



NOTICE OF ALTERATION

TO: Agnes Wittman, Director. Environmental Approvals Branch, Environment and Climate Change
Asit Dey, P. Eng., Engineering Manager, Environmental Approvals Branch, Environment and Climate Change

FROM: Darren Keam, P. Ag.

SUBJECT: Notice of Alteration - Pilot Test Excavation at Prairie Green Landfill

DATE: June 26, 2024

INTRODUCTION AND BACKGROUND

Waste Connections of Canada Inc. (WCC) owns and operates the Prairie Green Integrated Waste Management Facility (IWMF, or the "Site"), located on Section 14 and the north half of Section 11, Township 12, Range 2 East in the Rural Municipality of Rosser, approximately 1.6 km north of the City of Winnipeg, Manitoba.

The Site has been in operation since 1996 and is licensed under the revised Environment Act License (Licence) No. 2177 E R5 for the disposal of solid, residential, commercial, and institutional material. In addition to the landfill operations, the Site consists of a recycling facility, materials recovery facility, petroleum contaminated soil treatment facility, and a composting facility.

The Licence for the Site approved two separate material disposal areas, known as Phase I and Phase II. Phase I has been fully constructed and has a remaining disposal capacity of approximately 3.3 million cubic metres (m³) and a service life of approximately eight (8) years.

A Humanitarian Search Project is proposed to be completed at the Prairie Green IWMF that will involve excavation of existing material from the Phase I area, hauling excavated material to a proposed Search Facility Area (located within the approved material fill area of Phase II), searching the material for human remains at the Search Facility Area, and after search completion, hauling the cleared material to the active working face of the Phase I area for landfilling. A separate Notice of Alteration (NOA) to Prairie Green IWMF's License for undertaking the future humanitarian search was developed, submitted to the Environmental Approvals Branch (EAB) on June 5, 2024, and received approval on June 11, 2024.

To support the development of an applicable search procedure for the humanitarian search, a pilot test excavation of material from the Phase I area is being proposed. As such, WSP is submitting this Notice of Alteration to EAB on behalf of WCC, for approval to complete the pilot test excavation. The details relating to the pilot test excavation are further outlined below.



PURPOSE AND OBJECTIVE

The purpose of a pilot test excavation of solid waste from the Phase I area of the Prairie Green IWMF is to evaluate the best method for material excavation and for searching of the excavated material. Understanding the characterization of the waste material will support the eventual humanitarian search of Cells 11, 13 and 15, where it is believed the remains of the homicide victims are located. Numerous questions exist regarding the waste excavation process, waste segregation process, efficiency of search method, and safety and environmental conditions around the excavation. The purpose for this pilot test excavation is to attempt to answer these existing questions and extrapolate the findings to the full search method.

The working hypothesis for the pilot test would be:

Can waste materials be safely and effectively excavated and can a manual search of landfill material be conducted in order to identify specific characteristics of buried refuse material?

PILOT TEST LOCATION

As WCC owns and operates the Prairie Green IWMF they will direct the specific location for the test pilot excavation and spreading of collected waste. WCC has identified Cells 10 and 12 as the cells where the test excavation (Cell 10) and search (Cell 12) will be undertaken. Based on weather conditions and suitability of the site operations at the time, a date of June 27, 2024, has been selected to undertake this pilot test excavation.

It should be noted that the pilot test excavation will not be occurring in any Phase I landfill cells that have been closed with final cover, in any area of cells 11, 13 and 15 (the area of the future humanitarian search), nor near the active working face of the landfill.

PILOT TEST METHOD

HEALTH AND SAFETY

The Health and Safety of the staff who complete the pilot test in the field will be of the highest priority. Appropriate personal protective equipment (PPE) will be worn by all staff participating in the pilot test, including Canadian Standard Association (CSA) approved boots, Tyvek suits, latex and leather gloves, safety glasses, hard hats and half-face respirators with a combination hepa (P100) and organic vapour filter. All health and safety protocols as required by WCC will be strictly adhered to. Specialized equipment (i.e., continuous gas monitoring, ambient air asbestos monitoring) may be required as part of the manual search activities and these will be identified in consultation with WSP's industrial hygienist team, WCC and other SMEs to ensure that personnel conducting the search are appropriately outfitted. It is anticipated that a comprehensive safety orientation will be developed and provided to those participating in the test pilot excavation.

WCC has developed an emergency response plan (ERP) for the test excavation activities and WSP in conjunction with that ERP has developed a health and safety plan for the activities associated with the excavation. WSP will consult the staff industrial hygienist to develop an exposure control plan for safety during the field program (including WSP, WCC, contractors and GOM). It is expected that the exposure control plan will outline minimum PPE requirements for staff, as well as an air quality monitoring program for staff working in the area of the excavation, which will include monitoring for asbestos. WCC has in place a contingency plan in the event that asbestos is encountered along with ensuring training is provided to the operators in relation to that plan. WCC will have a water truck and stockpiles of soil adjacent to the work areas, to be used in the event of a fire. WCC and contractors



will be trained on fire response procedures. A water truck will be available adjacent to the pilot excavation area for use in wetting any asbestos encountered in the pilot excavation.

WCC will provide a Site safety orientation prior to anyone attending on Site and ensure that everyone has the required personal protective equipment (PPE).

APPROACH

WCC has identified two cells within Phase I of the landfill where the test pilot excavation will be undertaken. These areas are as follows:

- a) The pilot excavation is proposed in Cell 10 to a maximum depth of approximately 5 m, and will cover an area that is approximately 5 m by 5 m (“pilot excavation area”), and to be modified based on the available time during the pilot test; and
- b) The pilot search area is proposed in Cell 12 and covers an area that is approximately 100 m by 50 m (“pilot search area”).

A track hoe excavator will be used to remove the soil cover and place the material to the side of the designated excavation area. The excavation will progress in 0.5 metre increments or to the next soil cover layer, whichever is encountered first. After the soil has been removed, the equipment will be stopped and WSP will be given an opportunity to survey the excavation. After this point WSP staff will not be permitted to enter the area of the excavation, or to reach into the excavation with a survey rod/equipment. In order to obtain an approximate measurement of the depth of the excavation, the excavator’s arm will be used to measure the depth. WCC noted that the excavation is going to be completed by digging into a high spot or hill in the landfill, and thus sloping of the waste will only be required on one side where the excavated material will be pulled from, while the opposite side will be flat. GPS coordinates will be taken of the excavation area.

The excavation will be observed, and details recorded in a test pit log sheet. Details will be recorded including, but not limited to depth of cover material, depth of waste material, nature of materials including composition, and condition (i.e. wet, dry and heterogeneous). The excavated material will be placed into an articulated dump truck (ADT) and moved to a second area to be spread across the cover surface within a designated area. A thickness of approximately 0.3 m of waste and soil material will be considered a lift. The excavation will progress to a maximum depth of 5 m or until the time allocated for the excavation has elapsed.

Each lift of refuse material will initially be spread out by a backhoe prior to the start of the manual search of the material. The spread-out waste material will be manually searched and documented. This will require that the refuse material be pulled apart and specific aspects recorded regarding the refuse material. The manual defragmenting of the refuse material would be completed with thatching rakes or long handled gardening claws. After all lifts have been inspected and characterized, the material would then be redeposited back into and covered.

It is noted that the depth of 5m may not be required in order to for the test excavation to be considered complete. The size and depth are targets for this test excavation to provide guidance to ensure that there is sufficient waste material excavated to search and provide enough information by which the waste materials can be characterized. The test excavation is proposed to be completed within one day. If needed, the test excavation and search will be stopped in order to ensure that there is sufficient time to return waste materials to the landfill and cover with soil by the end of the day.

The timing for the work activities for the test excavation comprises of approximately four hours for the excavation work, three hours for the manual search of the refuse material and replacement and one hour for replacement of



the waste material and covering into the landfill. Timing is subject to change based on the work progress, however, the pilot will be completed within one day, and sufficient time will be left at the end of the day to cover any exposed waste.

ENVIRONMENTAL EFFECTS

ODOUR, NOISE, DUST AND VECTORS

It is anticipated that that this pilot test pit will generate odour due to the exposure of the refuse material, however, an important part of this pilot test is to evaluate the odour generation potential. WCC has a mobile odour control system that will be relocated to the area of the pilot excavation / search areas and will be operated if required. WCC will undertake odour patrols in the pilot excavation area, the pilot search area and at the perimeter of the Site. WCC has relocated mobile litter fences to the area of the pilot excavation. The litter fence will be placed downwind of the search area to minimize any windblown litter from escaping the work area. As noted, the test pilot excavation is scheduled to be undertaken within an eight (8) hour time period, and that the material will be excavated, searched, and then loaded back into the ADT for transport back to the excavated area for replacement. A litter picker will be available, if required, to collect materials that may escape the pilot search area during the test program.

It is not anticipated that that noise associated with the pilot test will be any greater than the typical operation of a tracked excavator and articulated dump truck operating at the Site, and the pilot test will be restricted to the regular hours of operation of the Prairie Green IWMF.

It is not anticipated that dust will be generated in significant volumes. The anticipated source of dust generation would be from the articulated dump truck transporting the excavated material from the excavation pit to a spread area; this distance is not anticipated to be significant between the two workspaces and truck speed will not be significant. A water truck will be available in the pilot area and can be used to wet the haul route to suppress dust in the work area, if required.

Final odour and vector management will be completed with the excavated material being reburied back in the applicable cell and covered over with material by end of the working shift.

It is not anticipated that the described pilot test would generate off-site environmental effects as the size of the test excavation is anticipated to be no greater than 25 m² and located within the Phase I area of the landfill.

In the event that the weather patterns change during the course of the day - i.e. high winds or rainfall – there will be a stop to test pilot excavation activities.

LEACHATE MANAGEMENT

The landfill liner and leachate management system in place for Prairie Green IWMF Phase I area will not be impacted as the pilot test will be completed at the top of the landfill and excavation will only occur to a maximum depth of five metres. It is anticipated that there will be leachate associated with the excavated material from Cell 10, however the excavated material will be spread on the surface of Cell 12 and will not be moved off the Phase I area, thereby confining the leachate within the existing Phase I area footprint. Given that the ADT and excavator are working in the same area, potential leachate seeping from the excavator bucket or from the movement of the dump truck from one cell to another will also be contained within the Phase I footprint.

REGULATORY REQUIREMENTS

It is expected that the described pilot test would be acceptable under the terms and conditions of EAL 2177 E R5.



SCHEDULE

As noted above, June 27, 2024, has been selected as the date for conducting the test pilot excavation and that it will be completed within one day, on-site.

CLOSING

Should you have any questions or concerns regarding this information, please contact the undersigned.



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