



SUMMARY OF RESULTS

DATE: March 1, 2024
MEMO TO: Kerstin Vroom
FROM: Tim McBride
RE: 2023 Annual Monitoring Report, Croft Waste Disposal Site, Magnetawan, Ontario
PINCHIN FILE: 225335.007

Pinchin Ltd. (Pinchin) was retained by the Corporation of the Municipality of Magnetawan (Client) to prepare the 2023 annual groundwater and surface water monitoring report for the Croft Waste Disposal Site (the Site) to assess the hydraulic media for contaminants of concern as a compliance requirement under the Site Certificate of Approval (CofA) Number **A7034002** and the applicable regulatory requirements.

The current groundwater monitoring well network at the Site consists of eight bedrock groundwater monitoring wells (BH1, BH8, BH9, BH10, BH11, BH12, BH13 and BH14) and three drive point monitors (DP7, DP8 and DP9). Based on the 2022 Pinchin Monitoring Report, all three of the drive point monitors have consistently been observed to have an insufficient volume of water at the time of sample collection and have since been retained as water level only monitoring locations to supplement the groundwater elevation monitoring for the Site. All wells were inspected in 2023 and found to be in good condition. No wells displayed evidence of a condition non-compliant with Ontario Regulation 903 with the exception of BH-11, which was found to have a broken casing lid, as well as no PVC cap. Additionally, three surface water locations were monitored for the Site (SW1, SW2 and SW3).

As per previous annual monitoring events, groundwater and surface water was sampled twice annually by Pinchin during 2023, in the spring and fall.

Based on the results obtained from the existing groundwater monitoring wells and surface water monitoring locations, Pinchin has not identified any significant landfill related impacts at the Site. Elevated concentration parameters within the groundwater samples analyzed at the furthest downgradient monitoring locations (i.e. BH8, BH9, BH12, BH13 and BH14) are likely attributed to either naturally occurring conditions within the shallow unconfined aquifer on-site or from temperate impacts from leachate sourced from the waste deposits at the Site. All exceedances of the Guideline B-7 RUC at the downgradient wells considered representative of the property boundary are related to operational guidelines and/or aesthetic objectives associated with drinking water systems set by the ODWQS and are not considered to be an immediate significant human health or environmental concern originating from the Site. These concentrations are interpreted to attenuate with further distance from the Site. In summary, the current 2023 groundwater monitoring data indicates that the Site is continuing to effectively



operate as designed, as a natural attenuation type facility, with any landfill derived groundwater impacts attenuated to acceptable levels prior to the downgradient property boundaries.

Based on a review of the existing dataset and regulatory requirements to date, Pinchin recommends the following:

- Continue with routine monitoring of all the available groundwater monitoring wells and surface water monitoring locations. Groundwater and surface water monitoring shall be completed with analyses for the parameters identified in the historical monitoring record. It is recommended that groundwater and surface water monitoring be completed during the spring and late fall to generate a baseline data set, to evaluate trends, and to determine the need and scope of a long-term monitoring program for the Site. Considering the dataset completed thus far, it is Pinchin's opinion that sampling should continue in 2024 before the adequacy of the monitoring program can be fully evaluated;
- The casing lid on monitoring well BH-11 should be repaired and given a PVC cap;
- The Client should continue to ensure that the requirements as specified in the CofA are complied with; and
- In the future, the component of the surface water samples identified for the analysis of aluminum should be filtered prior to analysis, in order to provide a clay free sample (as per the requirements of the PWQO).