Manitoba
**Environment and Climate Change**
Environmental Approvals Branch
Box 35, 14 Fultz Blvd.
Winnipeg MB R3Y 0L6
T 204-945-8321 F 204-945-5229
EABDirector@gov.mb.ca

File Number: 3851.00

June 11, 2024

Barry Blue
District Manager
Waste Connections of Canada Inc.
Prairie Green Landfill
Rosser MB R3C 2E6
barry.blue@wasteconnections.com

Dear Barry Blue:

**Re**: **Prairie Green Integrated Waste Management Facility (Landfill) – Notice of Alteration Approval – Environment Act Licence No. 2177 E R5**

Thank you for your notice of alteration dated June 4, 2024, seeking to begin a humanitarian search activity within the landfill. The scope of the work includes excavating materials from a portion of the landfill located within Phase I of the development, developing and operating a search facility in Phase II of the development, hauling those excavated materials to the search facility, and taking the materials back to the active face of the landfill once the materials have been searched. The notice of alteration includes information on environmental protection measures that will be followed during the search activity.

In executing the proposed work, I approve the alteration per Section 14(2) of The Environment Act with the following conditions:

## General Conditions

1. The licensee must obtain written approval from the director before proceeding with any alteration to this approval or the development.

2. The licensee must dispose of all non-hazardous solid waste generated or collected due to the search activity, which is not recycled, only to the active face of the landfill.

3. The licensee must, unless otherwise approved by an environment officer:
   a) haul and immediately unload all excavated waste at the designated waste storage area at the search facility;
   b) haul all searched materials or waste generated due to the search activity directly to the active face of the landfill; and

…2

c) not store any excavated waste or waste generated due to the search activity in trucks or trailers.

4. The licensee must take measures to prevent any escape of excavated materials, including any potential leachate, from waste-hauling trucks into the environment.

5. The licensee must update the emergency response plan following clause 96 of the licence.

6. The licensee must notify in writing to the designated environment officer of any changes to the routing of the access roads as identified in the notice of alteration. The notification must also include an updated site plan.

7. The licensee must notify the designated environment officer not less than two weeks before beginning any construction as identified in the notice of alteration, excavation of materials from Phase I of the development, or commissioning the search facility at the development.

8. The licensee must follow all federal, provincial, and municipal regulations and by-laws.

9. The licensee must follow all other clauses of this development's Environment Act Licence.

10. The licensee must obtain an onsite wastewater permit from Environment and Climate Change to manage the wastewater generated due to the search activity within the development.

**Noise, Odour, Air Emissions, and Dust**

11. The licensee must follow clauses 20-22 of the licence respecting odour and air emissions-related issues.

12. The licensee must follow clauses 23-24 of the licence respecting noise-related issues.

13. The licensee must follow clauses 27 a), d), and e) of the licence relating to vehicular access, dust control, and traffic.

**Litter and Vector Nuisance**

14. The licensee must:
    a) establish and maintain controls to minimize the escape of waste or other material from the development;
    b) minimize the presence of animals and vectors at the development; and
    c) retrieve waste or other materials that are blown onto adjacent properties or accumulated in the development and dispose of in the active face of the landfill.

**Surface Water and Leachate Management**

15. The licensee must collect and contain all surface runoff at the facility following the notice of alteration dated June 4, 2024.

16. The licensee must collect and contain all leachate at the facility following the notice of alteration dated June 4, 2024.

**Search Facility Area**

17. The licensee must, two weeks before beginning any construction associated with the search activity, provide a layout map of the waste storage area located within the search facility to the designated environment officer.

**Search Facility Clay Liner Components**

18. The licensee must construct and maintain all clay-lined component(s) of the search facility with the following specifications:
    a) the clay liner of the search facility base is compacted to a minimum thickness of 0.6 metres and covered with a clay layer of 0.5 metres; and
    b) the hydraulic conductivity of the clay liner is $1x10^{-7}$ cm/s or less.

**Soil Liner Sampling, Testing and Reporting**

19. The licensee must, after the completion of any clay component of the search facility, arrange with the designated environment officer a mutually acceptable time and date for any required soil sampling between the 15th day of May and the 15th day of October of any year, unless otherwise approved by the designated environment officer.

20. The licensee must take and test undisturbed soil samples, following Schedule A of this notice of alteration, from any clay component of the search facility.

21. The number and location of samples and test methods will be specified by the designated environment officer up to a maximum of 20 samples per clay component of the development.

22. The licensee must, before using any area tested following clause 20 of this approval, receive the approval of the designated environment officer for the results of the tests carried out following clause 20 of this approval.

**Environment Accidents including Spills**

23. The licensee must equip the facility with spill-cleanup equipment and supplies.

24. The licensee must in the event of a spill, dispose of the water used to clean up the spill and post clean-up materials following applicable regulations.

25. The licensee must follow clauses 17-19 of the licence respecting equipment breakdown or process upset.

26. The licensee must in the event of an environmental accident, take all necessary actions to report the accident by calling the Environmental Emergency Report Line at 204-944-4888 (toll-free 1-855-944-4888) following regulatory requirements, contain the spill, manage the impacted environment, and restore the environment to the satisfaction of the director.

**Reporting**

27. The licensee must include in their annual report the details of the search activity including but not limited to:
    a) a summary of any construction activities associated with this notice of alteration;
    b) the mass (in tonnes) of waste excavated from Phase 1 of the development to the search facility;
    c) the mass (in tonnes) of waste received at the search facility;
    d) the mass (in tonnes) of waste returned to the active face of the landfill from the search facility. This must also include the reference to the active cell where the searched waste will be disposed of; and
    e) a detailed long-term timeline for the project lifecycle.

    This annual report must follow the annual report due date as stated in the licence.

28. The licensee must, six months before the completion of the search activity, submit a decommissioning plan to the director for approval.

29. The licensee must, within three months of the date of completion of the search activity, submit a final closure report to the director. The report must address how it complies with the decommissioning plan.

Anyone affected by this decision may appeal, in writing, to the Minister of Environment and Climate Change at minecc@manitoba.ca by July 10, 2024. This approval is available on the public registry at https://www.gov.mb.ca/sd/eal/registries/index.html.

For clauses 6, 7, 17, 19, 21, and 22 of this approval, the designated environment officer is Mehak Bajwa, who can be reached at Mehak.Bajwa@gov.mb.ca or 431-334-3667.

If you have any questions about this approval, please contact Sonja Bridges, Acting Regional Supervisor, Environmental Compliance and Enforcement Branch at EnvCEWinnipeg@gov.mb.ca or 204-918-4271.

Sincerely,

Original Signed By

Agnes Wittmann
Director
The Environment Act

c. Mehak Bajwa
Sonja Bridges

**Schedule A to the June 11, 2024 Notice of Alteration Approval**
Soil sampling following clause 20 of this approval

**Soil Sampling**

1. The licensee must provide a drilling rig, acceptable to the designated environment officer, to extract soil samples from the specified liner of the structure. This includes all liners constructed with clay. The drill rig must have the capacity to drill to the maximum depth of the clay liner plus an additional 2 metres. The drill rig must be equipped with both standard and hollow stem augers. The minimum hole diameter must be five inches.

2. For liners placed or found at the surface of the structure, the licensee must provide a machine, acceptable to the designated environment officer, capable of pressing a sampling tube into the liner in a straight line motion along the centre axis line of the sample tube and without sideways movement.

3. Soil samples must be collected and shipped following ASTM Standard D 1587 (Standard Practice for Thin-Walled Tube Sampling of Soils), D 4220 (Standard Practice for Preserving and Transporting Soil Samples), and D 3550 (Standard Practice for Ring-Lines Barrel Sampling of Soils). Thin-walled tubes must meet the stated requirements including length, inside clearance ratio, and corrosion protection. An adequate venting area must be provided through the sampling head.

4. At the time of sample collection, the designated environment officer must advise the licensee as to the soil testing method that must be used on each sample. The oedometer method may be used for a sample where the environment officer determines that the soil sample is taken from undisturbed clay soil which has not been remoulded and which is homogeneous and unweathered. The triaxial test must be used for all samples taken from disturbed and remoulded soils or from non-homogenous and weathered soils.

5. The licensee must provide a report on the collection of soil samples to the designated environment officer and to the laboratory technician which includes but is not limited to a plot plan indicating sample location, depth or elevation of sample, length of the advance of the sample tube length of soil sample contained in the tube after its advancement, the soil test method specified by the environment officer for each soil sample and all necessary instructions from the site engineer to the laboratory technician.

6. All drill and sample holes must be sealed with bentonite pellets after the field drilling and sampling have been completed.

**Schedule A to the June 11, 2024 Notice of Alteration Approval**
Soil sampling following clause 20 of this approval
(continued)

**Soil Testing Methods**

7. Triaxial Test Method

a) The soil samples must be tested for hydraulic conductivity using ASTM D 5084 (Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter).

b) Soil specimens must have a minimum diameter of 70 mm (2.75 inches) and a minimum height of 70 mm (2.75 inches). The soil specimens must be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The hydraulic gradient must not exceed 30 during sample preparation and testing. Swelling of the soil specimen should be controlled to adjust for: the amount of compaction measured during sample collection and extraction from the tube and the depth or elevation of the sample. The effective stress used during saturation or consolidation of the sample must not exceed 40 kPa (5.7 psi) or the specific stress level, that is expected in the field location where the sample was taken, whichever is greater.

c) The complete laboratory report, as outlined in ASTM D 5084, must be supplied for each soil sample collected in the field.

8. Oedometer Test Method

a) The soil samples must be tested for hydraulic conductivity using ASTM D 2435 (Standard Test Method for One-Dimensional Consolidation Properties of Soils).

b) Soil specimens must have a minimum diameter of 50 mm (2 inches) and a minimum height of 20 mm (0.8 inches). The soil specimens must be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The soil specimen must be taken from an undisturbed soil sample. The soil specimen must be completely saturated.

c) The complete laboratory report, as outlined in ASTM D 2435, must be supplied for each soil sample collected in the field.