borehole BH5. Since the concentrations of PHCs are not considered to be significantly elevated, it is not considered to pose a concern to the current use of the subject site, its occupants, or the natural environment.

Given this, it is our opinion that it is not necessary to complete a remediation program at this time. The PHC concentrations will continue to degrade through natural attenuation processes.

If any excavation work is undertaken in the area (landscaping, paving, construction, etc.) consideration may be made to completing a remediation of this area at that time.

Monitoring Wells

If the groundwater monitoring wells on the property are not going to be used in the future, they must be decommissioned according to Ontario Regulation Reg. 903 (Ontario Water Resources Act), however we would recommend that they be maintained for future monitoring purposes.