



August 9, 2021

Manitoba Conservation and Climate
Programs and Strategies
1007 Century Street
Winnipeg, MB R3H 0W4

E-mail: warren.rospad@gov.mb.ca

Attention: Warren Rospad

Re: Remedial Plan
568 Gunn Road, Winnipeg, Manitoba
Pinchin File: 293685

Pinchin Ltd. (Pinchin) is pleased to provide Manitoba Conservation and Climate with the following Remedial Plan (RP) for approval prior to completing a remedial excavation at 568 Gunn Road, Winnipeg, Manitoba (Site).

The Site consists of vacant land that is divided into separate storage areas by chain link fences and is used for the storage of vehicles in various stages of disrepair as well as campers, trailers, and boats.

Contact information for the Owner (Client) is as follows:

Mani Dhaliwal
10104753 Manitoba Ltd.
695 Osborne Street
Winnipeg, Manitoba, R3L 2B8
Phone: 204.292.6264
Email: trademarksinc@gmail.com

1.0 BACKGROUND

Pinchin completed a Phase I ESA in relation to the Site, the findings of which are provided in the report entitled "*Phase I Environmental Site Assessment, 568 Gunn Road, Winnipeg, Manitoba*" prepared for Alliance Tree Care Inc., dated January 8, 2021. Based on the results of the Phase I ESA completed by Pinchin, the following was noted that could result in potential subsurface impacts at the Site:

- Potential airborne metals impacts from an industrial facility and foundry located south of the Site;
- Potential fill of unknown quality and origin observed throughout the Site in the 1979 to 1997 aerial photographs; and
- Staining associated with the storage of derelict vehicles on-Site since at least the early 2000s.



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Based on the findings noted above, Pinchin recommended completing a Phase II ESA at the Site.

Pinchin completed a Phase II ESA in relation to the Site, the findings of which are provided in the report entitled "*Phase II Environmental Site Assessment, 568 Gunn Road, Winnipeg, Manitoba*" prepared for Alliance Tree Care Inc., dated March 15, 2021.

The Phase II ESA was completed at the Site by Pinchin between February 19, 2021 and February 23, 2021, and consisted of the advancement of 5 boreholes, all of which were completed as groundwater monitoring wells. All groundwater monitoring wells were dry during the Phase II ESA.

The reported concentrations of benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX), petroleum hydrocarbons (PHCs) in the F1 to F4 fraction ranges (F1-F4), volatile organic compounds (VOCs), polyaromatic hydrocarbons (PAHs) and metals in the soil samples submitted for analysis met the applicable Soil Quality Guidelines, with the following exceptions:

- Soil sample BH03-01 collected at borehole BH03, which had concentrations of total chromium that exceeded the Soil Quality Guidelines; and
- Soil sample BH04-01 collected at borehole MW04, which had concentrations of total chromium that exceeded the Soil Quality Guidelines.

Pinchin also noted that soil sample BH04-01 collected at borehole MW04 had a concentration of vanadium equal to the Soil Quality Guideline.

Pinchin noted that the metal-impacted soils are not considered to present an immediate concern to human health or environment under current Site conditions and use. As such, it was Pinchin's recommendation that a Management Plan be developed for the Site and submitted to Manitoba Conservation and Climate for approval.

It is understood that the Client prefers to remediate the metal-impacted soils, as such a Remedial Plan is required for submission to Manitoba Conservation and Climate for approval. The following scope of work outlines proposed activities to support remediation of the metal-impacted soils.

2.0 SCOPE OF WORK

The scope of work to be completed includes excavation of impacted soils, verification soil sampling, and excavation backfilling.

The remedial excavation will be conducted in general accordance with the following documents:

- Manitoba Conservation and Climate guidelines entitled:
 - "*Environmental Site Assessments in Manitoba*", dated April 2016.



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- Manitoba Conservation and Climate information bulletins entitled:
 - “*Contaminated Sites Remediation Regulation Reporting Requirements and Standards*”, dated October 2015.
- Canadian Council of Ministers of the Environment (CCME) publication entitled “Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment – Volume 4 Analytical Methods”, dated 2016.
- Pinchin’s standard operating procedures (SOPs).
- Canadian Standards Association publication entitled “Phase II Environmental Site Assessment, CSA Standard Z769-00 (R 2018)”.

2.1 Remediation Activities

2.1.1 Pre-Excavation Activities

Prior to any remedial activities, the following will be completed:

- Pinchin will submit the Remedial Plan to Manitoba Conservation and Climate for approval;
- Client will retain the services of an independent contractor and public utility services to identify the locations of buried and overhead utility services prior to any excavation activities. Certain underground utilities (especially if constructed of plastic, fibreglass, clay, concrete pipe, repaired lines, etc.) cannot be located by standard locating practices. Pinchin will not be responsible for any damages to utilities;
- The Client will pre-arrange for acceptance of soil to be disposed of at a licenced disposal facility; and
- Client will obtain all necessary provincial and municipal permits.



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2.1.2 Soil Remediation Activities

2.1.2.1 Soil Excavation

Upon completion of the pre-excavation activities, the Client, working under the direction of Pinchin, will complete the following:

- Using an excavator, soil with previously identified impacts and/or obvious visual/olfactory impacts around locations of boreholes BH03 and BH04 will be excavated from the ground and placed directly into a dump truck. The impacted soil will then be transported directly from the Site for disposal at a licenced disposal facility. The extents of impacted soil have not been fully delineated. An excavation measuring 5 metres (m) by 5 m in surface area with a total depth of 1.0 m has been assumed for each location, yielding a total excavation in-ground volume of 50 metres cubed (m³); and
- Copies of waybills/bills of lading produced by the disposal facility for the received impacted material will be presented to Pinchin for review.

2.1.2.2 Verification Soil Sampling

Following the completion of the excavation, Pinchin will document the environmental status of the soil at each of the excavation limits by completing the following:

- The soil will be examined for visual/olfactory evidence of impacts and a verification soil sampling program will be conducted in accordance with Pinchin's Standard Operating Procedures (SOPs);
- Soil samples will be collected from the sidewalls and floor of each excavation using the excavator bucket or directly from the sidewalls and floor of the excavations by Pinchin personnel at the frequency specified in Pinchin's SOPs for field screening. A combination of visual and olfactory observations will be utilized to identify the most apparent "worst-case" soil samples for laboratory analysis of metals. Pinchin has assumed that six (6) soil samples will be submitted for laboratory analysis from each excavation, i.e. a total of twelve (12) soil samples. The soil samples will be submitted on standard 5-7 business days turnaround time; and
- Based on the results of laboratory analysis Pinchin will advise the Client whether additional remediation is required or if excavation backfilling can be completed.



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2.1.2.3 Excavation Backfilling

Following successful remediation of impacted soils, the excavation will be backfilled, by the Client, with clean imported fill material. Pinchin will not be present on Site for completion of backfilling activities.

2.2 Analytical Laboratory

Selected soil samples will be delivered to Bureau Veritas Laboratories (BV Labs) in Winnipeg, Manitoba for analysis. BV Labs is an independent laboratory accredited by the Standards Council of Canada and the Canadian Association for Laboratory Accreditation. Formal chain of custody records of the sample submissions will be maintained between Pinchin and the staff at BV Labs.

2.3 QA/QC Protocols

Various quality assurance/quality control (QA/QC) protocols will be followed during the remedial excavation to ensure that representative samples are obtained and that representative analytical data is reported by the laboratory.

Field QA/QC protocols that will be employed by Pinchin will include the following:

- Soil samples will be extracted from areas not in direct contact with the excavator bucket and/or sampling equipment, where possible, to minimize the potential for cross-contamination;
- Soil samples will be placed in laboratory-supplied sample jars;
- Soil samples will be placed in coolers on ice immediately upon collection, with appropriate sample temperatures maintained prior submission to the laboratory;
- Dedicated and disposable nitrile gloves will be used for sample handling;
- Non-dedicated sampling equipment will be cleaned before initial use and between uses to minimize the potential for cross-contamination; and
- Sample collection and handling procedures will be performed in general accordance with Manitoba Conservation and Climate Guidelines and Pinchin's SOPs.

BV Lab's internal laboratory QA/QC consists of the analysis of laboratory duplicate, method blank, matrix spike and spiked blank samples, and an evaluation of surrogate recoveries.

2.4 Regulatory Criteria

Analytical results of soil samples will be compared to criteria set forth in the Canadian Council of Ministers of the Environment (CCME) "*Environmental Quality Guidelines*" accessed on the CCME web site in August, 2021 (CCME Soil Guidelines).



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For assessing soil quality for parameters not included in the CCME Soil Guidelines, Manitoba Conservation and Climate has adopted the following guidelines:

- Ontario Ministry of the Environment, Conservation and Parks standards specified by the MECP document entitled “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act”, dated April 15, 2011 for non-potable groundwater conditions as a secondary regulatory criteria applicable to soil conditions in Manitoba; and
- Alberta Environment and Parks (AEP) guidelines specified by the AEP document entitled “*Alberta Tier 1 Soil and Groundwater Remediation Guidelines*”, dated January 10, 2019” as tertiary regulatory criteria applicable to soil conditions in Manitoba.

3.0 REPORT

Pinchin will prepare a factual report for the Site documenting the findings of the remedial excavation. A copy of the report will be provided to Manitoba Conservation and Climate.

4.0 PROJECT SCHEDULE

Pinchin anticipates that remedial activities will begin shortly after the RP has been approved by Manitoba Conservation and Climate.

5.0 CLOSING

We trust that the information provided herein is sufficient for Manitoba Conservation and Climate to approve the RP. If you have any questions, or require additional information, please do not hesitate to contact the undersigned.

Sincerely,

Pinchin Ltd.

Prepared by:

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