Notice of Alteration Form

Manitoba

File No. : 5556.00	Environment Act Licence No. : 3081 R

Legal name of the Licensee: City of Winnipeg, Water and Waste Department

Name of the development: Brady Road Resource Management Facility

Category and Type of development per Classes of Development Regulation:

Waste Treatment and Storage — Class 1 Waste Disposal Grounds

Licensee Contact Person: Chris Kozak, C.E.T., Superintendent of Operations

Mailing address of the Licensee: 1120 Waverley Street

City: Winnipeg Province: MB Postal Code: R3T 0P4

Phone Number: (204) 232-9486 Fax: Email: ckozak@winnipeg.ca

Name of proponent contact person for purposes of the environmental assessment (e.g. consultant):

WSP Canada Inc. - Fiona Scurrah, M.Sc., P. Biol., R.P. Bio., EP(CEA)

Phone: (204) 918-3277 Fax:	Mailing address: 6 HIgh Level Road, Oak Bluff, MB R2G 0E4

Email address: fiona.scurrah@wsp.com

Short Description of Alteration *(max 90 characters)*:

NoA for undertaking a pilot test excavation related to the humanitarian search at Brady

Alteration fee attached: Yes: ☐ No: ☑

If No, please explain: fee to follow

Date: 2025-07-30	Signature: [redacted] Printed name: Chris Kozak

A complete Notice of Alteration **(NoA)** consists of the following components:

- ☐ **Cover letter**
- ☑ **Notice of Alteration Form**
- ☑ **1 electronic copy of the NoA detailed report** (see "Information Bulletin - Alteration to Developments with Environment Act Licences")
- ☐ **$500 Application fee, if applicable** (Cheque, payable to the Minister of Finance)

Submit the complete NoA to:
Director, Environmental Approvals Branch
Environment and Climate Change
Box 35, 14 Fultz Blvd
Winnipeg MB R3Y 0L6
EABDirector@gov.mb.ca
For more information:
Toll-Free: 1-800-282-8069
Phone: 204-945-8321 Fax: 204-945-5229
https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/ licence/index.html

Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")

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: Fiona Scurrah, M.Sc., P. Biol., R.P. Bio. EP(CEA) – Senior Principal Environmental Scientist, WSP

SUBJECT: ***Environment Act*** **Licence 3081 R Notice of Alteration - Pilot Test Excavation**

DATE: 31 July 2025

INTRODUCTION AND BACKGROUND

The City of Winnipeg owns and operates the Brady Road Resource Management Facility (BRRMF, or the "Site"), located at 1901 Brady Road, Winnipeg, Manitoba. The Site is bordered by the Perimeter Highway on the north, Waverley Street on the east, Brady Road and the RM of MacDonald on the west and Rue de Trappistes on the south.

The Site has been in operation since 1973 and is licensed under the revised Environment Act License (Licence) No. 3081 R as a Class 1 Waste Disposal Ground and Resource Management Facility (WDG). As a Class I WDG, waste materials that can be disposed of at the Site include solid residential, commercial, and institutional material. As well the Site includes a recycling facility, materials recovery facility, petroleum contaminated soil treatment facility, and a composting facility. As part of the Site infrastructure, the BRRMF includes a series of waste disposal cells with liners and a leachate collection and removal system, a gas collection system, a stormwater runoff system and a leachate collection tank for the leachate. The Site is 790-hectares and currently holds approximately 12 million metric tonnes of waste, with over 300,000 metric tonnes of waste materials landfilled on an annual basis. The Site has capacity for over 100 additional years of waste disposal, assuming current waste diversion practices are continued.

A Humanitarian Search Project is proposed to be completed at the BRRMF that will involve excavation of some existing waste and cover soil material from Cell 32 which has been identified as the area of interest, hauling excavated material to a proposed Search Facility Area located within the existing licenced wood waste area, searching the material for human remains at the Search Facility Area, and after search completion, hauling the cleared material to the active working face for landfilling. A separate Notice of Alteration (NOA) to the BRRMF License for undertaking the future humanitarian search is currently being developed, for submission to the Environmental Approvals Branch (EAB).

1600 Buffalo Place
Winnipeg, MB
Canada R3T 6B8

T: +1 204 477-6650
F: +1 204 474-2864
wsp.com

To support the development of an applicable search procedure for the humanitarian search, a pilot test excavation of material from the Cell 32 area along with testing of alternate technologies is being proposed. As such, WSP is submitting this Notice of Alteration to EAB on behalf of the City of Winnipeg, 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 the pilot test excavation of solid waste from the Cell 32 area of the BRRMF 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 within the area of Cell 32, where it is believed the remains of the homicide victim are located. Numerous concerns exist regarding the waste excavation process, waste segregation process, efficiency of the search method, safety requirements and environmental conditions around the excavation. The purpose of this pilot test excavation is to attempt to provide clarification of these existing concerns 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 the City of Winnipeg owns and operates the BRRMF, they will direct the specific location for the pilot test excavation and the spreading of collected waste within an area in or adjacent to Cell 32 (Figure 1), which was used for truck tipping at the time the homicide occurred. Based on weather conditions and suitability of the site operations at the time, it is anticipated that the pilot test excavation will be undertaken in mid to late August 2025. The waste material located in and around Cell 32 is predominantly residential type waste with a top of waste elevation of approximately 259 metres above sea level (masl).

It should be noted that the pilot test excavation will not be occurring in cells that have been closed with final cover, 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 staff participating in the pilot test. The PPE will be confirmed by an Industrial Hygienist but is expected to include 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 BRRMF will be followed. 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 the WSP industrial hygienist team, City of Winnipeg and other subject matter experts (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.

The Site has an emergency response plan (ERP) which will be reviewed to inform and develop an ERP specific for the pilot test excavation activities. WSP in conjunction with that ERP will develop a health and safety plan for the activities associated with the excavation. The WSP Industrial Hygienist will develop an exposure control plan for

safety during the field program for those participating (including WSP, City of Winnipeg, contractors and GOM). The exposure control plan will confirm the 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. A contingency plan will be put in place, in the event that asbestos is encountered along with ensuring training is provided to the operators in relation to that plan. A water truck and stockpiles of soil adjacent to the work areas, will be in place to be used in the event of a fire. BRRMF personnel 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.

There will be a safety orientation prior to anyone attending on Site and an inspection of the required personal protective equipment (PPE) for each participant.

APPROACH

Cell 32 and the area immediately surrounding it is the focus area. The future extraction and searching of material will be in the areas that were used by waste hauling trucks for tipping of waste material into the area on the specific dates of interest. For the pilot test excavation, a sample of waste material will be excavated from Cell 32 and a test search will be executed. The area for searching during the pilot test excavation will have rubber matting placed on the ground and the waste material placed on top. The rubber matting is expected to delineate the search area from the underlying cover materials and provide a stable surface for ease of searching.

The proposed approached for the pilot test is as follows:

a) The maximum depth will be approximately 5 m, and will cover an area that is approximately 10 m by 10 m ("pilot excavation area"). This may be modified based on the available time during the pilot test, limitation of excavation equipment and the characteristics of the waste encountered; and

b) The pilot search area is proposed to be located in Cell 32, covering an area approximately 100 m by 50 m ("pilot search area").

It is proposed that a track hoe excavator will be used for the excavation. The excavator will remove the soil cover and place this material to the side of the designated excavation area. The excavation will progress in 0.5 metre depth increments or to the next soil cover layer, whichever is encountered first. After the soil has been removed, the equipment will be stopped and the inspectors will be given an opportunity to survey the excavation. In order to obtain an approximate measurement of the depth of the excavation, the excavator's arm will be used to measure the depth. GPS coordinates will be taken of the excavation area and if possible, surveyed to confirm depth. The excavator will remove the waste in a series of steps with benches that are approximately 1 m deep and 1 m wide in order to maintain the stability of the waste. This procedure will continue to the full extent of the reach of the excavator arm.

The excavation will be observed, and details recorded in a test pit log sheet and with photographs. 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). Waste material excavated will be placed into an articulated dump truck (ADT) and moved to a second area to be spread across the rubber mat covered surface within a designated area. The 1 m thick lift of excavated material will be spread to a depth of 0.3 m in the temporary search area.

Each lift of refuse material will initially be spread out by a skidsteer unit prior to the start of the manual search. The dispersed 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. It is expected that the manual

separation of the refuse material would be completed with thatching rakes or long handled gardening claws or other tools as required.

After the material has been inspected and characterized, it would then be collected and loaded into the dump truck to be deposited back into the excavation area. The material will be dumped at the edge of the excavation and pushed into placed with the excavator and the waste compactor pushing and driving over the material to compact it. Cover soil will be placed over each 1 m thick lift of waste. The waste and cover soil material will be filled up to match the surrounding grade before the excavation commenced. This will include replacement of the cover soil that was salvaged prior to completing the excavation augmented by additional cover soil as required to have the upper surface match the surrounding grade.

It is noted that the full excavation depth of 5m may not be required in order for the test excavation to be considered complete. The proposed size and depth of this test excavation is intended to provide enough waste material to allow for effective characterization. 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 excavation and cover with soil by the end of the day.

The proposed timing for the work activities during the test excavation is approximately four hours for the excavation work, three hours for the manual search of the refuse material and one hour for replacement and covering of the waste material back into Cell 32. Timing is subject to change based on the work progress; however, the pilot will be completed within one day.

ALTERNATE TECHNOLOGIES

A consideration for this pilot test excavation is to examine alternate technologies that may assist in the location and discovery of human remains as well as assisting in providing a profile of the type of waste that has been compacted in Cell 32.

Ground penetrating radar (GPR) is currently being reviewed to determine if this type of approach will aid in identifying areas of interest when the search begins. While GPR can be used in landfill, its is typically constrained to subsurface imaging for delineating landfill boundaries, and volume estimation. Limitations of GPR include physical obstructions on the surface interfering with the ability of the GPR to collect accurate data and in areas with highly conductive soils such as wet clay, absorb GPR signals reducing depth penetration and clarity in the data returned. The use of GPR is non-invasive and can be done in advance of excavation activities.

Undertaking a core sampling program after the pilot test excavation may assist in waste characterization of Cell 32. The type of care sampling that could be most suitable such as auguring and drilling with a sonic rig will be used. There are limitations for core sampling including the heterogeneity of the waste material given that landfill waste is typically variable in composition and distribution; ability to core to a great depth; cost and time for a drilling program; and safety considerations including unstable waste material and landfill gases such as methane. Maple Leaf Drilling has been contracted to undertake the drilling, auguring and sonic drilling. This will occur post test excavation and over a two-day period. Cuttings from the drill program will be placed back into the test holes and backfilled with bentonite.

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. The BRRMF has a mobile odour control system that will be relocated to the area of the pilot excavation and search areas and will be operated if

required. Monitoring of odours during the execution of the pilot test excavation will be done through odour patrols in the pilot test excavation area, in the pilot search area and at the perimeter of the Site.

If required, mobile litter fences will be deployed to the area of the pilot excavation and 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 schedule 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 BRRMF.

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 pilot excavation area to pilot search 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 test 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 replaced and buried back in Cell 32 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 100 m^2 and located within the BRRMF boundaries

In the event that the weather patterns change during the course of the day such as high winds or rainfall, there will be a stop to pilot test excavation activities.

LEACHATE MANAGEMENT

The existing landfill liner and leachate management system in place for the BRRMF will not be impacted by this proposed pilot test excavation. The excavation will be limited to Cell 32 and excavation will only occur to a maximum depth of five metres. It is anticipated that there could be leachate associated with the excavated material from Cell 32, however the excavated material will be spread on the surface within Cell 32 and will not be moved away from this area, thereby confining the leachate within the existing 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 Cell 32 area.

REGULATORY REQUIREMENTS

It is expected that the described pilot test NoA would be acceptable under the terms and conditions of EAL 3081 R.

SCHEDULE

As noted above, timing for the test pilot excavation is expected to be the week of August 11, 2025. It is anticipated the pilot test excavation will take place over a three (3) day period including one (1) day for the excavation and two (2) days for the testing of alternate technologies.

CLOSING

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

Prepared by:

[redacted]

Fiona Scurrah, M.Sc., P. Biol., R.P. Bio, EP(CEA)
Senior Principal Environmental Scientist

Reviewed by:

[redacted]

Allyson Desgroseilliers, B.Sc., P. Eng
Vice President, Environmental Management

[redacted]

Ian MacLeod, P. Eng.
Senior Principal Environmental Engineer