



Conservation and Water Stewardship

Environmental Stewardship Division
Environmental Approvals Branch
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CLIENT FILE NO.: 3440.20

November 3, 2015

Vaughn Bullough, Vice President & General Manager
Miller Environmental Corporation
1803 Hekla Avenue
Winnipeg MB R2K 0K3

Dear Mr. Bullough:

Enclosed is **Licence No. 58 HW S2 RRRR** dated November 3, 2015 issued to **Miller Environmental Corporation** for the construction and continued operation of a central hazardous waste management facility, located in the Rural Municipality of Montcalm, Province of Manitoba, in accordance with the application filed under *The Dangerous Goods Handling and Transportation Act* on March 22, 2013 and subsequent proposals and additional information submitted on September 27, 2013, July 25, 2014, February 2, 2015, and April 20, 2015.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the facility as licensed.

For further information on the administration and application of the Licence, please feel free to contact Tyler Kneeshaw, Environment Officer at 204-239-3608.

Pursuant to Section 25 of *The Dangerous Goods Handling & Transportation Act*, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation and Water Stewardship within 30 days of the date of the Licence.

Yours truly,

“original signed by”

Tracey Braun, M.Sc.
Director
Dangerous Goods Handling & Transportation Act

Enc.

c: Don Labossiere, Donna Smiley, Tyler Kneeshaw Environmental Compliance and Enforcement
Ian Forrester, Gaetan Fontaine
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 58 HW S2 RRRR (*by the Licencee only*) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department at 204-945-5229 by November 9, 2015.

On behalf of the Miller Environmental Corporation

Date

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

LICENCE

Licence No./Licence n°	<u>58 HW S2 RRRR</u>
Issue Date/Date de délivrance	<u>October 15, 1997</u>
Revised:	<u>June 2, 2000</u>
Revised:	<u>August 8, 2000</u>
Revised:	<u>April 11, 2013</u>
Revised:	<u>November 3, 2015</u>

In accordance with *The Dangerous Goods Handling and Transportation Act* (C.C.S.M. c. D12)/
Conformément à la *Loi sur la manutention et le transport des marchandises dangereuses* (C.P.L.M. c. D12)

THIS LICENCE IS ISSUED TO:/CETTE LICENCE EST DONNÉE À:

MILLER ENVIRONMENTAL CORPORATION;
"the Licencee"

STAGE 2 LICENCE

for the construction and continued operation of a central hazardous waste management facility, known as the "MANITOBA ENVIRONMENTAL CENTRE" (hereinafter referred to as "the facility") located on NE 2-3-1 EPM in the Rural Municipality of Montcalm, Province of Manitoba, in accordance with the application filed under *The Dangerous Goods Handling and Transportation Act* on March 22, 2013 and subsequent proposals and additional information submitted on September 27, 2013, July 25, 2014, February 2, 2015, and April 20, 2015 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence;

"**accredited laboratory**" means an analytical facility accredited by the Standards Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation and Water Stewardship to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

"active area" means a designated trench or berm confined area of the repository cell in which stabilized materials are or will be deposited;

"affected area" means a geographical area, excluding the property of the facility;

"approved" means approved in writing;

"bulk material and sludges" means substances which may be soils or other solid material that are contaminated with organics such as hydrocarbons or inorganic substances such as heavy metals;

"Community Liaison Committee" means that committee appointed by the Rural Municipality of Montcalm, to provide general oversight of the facility's operation, facilitate public consultation activities in the community and administer any independent review, monitoring or investigation of the facility's operation in accordance with the Agreement between the Licencee and the Rural Municipality of Montcalm;

"containers in transit" means containers which do not remain at the facility for a period exceeding 72 hours and which are only used for the receipt or delivery of hazardous waste;

"contaminant" means a contaminant as defined in *The Dangerous Goods Handling and Transportation Act*;

"daily" means any 24-hour period;

"dangerous goods" means any product, substance or organism designated in the regulations, or conforming with the criteria set out in the regulations, or in any regulation adopted in accordance with *The Dangerous Goods Handling and Transportation Act*, and includes hazardous wastes;

"days" means calendar days unless otherwise indicated;

"developed area" means all areas of the facility used for the receiving, movement, handling, storage, processing, or disposal of hazardous waste;

"Director" means an employee so designated pursuant to *The Dangerous Goods Handling and Transportation Act*;

"drum" means a container having a capacity of 205 litres;

"drum equivalent" means a volume of 205 litres;

"engineer(s)" means an engineer or engineers registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba;

"Environment Officer" means an employee so designated pursuant to *The Dangerous Goods Handling and Transportation Act*;

"final cover" means soil compacted to a thickness of at least 1.0 metre and topped off with at least 0.5 metre of top soil applied to the surface of the compacted repository cell that has achieved the final elevation for cell closure, and is graded to minimize ponding of water on the surface;

"groundwater" means water below the ground surface and within a zone of saturation;

"handle" means generate, use, transfer, process, mix, package, or store;

"hazardous waste" means a product, substance or organism that

- a) is prescribed, designated or classified as hazardous waste in the regulations; or
- b) by its nature conforms to the classification criteria for one or more classes of hazardous wastes set out in the regulations;

"HVAC" means the heating, ventilating and air conditioning system;

"lab pack" means small quantities of compatible wastes in containers that are placed in a drum and surrounded by sorbent material;

"leachate" means liquid that has percolated through solid waste and that contains dissolved and suspended materials from the solid waste;

"leachate collection system" means a system that gathers leachate so that it may be removed from a landfill and which could include a permeable drainage layer, a network of perforated piping, and sumps or manholes from which leachate can be removed;

"leachate management system" means all of the components of a system to transport, collect, and extract leachate from the repository; to include the leachate collection system, and any other infrastructure installed for the purpose of handling leachate;

"liner" means a continuous layer of reworked soil, or manufactured materials, placed beneath and on the sides of a land disposal facility active area intended to restrict the downward or lateral escape of stabilized materials, leachate, and/or gases, or to restrict the upward movement of groundwater into an area;

"monitoring well" means a well drilled to measure groundwater levels and collect groundwater samples for the purpose of physical, chemical or biological analysis to determine the concentration of groundwater constituents;

"noise nuisance" means an unwanted sound, in an affected area, which is annoying, troublesome, or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to the members of the public;

if the unwanted sound

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90 day period, from 5 different persons falling within clauses a), b), or c), who do not live in the same household; or

- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b), or c), and the Director is of the opinion that if the unwanted sound had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90 day period from 5 different persons who do not live in the same household;

"odour nuisance" means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant, or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to the members of the public;

if the odour, smell or aroma

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90 day period, from 5 different persons falling within clauses a), b), or c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b), or c), and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90 day period from 5 different persons who do not live in the same household;

"opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

"overpack" means a container with a maximum capacity of 250 litres used to temporarily contain smaller quantities of individually contained hazardous wastes;

"particulate matter" means any finely divided liquid or solid matter other than water droplets;

"particulate residue" means that part or portion of an atmospheric emission which is deposited onto a surface;

"point source" means any point of emission from the facility where contaminants are directed by a stack into the atmosphere;

"ppmv" means parts per million by volume;

"process building 1, PB1" means that area identified in the application received March 22, 2013;

"process building 2, PB2" means that area identified in the application received March 22, 2013;

"process building 3, PB3 " means that area identified in the application received March 22, 2013;

"process building 4, PB4" means that area identified in the application received March 22, 2013;

"process building 5, PB5" means that area identified in the application received March 22, 2013;

"process building 6, PB6" means that area identified in the proposal received April 20, 2015;

"record drawings" means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built;

"residuals" means any by-product of a waste or hazardous waste treatment process;

"sanitary wastes" means human body, toilet, liquid, waterborne culinary, sink or laundry waste;

"small containers" means containers having a capacity of less than 205 litres;

"stack" means a duct, flue, pipe, chimney, vent, opening or other structure through which contaminants are emitted to the atmosphere;

"Standard Methods for the Examination of Water and Wastewater" means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Federation;

"Surface Water Management System" means a system that manages surface water and storm water from all areas, within the facility;

"tankage" means fixed, non-moveable storage vessels designed and manufactured to store wastes or hazardous wastes with a capacity of 8000 litres or greater;

"tank farm" means that area identified in the application received March 22, 2013;

"top soil" means soil that is free of roots, vegetation, weeds and stones larger than 50 mm, is capable of supporting good vegetative growth, and is suitable for use in top dressing, landscaping and seeding;

"tote" means a container with a capacity of approximately 1000 litres used to contain waste or hazardous waste material;

"treat" and **"treatment"** means blending, extracting, mixing, heating, evaporating or otherwise managing waste or hazardous waste material so as to render it less hazardous or non-hazardous;

"waste(s)" means any matter, substance, or emission which is or has been created or emitted by the transportation, storage, treatment or handling of any product whatsoever and which is or should be intended for discard or disposal; and

"wastewater" means any liquid containing a contaminant as defined in *The Dangerous Goods Handling and Transportation Act*, associated with or resulting from the facility which is discharged into the environment.

GENERAL REQUIREMENTS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a

high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

The specifications, limits, terms and conditions of this Licence are severable. If any term or condition of this Licence or the application of any specification, limit, or term or condition to any circumstances is held invalid, the application of such specification, limit, or term or condition to other circumstances and the remainder of this Licence shall not be affected thereby.

Nothing in this Licence shall be construed to relieve the Licencee from civil or criminal penalties.

1. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the facility.
2. The Licencee shall reduce the production and dissemination of wastes by initiating and maintaining waste reduction and waste recycling programs.
3. In addition to any of the limits, terms or conditions specified in this Licence, the Licencee 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, 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 be 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; 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 from time to time be requested.
4. The Licencee shall, unless otherwise specified in this Licence:
 - a) carry out all preservations and analyses on liquid samples in accordance with the methods prescribed in the most current edition of Standard Methods for the Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director;
 - b) carry out all sampling of, and preservation and analyses on, water, soil or air samples in accordance with methodologies approved by the Director;
 - c) have all analytical determinations undertaken by an accredited laboratory; and
 - d) report the results to the Director, in writing and in an electronic form acceptable to the Director within 60 days of the samples being taken, or within another time frame as specified by the Director.
5. The Licencee shall for the purpose of compliance monitoring notify the Director orally concerning any actual or anticipated breach or failure to meet any specification, limit, term or condition of this Licence, as soon as possible after discovery, and in any event within two working days of discovery.

6. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in writing, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labeled with the Licence Number and Client File Number associated with this Licence.
7. The Licencee shall submit to the Director all records, as determined by the Director, that are relevant to the control of contaminants with respect to construction, alteration, or operation of the facility or regarding the conduct of any activity at the facility.
8. The Licencee shall, unless otherwise specified by this Licence, retain all records relating to this Licence during the full life of operation of the facility, and after closure, for such period of time as may be specified by the Director. Records may be transferred from their original form to other accepted forms for information storage. These records shall be made available to an Environment Officer upon request.
9. The Licencee shall carry out, as deemed necessary by the Director, any remedial measures or modifications in respect to matters authorized under this Licence.
10. The Director or Environment Officer may, without incurring liability for so doing, enter the facility for the purpose of:
 - a) investigating, inspecting and carrying out tests at the facility; and
 - b) examining, making copies of, taking photographs of, or taking extracts from any records of the facility pursuant to an investigation, inspection, or test under this Licence.
11. The Licencee shall, in addition to the requirements of this Licence, carry out all aspects of the operation of the facility in compliance with the Agreements between Miller Paving Ltd., the Manitoba Hazardous Waste Management Corporation, the Community Liaison Committee, the Manitoba Government and the Rural Municipality of Montcalm and any amendments thereto.
12. The Licencee shall make available all information required by this Licence to the public and the Rural Municipality of Montcalm.
13. The Licencee shall notify the Director of any intended alteration of process at the facility, which is likely to cause a significant environmental effect, prior to implementing the alteration.
14. The Licencee shall provide to the Director letters of acceptance from both the Manitoba Hazardous Waste Management Corporation and the Citizen Liaison Committee for any alteration requested pursuant to Clause 13 of this Licence.
15. The Licencee shall inform the Director, in writing, of any intention or agreement to lease any part or portion of the facility's property, including any buildings or structures, where such leasing might involve the establishment of any other development with a potential for emissions which may affect the environment.

LIMITS, TERMS AND CONDITIONS

Respecting Insurance Requirement

16. The Licencee shall purchase and maintain Comprehensive General Liability Insurance with a minimum limit of \$10.0 million per occurrence providing coverage for the facility and all operations of the Licencee at the facility, including completed operations. The terms and conditions of coverage shall be satisfactory to the Director, and without limitations shall include coverage for bodily injury (including death), personal injury and accidental property damage, blanket contractual broad form property damage, and non-owned automobile coverages.
17. The Licencee shall purchase and maintain Automobile Liability Insurance for all owned and non-owned licenced vehicles used in connection with the operation of the facility and which provides coverage against liability arising from third party bodily injury or property damage for a minimum of \$5.0 million per occurrence with terms and conditions satisfactory to the Director. If the automobile liability policy excludes coverage for sudden and accidental pollution, this coverage shall be provided under the Environmental Impairment Liability Policy or the Comprehensive General Liability Policy.
18. The Licencee shall purchase and maintain Environmental Impairment Liability Insurance providing coverage for the Licencee's on-site and off-site operations associated with the facility. The minimum limits shall be \$3.0 million for gradual pollution and \$5.0 million for sudden and accidental pollution, with a minimum annual aggregate of \$5.0 million. Terms and conditions of coverage shall be satisfactory to the Director. Environmental impairment resulting from the loading and unloading of licenced vehicles shall be covered under the Environmental Impairment Liability Policy or under the Comprehensive General Liability Policy on a sudden and accidental basis; or via a specific endorsement on the automobile liability policy.
19. The Licencee shall provide satisfactory written evidence to the Director of the insurance coverages described in Clauses 16, 17 and 18 of this Licence, on an annual basis.

Respecting Storage and Treatment of Hazardous Waste

20. The Licencee shall not store at the facility, at any time:
 - a) at the tank farm, organic liquids in excess of the storage capacity as hazardous wastes or organic products or byproducts of the treatment of hazardous waste, or uncontaminated fuel oil;
 - b) within the process building PB1 in tankage:
 - i. in excess of the storage capacity for treated wastewater;
 - ii. in excess of the storage capacity for organic hazardous wastes or organic products or byproducts of the treatment of hazardous waste;
 - iii. in excess of the storage capacity for inorganic hazardous wastes or inorganic products or byproducts of the treatment of hazardous waste;
 - c) within the process building PB1, hazardous waste in totes, drums and/or small containers in excess of the storage capacity;
 - d) within the process building PB3, hazardous waste in tanks, totes and drums in excess of the storage capacity;

- e) within the process buildings PB4 and PB5, hazardous waste in totes, drums and/or small containers, in excess of the total capacity of the storage space;
 - f) within the process building PB6, hazardous waste in totes in excess of the storage capacity; and
 - g) hazardous waste in containers other than as described in Clause 20 a), b), c), d) or f) of this Licence, excepting containers in transit and out bound waste in trailers.
21. The Licencee shall not store hazardous waste at the facility except as described in Clause 20 of this Licence unless otherwise approved by the Director. Any approval will include consultation with, and acceptance in writing from, the Community Liaison Committee and the Manitoba Hazardous Waste Management Corporation Board.
22. The Licencee shall store hazardous waste as described in Clause 20 c), d), e) and f) of this Licence:
- a) in single pallet rows not more than 2 drum heights or 240 centimetres in height; and
 - b) with a minimum aisle width between rows of 1 metre.
23. The Licencee shall not store containers of hazardous waste as described in Clause 20 c), d), e) and f) of this Licence for a period exceeding 180 days from the date of receipt of the hazardous waste, except for lab packs, overpacks and partially filled drums where the 180 day period will commence on the date the lab pack, overpack or drum is filled.
24. The Licencee shall not store more than 27 in-process lab packs at the facility. The in-process lab packs shall be segregated from the other hazardous wastes in storage.
25. Notwithstanding Clause 20 f), the Licencee may store and process used pesticide containers and used oil containers in process building PB6 with the following conditions:
- a) used pesticide containers shall be washed and shredded;
 - b) used oil containers shall be shredded;
 - c) all wastes shall be entered into the record tracking system; and
 - d) all wastes shall be removed in accordance with Clause 23 of this Licence.
26. The Licencee shall, when storing hazardous waste in trailers as containers in transit as described in Clause 20 g) of this Licence:
- a) document the contents of each trailer; and
 - b) have the documents referred to in Clause 26 a) readily available for inspection by the Director or an Environment Officer or an emergency responder.
27. The Licencee shall, when storing outbound waste in trailers, conform to the written plan submitted on September 27, 2013 for the secure parking of the trailers.
28. The Licencee shall store all types of waste at the facility in accordance with the written plan submitted on September 27, 2013, such that storage of waste in trailers will not be necessary.

Respecting the Process Building 6 (PB6)

29. The Licencee shall prior to the commencement of the container washing, container shredding and vehicle washing process at the PB6, submit a detailed building floor plan showing the locations of processing equipments and the drainage system to be installed.

Respecting the Storage and Treatment of Bulk Material and Sludges

30. The Licencee shall, prior to initiating construction of any bulk material and sludges cell(s) submit five paper copies and one electronic copy of final engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, to the Director for approval. The plans will show the engineering details of each new component and the location of each new component with respect to other components.
31. The Licencee shall construct the cell(s) in accordance with the design plans approved by the Director pursuant to Clause 30 of this Licence.
32. The Licencee shall construct and maintain the bulk material and sludges cell(s) with continuous clay liners, under all interior surfaces of the cell(s) in accordance with the following specifications:
- a) the clay liner is recompacted to a minimum thickness of one metre for the side slopes and for the base; and
 - b) the hydraulic conductivity of the clay liner is 1×10^{-7} cm/second or less.
33. The Licencee shall arrange with the assigned 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.
34. The Licencee shall take and test undisturbed soil samples, in accordance with "Schedule A" of this Licence, from the compacted clay liner of the bulk material and sludges cell(s). The number and location of samples and test methods will be specified by the assigned Environment Officer.
35. The Licencee shall, prior to operation of the area tested, receive the approval of the Environment Officer for the results of the tests carried out pursuant to Clause 34 of this Licence.
36. The Licencee shall initiate treatment of all bulk material and sludges if they are to be treated by landfarming, within one year of their receipt.
37. The Licencee shall store all untreated bulk material and sludges in a secure and bermed area which has been specifically constructed for that purpose.
38. The Licencee shall not store at the facility, a quantity of untreated bulk material and sludges that exceeds the capacity of which the facility is capable of treating in a year period, unless authorized by the Director.

39. The Licencee shall treat and dispose of all petroleum contaminated soils in accordance with the most current version of Manitoba Environment Guideline 96-05, Treatment and Disposal of Petroleum Contaminated Soil June 1996, as revised from time to time.

Respecting the Construction of the Repository Cell

40. The Licencee shall hire an engineer(s), registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, to be responsible for the construction of the repository cell in accordance with the plans, specifications and design drawings submitted in support of the Proposal filed on July 25, 2014.
41. The Licencee shall prior to the construction of the repository cell, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.
42. The Licencee shall construct and maintain the active cell with a continuous liner under all interior surfaces (base and side slopes) of the cell in accordance with the following specifications:
- a) the clay liner is recompacted to a minimum thickness of 1 meter for the side slopes and 1 meter for the base of the active area; and
 - b) the in-place recompacted hydraulic conductivity of the clay liner on the side slopes and the base of active cell is 1×10^{-7} cm/second or less.
43. The Licencee shall take and test undisturbed soil samples, in accordance with Schedule "A" attached to this Licence, from the compacted clay liner of the active area. The number and location of samples and test methods will be specified by the assigned Environment Officer;
44. The Licencee shall 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.
45. The Licencee shall, prior to operation of the area tested, receive the approval of the Environment Officer for the results of the tests carried out pursuant to Clause 44 of this Licence.
46. The Licencee shall construct the leachate collection system so that:
- a) the hydraulic capacity of the perforated leachate collection pipes can readily accommodate the expected quantity of leachate;
 - b) leachate that enters the pipe can readily flow within the pipes;
 - c) blockage of the perforations of the leachate collection pipes by sedimentation is minimized; and
 - d) the leachate collection pipes have adequate structural integrity to withstand impacts from waste placement and other site operations.
47. The Licencee shall prior to the commissioning of the repository cell, undertake the construction and installation of the monitoring wells in order to monitor the ground water up gradient and down gradient from the repository in accordance with the specifications and design drawings submitted on February 2, 2015.

48. The Licencee shall:
- a) prepare "record drawings" for the repository cell of the Facility and shall label the drawings "Record Drawings"; and
 - b) provide to the Director, within four months of the Environment Officer's approval of the reports required by Clause 45 of this Licence, two electronic copies of the "record drawings".

Respecting the Operation of the Repository Cell

49. The Licencee shall deposit stabilized materials generated from the stabilization process carried out at the facility in accordance with the specifications and process details submitted on July 25, 2014 in the repository cell.
50. The Licencee shall carry out a full characterization of all waste types, before the waste is deposited in the repository cell.
51. The Licencee shall maintain, at the operator's office and make available for inspection by an Environment Office upon request, records of all wastes received and deposited in the active area of the repository cell. The records shall contain, but not be limited to the following:
- a) the date wastes were deposited in the cell;
 - b) the volume received; and
 - c) results of laboratory analyses of the wastes.
52. The Licencee shall inspect the leachate collection system annually.
53. The Licencee shall take remedial action to correct the situation where an increase occurs in the slope of the final cover, or erosion of the final cover occurs during the post-closure period.

Respecting the Operating Plan and Operating Records

54. The Licencee shall submit for the approval of the Director, within six (6) months of the date of issuance of this Licence, an Operating Plan that includes information regarding all aspects of the repository cell, to include but not be limited to:
- a) method of tracking placement of stabilized materials;
 - b) stabilized materials acceptance parameters and limitations;
 - c) restrictions and procedures on volumes for stabilized materials;
 - d) incident tracking and reporting parameters;
 - e) dust control procedures;
 - f) leachate handling and management;
 - g) surface and ground water management;
 - h) monitoring and reporting parameters; and
 - i) identification of operational records to be maintained.
55. The Licencee shall implement the approved Operating Plan submitted pursuant to Clause 54 of this Licence.

Mitigating Erosion and Runoff

56. The Licencee shall with respect to on-site earthen construction works, construct and maintain silt fences in the drainage routes transporting surface runoff off the property of the Development until vegetation has been re-established on the disturbed areas.
57. The Licencee shall construct and maintain the final side slopes of the above ground deposit of stabilized materials, including final cover, in the cell to not exceed one unit vertical to four units horizontal (1V:4H) and the final top slope to not less than one unit vertical to twenty units horizontal (1V:20H), unless otherwise approved by the Director.
58. The Licencee shall carry out the cell closure and capping process by applying a compacted clay cap to a thickness of at least 1.0 metre and topped off with at least 0.5 metre of top soil applied to the surface of the compacted repository cell in accordance with the specifications submitted on February 2, 2015.

Respecting the Operation of the Evaporator

59. The Licencee shall prior to the installation and commissioning of the evaporator at the facility, submit the following to the Director for approval:
 - a) characteristics, method and rate of discharge of concentrated wastewater and residue;
 - b) design and specifications of the air pollution control systems to be installed; and
 - c) schedule of procurement, installation and setting into operation of the evaporator unit, drainage system and exhaust gas ventilation system.
60. The Licencee shall submit, within 60 days of commencing to operate the evaporator, a detailed plan for the sampling and analysis of potential air pollutants, released as stationary point, to the Director for approval. The plan shall identify all compounds to be analysed, the rationale for the sampling, the methods used for the sampling and the analysis for each compound, the detection level to be attained and other items as may be identified by the Director.
61. The Licencee shall process only the types of waste water streams identified in the proposal dated April 20, 2015.
62. The Licencee shall maintain a record for all waste water processed in the Evaporator unit. The record shall contain, for each day, but not be limited to the following:
 - a) volume of each load processed through the evaporator;
 - b) date processed;
 - c) volume and analytical test results of waste water and residue removed; and
 - d) date and method of treatment and/or disposal of waste water and residue removed.

Respecting Air Emissions

63. The Licencee shall not emit from the facility:
 - a) particulate matter in any air emission that:
 - i. exceeds 0.23 grams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury, corrected to 12 percent carbon dioxide for processes involving combustion, from any point source of the facility;

- ii. exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the facility; or
- iii. results in the deposition of visible particulate residue at any time beyond the property line of the facility; or
- b) particulate matter from any point source with an opacity that equals or exceeds:
 - i. 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
 - ii. 20 percent for more than 16 individual opacity observations within any 1 hour period; or
 - iii. 40 percent for any individual opacity observation.

64. The Licencee shall not cause or permit a noise nuisance to be created as a result of the construction, operation, or alteration of the facility, and shall take such steps as the Director may require to eliminate or mitigate a noise nuisance.

65. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation, or alteration of the facility, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.

66. The Licencee shall manage the handling, storage and treatment of hazardous waste at the facility, such that ambient air contaminants at any point of impingement beyond the boundaries of the facility, do not exceed the following concentrations:

Air Contaminant	Period of Time Air Contaminant is Measured	Concentration Limit
Total Hydrocarbons	24 hour average	32 mg/m ³
Benzene	24 hour average	2.3 µg/m ³
Toluene	24 hour average	2000 µg/m ³
Ethylbenzene	24 hour average	4000 µg/m ³
Xylenes	24 hour average	2300 µg/m ³

67. The Licencee shall not handle, treat, or otherwise manage any hazardous waste at the facility where the hazardous waste is exposed in any manner to the atmosphere within a building:

- a) unless there is air collection equipment specifically designed to collect the air from these activities and this equipment is fully operational at the time of the handling, treating, or otherwise managing the hazardous waste; and
- b) the collected air is directed to a fully operational air pollution control device suitable for removing the potential contaminants of concern.

68. The Licencee shall not handle, transfer, treat or otherwise manage any hazardous waste at the facility except as described in Clause 67 of this Licence unless otherwise approved by the Director. Any approval will include consultation with, and acceptance in writing from, the Community Liaison Committee and the Manitoba Hazardous Waste Management Corporation Board.

69. The Licencee shall not treat any hazardous waste at the facility at any location other than the process buildings PB1, PB2, PB3, PB4, PB5 and PB6 and the tank farm and the bulk materials and sludges cells.
70. The Licencee shall configure the air pollution control devices in accordance with the application dated March 22, 2013 and the plan submitted as per Clause 63 of this Licence.
71. The Licencee shall install appropriate instrumentation at the discharge of the air pollution control devices so that the devices can be continuously monitored for the air emissions that are being controlled.
72. The Licencee shall not operate the air pollution control devices except as described in Clause 71 of this Licence unless otherwise approved by the Director. Any approval will include consultation with, and acceptance in writing from, the Community Liaison Committee and the Manitoba Hazardous Waste Management Corporation Board.
73. The Licencee shall keep, for the inspection of an Environment Officer, the most recent 24 months record of the continuously monitored air emission measurements and all maintenance performed on the air pollution control devices and monitoring instruments.

Respecting Wastewater Emissions

74. The Licencee shall not discharge wastewater beyond the boundaries of the facility unless:
 - a) the wastewater meets criteria as identified in "Schedule B" attached to this Licence; and
 - b) written approval for discharge is received from the Director.
75. The Licencee shall not discharge any wastewater to the large retention ponds at the north boundary of the facility.
76. The Licencee shall provide a control structure at the discharge location of the large retention ponds such that uncontrolled or accidental discharge is prevented.
77. The Licencee shall direct all sanitary wastes only to a holding tank(s) properly designed to contain sanitary wastes.
78. The Licencee shall direct all wastewater generated as a result of any activity at the facility, other than the treatment of hazardous waste, to a sump or sumps properly designed to contain such liquids.
79. The Licencee shall manage all liquids collected in sumps at the facility in a manner approved by the Director.

MONITORING

80. The Licencee shall provide to the Director, within 30 days of the issuance of this Licence, a scaled area map showing all monitoring locations and site drainage.

Respecting Ambient Air Monitoring

81. The Licencee shall monitor the ambient air according to the following:

Frequency	Parameters	Locations*
Monthly - May to October	VOC's	A1 and A2
Alternating Month May to October	Particulates/Arsenic; Cadmium; Chromium; Copper; Lead; Mercury; Nickel; Zinc	A1 and A2

* locations as identified in Clause 80 of this Licence.

Respecting Soil Monitoring

82. The Licencee shall monitor the soil according to the following:

Frequency	Parameters	Locations*
Every Three Years	Arsenic; Cadmium; Chromium; Copper; Lead; Nickel; Zinc, Mercury; BTEX; PHC CWS; PAH.	A1, A2 and A3

* locations as identified in Clause 80 of this Licence.

Respecting Groundwater Monitoring

83. The Licencee shall monitor groundwater according to the following:

Frequency	Parameters	Locations*
Annually	BTEX; Arsenic; Cadmium; Chromium; Copper; Lead; Mercury; Nickel; Zinc/pH/Calcium; Magnesium; Sodium; Potassium; Chloride; Nitrate; Sulphate; Total Organic Carbon; Total Dissolved Solids/Static level prior to purging if possible or sampling	OMW1; OMW2; OMW3; OMW4; OMW5; OMW6; OMW7

* locations as identified in Clause 80 of this Licence.

84. The Licencee shall provide to the Director, within 60 days of the issuance of this Licence, revised protocols for all sampling that will be carried out at the facility.

Respecting Surface Water Monitoring

85. The Licencee shall monitor large retention ponds water according to the following:

Frequency	Parameters	Locations*
Prior to discharge	BTEX; PAH's; Arsenic; Cadmium; Chromium; Copper; Lead; Mercury; Nickel; Zinc/Bioassay	Discharge points

* locations as identified in Clause 83 of this Licence.

TRAINING REQUIREMENTS

Respecting Trained Personnel

86. The Licencee shall provide and maintain training for all persons who will be assigned duties at the facility in:

- a) *the Transportation of Dangerous Goods Regulations*; and
- b) the procedures pertaining to the operation of the facility including spill response.

The records of this training shall be made available to an Environment Officer upon request.

87. The trained personnel shall be on site at all times when the facility is open to receive hazardous waste.

FACILITY SECURITY

Respecting Facility Security

88. The Licencee shall maintain a fully operational security system as described in the application dated March 22, 2013 and the proposal dated July 25, 2014, or an equivalent security system approved by the Director.

FACILITY INSPECTION

Respecting Facility Inspection

89. The Licencee shall conduct regular inspections of the facility to ensure that all pieces of equipment and the storage and treatment operations are operated in a manner that will not negatively impact the environment. Any deficiencies detected during these regular inspections,

that might negatively impact the environment shall be promptly corrected. The inspection must include, as applicable, an observation of:

- a) the condition of every hazardous waste container and all piping and ancillary equipment;
- b) the condition of the secondary containment system and of any other mechanism that prevents the release of hazardous waste;
- c) any indications of a release of hazardous waste or of any deterioration of containers, piping, ancillary equipment or a secondary containment system that increases the likelihood of a release; and
- d) recommendations for remedial action and actions undertaken.

90. The Licencee shall record each inspection required by Clause 89 of this Licence. The record shall include the date of the inspection, the name of the person who conducted the inspection and the observations made by that person during the inspection.

CONTINGENCY PLAN REQUIREMENTS

Respecting Emergency Response Contingency Plan

91. The Licencee shall prepare and maintain an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety “Emergency Response Planning Guide” or other emergency planning document acceptable to the Director.
92. The emergency response contingency plan shall be designed to minimize hazards from fires, explosions or any unplanned release of hazardous waste or contaminants.
93. A copy of the emergency response contingency plan shall be kept on site and emergency response information must be posted in a conspicuous location.

SPILL RESPONSE

Respecting Spills

94. The Licencee 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 contaminant 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.
95. The Licencee shall, following the reporting of an event pursuant to Clause 94,
 - a) identify the repairs required to the mechanical equipment;
 - b) undertake all repairs to minimize unauthorized discharges of a contaminant;
 - c) complete the repairs in accordance with any written instructions of the Director or an Environment Officer; and

- d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.
96. The Licencee shall take action to promptly clean up any spill or leakage and repackage the waste if any hazardous waste container leaks, cracks or otherwise causes a spill during loading or unloading. Any material resulting from such a cleanup shall be handled as hazardous waste and shall be packaged and disposed of in accordance with applicable regulations.
97. The Licencee shall equip the facility with spill cleanup equipment and supplies.

OPERATING REQUIREMENTS

98. The Licencee shall manage all solid wastes generated at the facility such that all garbage, solid waste, liquid waste, bulky metallic waste and industrial waste as defined in Manitoba Regulation 150/91 respecting Waste Disposal Grounds, as amended from time to time, shall be disposed of in a waste disposal ground operating under the authority of a permit issued pursuant to the said Regulation. Any other solid waste to be disposed of off-site, must be disposed of in a manner approved in writing by the Director.
99. The Licencee shall neither store nor treat, except as indicated, the following hazardous waste at the facility without the written approval of the Director:
- a) store but not treat hazardous waste containing polychlorobiphenyls (PCBs) that are received in small quantities as part of household hazardous waste programs;
 - b) store but not treat hazardous waste containing radioactive material that are received in small quantities as part of household hazardous waste programs;
 - c) infectious hazardous waste;
 - d) store but not treat biomedical hazardous waste excepting pharmaceuticals and preserved specimens received periodically from research facilities or clinical laboratories;
 - e) store but not treat explosives excepting ammunition, flares or fireworks received in small quantities as part of household hazardous waste programs; and
 - f) hazardous waste which is readily capable of detonation or of explosive decomposition or reaction at normal temperature and pressure.

REPORTING REQUIREMENTS

Respecting Record Keeping

100. The Licencee shall maintain, on a daily basis, written records and any amendments, revisions or modifications to these records reflecting the operation of the facility. These records shall be kept available for inspection by an Environment Officer.

Respecting Annual Reporting

101. The Licencee shall, unless otherwise approved by the Director, on or before the 15th day of April of each year, submit to the Director an annual report with respect to all activities at the facility conducted pursuant to this Licence during the previous calendar year. The report shall be made

available to the public and the Rural Municipality of Montcalm. The format of the report shall be approved by the Director and contain, as a minimum, the following information.

- a) the amount and type of each hazardous waste received and subsequently bulked for shipment to off-site disposal;
- b) the amount and type of hazardous waste received and treated by the facility, including any residuals;
- c) the amount and type of stabilized material received and subsequently deposited at the repository cell;
- d) the amount and type of hazardous waste managed at the evaporator, including any residuals;
- e) a summary of the hazardous waste characterization data;
- f) all calibration and equipment maintenance records;
- g) summary reports and details of all incidents that require implementation of the contingency plan; and
- h) with respect to the monitoring programs:
 - i. the date(s), location and time(s) of sampling or measurements;
 - ii. the date(s) analyses were performed;
 - iii. the individual(s) who performed the analyses;
 - iv. documentation to verify the appropriate certification of the laboratory used to perform the analyses;
 - v. quality assurance and quality control data; and
 - vi. the analytical results of all monitoring.

102. Any approval by the Director for changes with respect to the requirements of Clause 101 of this Licence will include consultation with, and acceptance in writing from, the Community Liaison Committee and the Manitoba Hazardous Waste Management Corporation Board.

Respecting Decommissioning

103. The Licencee shall submit to the Director, for approval, one year in advance of the projected date for commencing the decommissioning of the facility or when it becomes evident that the closure of the facility is imminent, a detailed Closure Plan outlining the measures proposed to address environmental and health issues which might arise in the course of, and subsequent to, the decommissioning of the facility and implement the approved Closure Plan in accordance with a time frame satisfactory to the Director.

REVIEW AND REVOCATION

- A. This Licence replaces Licence No. 58 HW S2 RRR which is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the restrictions or conditions set out in this Licence, or in the opinion of the Director a hazardous situation exists, the Director may, temporarily or permanently, terminate, vary or suspend this Licence.

- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new application pursuant to *The Dangerous Goods Handling and Transportation Act*.

Tracey Braun, M.Sc.
Director
*Dangerous Goods Handling
and Transportation Act*

Client File No.: 3440:20
Consignor Registration No. MBG 02410
Consignee Registration No. MBR 01829

**Schedule “A” to
Miller Environmental Corporation
Licence No. 58 HW S2 RRRR**

Soil Sampling:

1. The Licence shall 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 shall have the capacity to drill to the maximum depth of the clay liner plus an additional 2 meters. The drill rig shall be equipped with both standard and hollow stem augers. The minimum hole diameter shall be 5 inches.
2. For liners placed or found at the surface of the structure, the Licencee shall 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 shall be collected and shipped in accordance with ASTM Standard D 1587 (Standard Practice for the 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 shall meet the stated requirements including length, inside clearance ratio and corrosion protection. An adequate venting area shall be provided through the sampling head.
4. At the time of sample collection, the designated Environment Officer Shall advise the Licencee 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 an undisturbed clay soil which has not been remoulded and which is homogeneous and unweathered. The triaxial test shall be used for all samples taken from disturbed and remoulded soils or from non homogenous and weathered soils.
5. The Licencee shall 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 the following: a plot plan indicating sample location, depth or elevation of sample, length of 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 shall be sealed with bentonite pellets after the field drilling and sampling has been completed.

**Schedule “A” to
Miller Environmental Corporation
Licence No. 58 HW S2 RRRR (cont’d)**

Soil Testing Methods:

1. Triaxial Test Method

- a) The soil samples shall be tested for hydraulic conductivity using ASTM D5084 (Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter).
- b) Soil specimens shall have a minimum diameter of 70 mm (2.75 inches) and a minimum height of 70 mm (2.75). The soil specimens shall be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The hydraulic gradient shall 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 shall 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 D5804, shall be supplied for each soil sample collected in the field.

2. Oedometer Test Method

- a) The soil samples shall be tested for hydraulic conductivity using ASTM D2435 (Standard Test Method for One-Dimensional Consolidation Properties of Soils).
- b) Soil specimens shall have a minimum diameter of 50 mm (2 inches) and a minimum height of 20 mm (0.8 inches). The soil specimens shall be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The soil specimen shall be taken from an undisturbed soil sample. The soil specimen shall be completely saturated.
- c) The complete laboratory report, as outlined in ASTM D2435, shall be supplied for each soil sample collected in the field.

**Schedule “B” to
Miller Environmental Corporation
Licence No. 58 HW S2 RRRR**

Wastewater or discharge from the large site retention ponds shall not contain contaminants, as described below, whose concentrations exceed the appropriate set of criteria for water use classification of the receiving waterways as may be specified in the most recent version of the Manitoba Surface Water Quality Objectives:

Alkalinity (Total CaCO₃)	Lithium
Colour	Manganese
Conductivity	Mercury
Dissolved oxygen	Molybdenum
Hardness (as CaCO₃)	Nickel
Odour	Selenium
pH	Silver
Temperature	Uranium
Total Dissolved Solids	Vanadium
Turbidity	Zinc
Aluminum	Chloride
Antimony	Fluoride
Arsenic	Nitrate (as N)
Barium	Nitrite (as N)
Beryllium	Sodium
Boron	Sulphate
Cadmium	Total Petroleum Hydrocarbons
Chromium	Benzene
Cobalt	Toluene
Copper	Ethyl Benzene
Cyanide (free)	Xylenes
Iron	
Lead	

Wastewater or discharge from the large site retention ponds shall not be acutely lethal to water fleas, as determined by means of a 48-hour exposure period which results in mortality to more than 50 percent of the test water fleas exposed to undiluted discharge water, with the test carried out in accordance with section 5 or 6 of the Reference Method for Determining the Acute Lethality of Effluent to *Daphnia magna*, outlined in Environment Canada’s Report, EPS 1/RM/14 July 1990, or any future amendment thereto.