



Conservation and Climate

Environmental Approvals Branch
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File No.: 3440.20

October 15, 2021

Dave Howes
Director of Regulatory Affairs
Miller Environmental Corporation
1803 Hekla Ave.
Winnipeg MB R3N 0T1
daveh@millerenvironmental.mb.ca

Dear Dave Howes:

Re: Miller Environmental Corporation - Notice of Alteration Approval to Construct a Leachate Pond – Dangerous Goods Handling and Transportation Act Licence No. 58 HW S2 RRRR

Thank you for your June 15, 2021 Notice of Alteration request, July 20, 2021 additional revised design plans and information, and September 8, 2021 additional information for an alteration to Dangerous Goods Handling and Transportation Act Licence No. 58 HW S2 RRRR, originally issued for the construction and continued operation of a central hazardous waste management facility located on portions of NE 2-3-1 EPM within the Rural Municipality of Montcalm. The intent of the request is to construct a new leachate pond.

Upon review of the request, I am satisfied that the identified changes in the environmental effects as would result from the proposed new leachate pond described in the June 15, 2021 Notice of Alteration, and additional information dated July 20, 2021 and September 8, 2021 would be insignificant. The request satisfies the requirements of Dangerous Goods Handling and Transportation Act Licence No. 58 S2 RRRR regarding construction of leachate collection system. Therefore, I hereby approve construction of the leachate pond in accordance with Schedule A of this Notice of Alteration Approval.

All clauses of Dangerous Goods Handling and Transportation Act Licence No. 58 HW S2 RRRR remain in effect.

Please be advised that this Notice of Alteration Approval is contingent on the acceptance of a revised Dangerous Goods handling and Transportation Act Licence that will be issued in the near future.

If you have any questions concerning this Notice of Alteration Approval, please contact Edwin Yazon, Environmental Engineer, Environmental Approvals Branch, at Edwin.Yazon@gov.mb.ca or 431-335-2554.

For questions relating to the ongoing administration of Dangerous Goods Handling and Transportation Act Licence No. 58 HW S2 RRRR, please contact Tyler Kneeshaw, Regional Supervisor, Environmental Compliance and Enforcement Branch, at Tyler.Kneeshaw@gov.mb.ca or 204-239-3608.

Sincerely,

Original Signed By:

Laura Pyles, A/Director
The Dangerous Goods Handling and
Transportation Act

- c. Paul Bauer, Yolo Ortiz – Miller Environmental Corporation
- Arman Vahedi – Crocus Environmental Inc.
- Gaetan Fontaine – Community Liaison Committee
- Harvey Miller, Ryan Hewitt - Manitoba Hazardous Waste Management Corporation
- Kristal Harman, Yvonne Hawryliuk, Tyler Kneeshaw - Environmental Compliance and Enforcement
- Asit Dey, Eshetu Beshada, Edwin Yazon - Environmental Approvals
- Public Registry

**Schedule A to October 15, 2021 Notice of Alteration Approval of DGHTA Licence
No. 58 HW S2 RRRR**

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Synthetic Liner

1. The Licensee shall construct the leachate pond as described in the July 20, 2021 revised design and identified in Schedule B of this Notice of Alteration Approval, unless otherwise approved by the Director of Environmental Approvals Branch.
2. The Licensee shall notify the assigned environment officer of the approvals branch, and the regional supervisor, not less than five (5) days and not more than ten(10) days before construction begins in accordance with the Waste Management Facilities Regulation, and future amendment thereto.
3. The Licensee shall construct the synthetic liner underlying the component in accordance with clauses 4 to 7 of this Notice of Alteration Approval.
4. The Licensee shall construct and maintain a continuous liner underlying the component of the leachate pond, such that:
 - a) the liner is constructed from HDPE geomembrane;
 - b) the liner has a minimum thickness of 60 mils;
 - c) all sections of the liner are joined by dual track seaming;
 - d) the liner is installed under the entire base and side wall or berm of the leachate pond;
 - e) the liner is installed to a minimum elevation of 3.90 metres above the base of the cell;
 - f) the liner is installed in accordance with ASAE Standard EP340.2 for the installation of Flexible Membrane Linings;
 - g) non-destructive test methods are used to test the integrity of:
 - i) all field seams joining liner sections in accordance with ASTM Standard D 5820-95 (Reapproved 2006); and
 - ii) all other field seams in accordance with ASTM Standard D 4437-99;
 - h) an installation report is prepared and submitted to the assigned environment officer of the approvals branch for approval within 30 days of commencing the installation of the liner. The installation report shall include a cover letter with a declaration that the liner is continuous underlying the cell. The installation report shall also include the test results, a discussion of the results, and a declaration that the liner was installed in accordance with the manufacturer's requirements;
 - i) the floor of the liner is covered with sand or other granular cover material to a minimum depth of 0.3 metres measured perpendicular to the surface of the liner; and
 - j) the liner is secured to prevent lifting of the liner.

5. The Licensee shall complete the installation of the synthetic liner on any component of the leachate pond in accordance with the manufacturer recommendations regarding temperature and environmental conditions.
6. The Licensee shall not cover the synthetic liner until receiving written approval of the assigned environment officer of the approvals branch of the report submitted pursuant to sub-clause 4g) of this Notice of Alteration Approval.
7. The Licensee shall not set the leachate pond into operation or allow the use of the leachate pond until the assigned environment officer of the approvals branch has issued written authorization.

Respecting Recirculation

8. The Licensee shall not recirculate leachate or contaminated water collected at the Development into the repository cells, unless approved by the Director of Environmental Compliance and Enforcement Branch.

Respecting Accidental Spill

9. The Licensee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling the 24-hour environmental accident reporting line at 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.

Respecting Leachate Monitoring

10. The Licensee shall develop policies and procedures for leachate monitoring program that includes:
 - a) measurement of the depth of leachate head in the cell;
 - b) collection of representative samples in accordance with Schedules C and D of this Notice of Alteration Approval; and
 - c) annual monitoring and analysis of leachate in accordance with Schedules C and D of this Notice of Alteration approval.
11. The Licensee shall include the results of the monitoring and analysis carried out pursuant to clause 10 of this Notice of Alteration Approval in the Annual Monitoring Report, including but not limited to the following:
 - a) documentation to verify the appropriate certification of the laboratory used to perform the analyses;
 - b) copies of the laboratory analytical results in accordance with clause 10 of this Notice of Alteration Approval;
 - c) quality assurance and quality control data;

- d) the date(s), exact place, and time(s) of sampling measurements;
 - e) summary of laboratory analytical results in accordance with clause 10 of this Notice of Alteration Approval; and
 - f) discussion of the results of monitoring and analyses carried out pursuant to clause 10 of this Notice of Alteration Approval.
12. The Licensee shall maintain the leachate monitoring program during the lifespan, final closure, and post closure of the Development.

Respecting Atmospheric Emission of Leachate

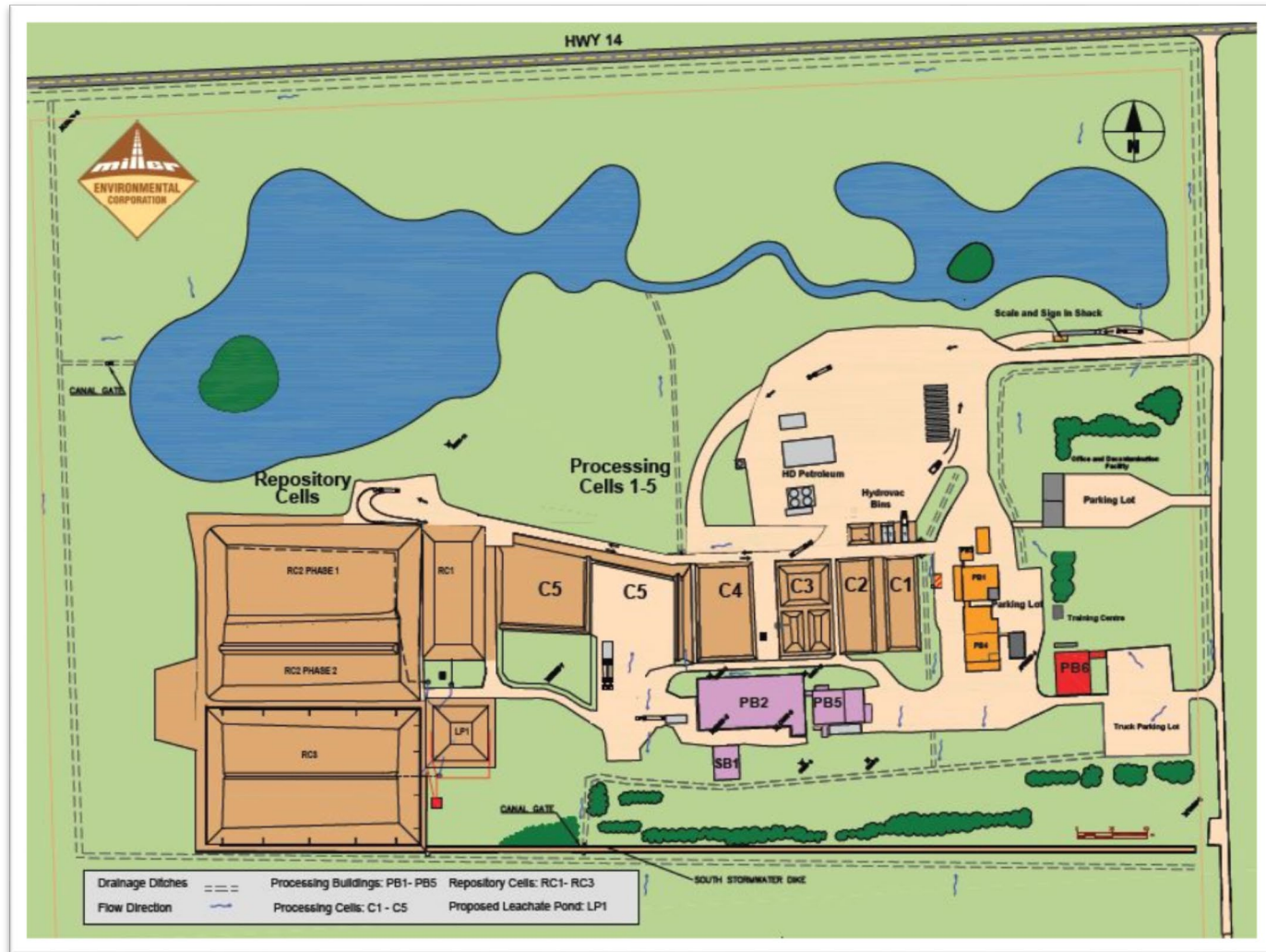
13. The Licensee shall, within six months from the date the leachate pond is in operation, submit and conduct an environmental and human health impact assessment of atmospheric emission of leachate acceptable to the Director. The assessment shall focus on the following, including but not limited to:
- a) direct and indirect exposure;
 - b) pathway of exposure;
 - c) bioaccumulation;
 - d) soil accumulation;
 - e) receptor sensitivity; and
 - f) toxicity reference values.
14. The Licensee shall, upon review of the results of the assessment carried out pursuant to clause 13 conduct sampling and analysis of atmospheric emission from leachate at a frequency, parameters, and laboratory analytical methods specified by the Director of Environmental Compliance and Enforcement Branch.

General

15. In addition to any of the limits, terms or conditions specified in this Notice of Alteration Approval, The Licensee shall upon the request of the Director:
- a) sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of contaminant storage, containment, repository cells, leachate pond, storage building, process building, containment pad, treatment, handling, disposal or emission systems, for such contaminants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may specified;
 - b) determine the environmental impact associated with the release of any contaminant(s) from the facility;
 - c) conduct specific investigations in response to the data gathered during environmental monitoring programs; and/or
 - d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements, and such other information as may form time to time requested.

**Schedule B to October 15, 2021 Notice of Alteration Approval of DGHTA Licence
No. 58 HW S2 RRRR**

Facility Layout pursuant to clause 1 of Schedule A to October 15, 2021 Notice of Alteration Approval



**Schedule C to October 15, 2021 Notice of Alteration Approval of DGHTA Licence
No. 58 HW S2 RRRR**

Monitoring and analysis requirements pursuant to clause 10 of Schedule A to October 15, 2021 Notice of Alteration Approval

1. Representative samples of leachate shall be collected from leachate pond
2. The sample of leachate shall be analyzed for the following parameters*:
 - a) pH
 - b) alkalinity
 - c) chloride
 - d) sulphate
 - e) sodium
 - f) potassium
 - g) COD
 - h) BOD
 - i) total organic carbon
 - j) total suspended solids
 - k) nitrate nitrogen
 - l) ammonia nitrogen
 - m) organic nitrogen
 - n) total phosphorus
 - o) ortho phosphate
 - p) total hardness
 - q) antimony
 - r) arsenic
 - s) barium
 - t) beryllium
 - u) bismuth
 - v) boron
 - w) cadmium
 - x) calcium
 - y) cesium
 - z) chromium
 - aa) copper
 - bb) total iron
 - cc) lead
 - dd) magnesium
 - ee) manganese
 - ff) mercury
 - gg) nickel
 - hh) potassium
 - ii) titanium
 - jj) zinc

*Analysis for heavy metals must be carried out in accordance with Schedule D of this Notice of Alteration Approval.

**Schedule D to October 15, 2021 Notice of Alteration Approval of DGHTA Licence
No. 58 HW S2 RRRR**

Analysis of metals pursuant to clause 10 of Schedule A to October 15, 2021 Notice of Alteration Approval

1. The laboratory performing these analysis shall:
 - a) possess and maintain accreditation with the Canadian Association for Laboratories Inc. (CALA);
 - b) operate a quality assurance program acceptable to the assigned Environment Officer;
 - c) monitor the accuracy of the leachate and soil analyses fro each set of samples of leachate or soil through the use of a suitable reference material acceptable to the assigned Environment Officer; and
 - d) analyze field duplicates of samples with acceptance criteria of ± 10 percent.

2. A copy of the analytical procedures and the analytical results for associated reference materials used in the laboratory, and any other controls used in the analysis, shall be submitted with the field sample results.

3. If the analytical results of any associated materials do not meet the following criteria, the leachate must re-analyzed:
 - a) Arsenic ± 35 percent from the reference value
 - b) Cadmium ± 25 percent from the reference value (for values above 1 microgram/gram)
 - c) Cadmium ± 35 percent from the reference value (for values below 1 microgram/gram)
 - d) Chromium ± 25 percent from the reference value
 - e) Copper ± 25 percent from the reference value
 - f) Lead ± 25 percent from the reference value
 - g) Mercury ± 25 percent from the reference value
 - h) Nickel ± 25 percent from the reference value
 - i) Zinc ± 25 percent from the reference value