



Conservation

Climate Change and Environmental Protection Division
Environmental Assessment and Licensing Branch
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FAXED

CLIENT FILE NO.: 5332.00

Mr. Phil Kalyta, P. Eng.
City Engineer
City of Steinbach
225 Reimer Avenue
Steinbach MB R5G 2J1

November 26, 2010

Dear Mr. Kalyta:

Enclosed is revised **Environment Act Licence No. 2918RR** dated November 26, 2010 issued in accordance with The Environment Act to the **City of Steinbach** for the construction and operation of the Development being a Class 1 Waste Disposal Ground in the City of Steinbach located on the northern ½ of Section 23 - Township 6 - Range 6 EPM, in accordance with the Proposal filed under The Environment Act on May 5, 2008, and the additional information received on August 28, 2009 and November 5, 2010.

Please note the revision refers to the construction and operation of the new de-watering pond at the Development.

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.

For further information on the administration and application of the Licence, please feel free to contact Adrian Jackson, Environmental Engineer at (204) 945-7108.

Pursuant to Section 27 of The Environment Act, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation within 30 days of the date of the Licence.

Yours truly,

Tracey Braun, M. Sc.
Director
Environment Act

Enc.

c: Don Labossiere, Director, Environmental Operations
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 2918RR (*by the Licensee only*) is required by the Director of Environmental Assessment and Licensing. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by December 10, 2010.

On behalf of the City of Steinbach

Date

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

LICENCE

Licence No. / Licence n° 2918 RR

Issue Date / Date de délivrance April 26, 2010

Revised : May 20, 2010

November 26, 2010

In accordance with The Environment Act (C.C.S.M. c. E125)
Conformément à la Loi sur l'environnement (C.P.L.M. c. E125)

Pursuant to Section 11(1) / Conformément au Paragraphe 11(1)

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

THE CITY OF STEINBACH "the Licencee"

for the construction and operation of the Development being a Class 1 Waste Disposal Ground in the City of Steinbach located on the northern ½ of Section 23 - Township 6 - Range 6 EPM, in accordance with the Proposal filed under The Environment Act on May 5, 2008, and the additional information received on August 28, 2009 and November 5, 2010 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"**access road**" means a road that leads from a Provincial Trunk Highway, Provincial Road, or a Municipal Road;

"**accredited laboratory**" means an analytical facility accredited by the Standard Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation 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 a waste disposal ground in which solid wastes are deposited;

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

"**approved**" means approved in writing;

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"assigned Environment Officer" means the Environment Officer who is responsible for enforcement of the licence;

"ASTM" means the American Society for Testing and Materials;

"background water quality" means the quality of water in any geologic zone monitored with regards to the chemical and microbiological parameters specified in a Licence issued pursuant to The Environment Act by the Director;

"body of water" means any body of flowing or standing water whether natural or artificially created;

"cell" means the location where waste is deposited;

"Class 1 Waste Disposal Ground" means a waste disposal ground serving a population in excess of 5,000 persons;

"closure plan" means a plan indicating the actions to be taken for the closure of the Development or a portion of the Development;

"concentration value" means a restriction established by a Licence issued pursuant to The Environment Act by the Director on quantities, discharge rates and concentrations of pollutants;

"contaminant" in relation to the site, means any product, substance or organism that is foreign to or in excess of the natural constituents of the environment at the site and that:

- a) has affected, is affecting or may affect the natural, physical, chemical or biological quality of the environment; or
- b) is, or is likely to be, injurious or damaging to the health or safety of a person;

"cover material" means material which is free of roots, vegetation and frozen material, or other material as approved by the Director, that is used to cover compacted solid waste;

"de-watering pond" means the shallow pond that is located approximately north-east of the compost pad;

"Director" means an employee so designated pursuant to The Environment Act;

"Environment Officer" means an employee so designated pursuant to The Environment Act;

"existing cell" means the cell that is located on the NW $\frac{1}{4}$ of 23-6-6 EPM;

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

"hazardous waste" means any substance or group of substances so designated by the regulations or conforming to criteria set out in regulations, or any future amendments thereof;

"HDPE" means high density polyethylene;

"landfill gas" means gas produced when organic waste naturally decomposes in a landfill;

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

"liner" means a continuous layer of reworked soil, or man-made materials beneath and on the sides of a land disposal facility, compost facility, or storage area and that restricts the downward or lateral escape of solid waste, leachate and gas;

"liquid industrial waste" means waste generated by industrial processes that has a slump of more than 150 mm using the slump test method (slump test, C.S.A. Standards Test Method A 23.1-5C), and does not include hazardous waste or industrial waste;

"liquid waste" means sewage, sewage effluent and sludge from septic tanks, holding tanks and municipal sewage treatment systems and that has a slump of more than 150 mm using the slump test method (slump test, C.S.A. Standard Test Method A 23.2-5C);

"mil" means one-thousandth of an inch;

"new cell" means a cell that is located on the NE ¼ of 23-6-6 EPM;

"noise nuisance" means a continuous or repeated noise 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 noise
- 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 noise 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 the affected area;
 - b) working in the affected area; or
 - c) present at a location in the affected area which is normally open to 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;

"post-closure plan" means a plan indicating the actions to be taken for the care, maintenance, and monitoring of the Development after closure, that will prevent, mitigate, or minimize the threat to public health and the environment;

"site" means the area both permanent and temporary which is required for the construction and operation of the Development;

"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;

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

"waste transfer area" means the area where recyclables such as paper and cardboard are collected prior to removal by a recycling company.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains terms and conditions 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.

1. The Licencee shall construct and maintain permanent and temporary dyke structures and surface drainage to divert surface runoff from active waste disposal cells and cells under construction to the storm water retention pond at the Development.
2. The Licencee shall construct an internal drain system to divert non-contaminated runoff from the Development to the storm water retention pond.
3. The Licencee shall not construct diversion for surface drainage other than that specified in Clauses 1 and 2 of this Licence.
4. The Licencee shall submit all information required to be provided to the Director under this Licence, in writing, in such form (including number of copies), and of such content as may be

required by the Director. Each report shall be provided in hard copy (paper) and in electronic copy.

5. The Licencee shall obtain approval in writing from the Director for any proposed alteration to the Development before proceeding with the alteration.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

General

6. In addition to any of the following specifications, limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:
 - a) sample, monitor, analyze or investigate specific areas of concern regarding any seepage and discharge rates and for such duration and frequencies as may be specified;
 - b) determine the environmental impact associated with the release of any pollutant from the Development; or
 - c) provide the Director within such time as may be specified, with such reports, drawings, specifications, analytical data, flow rate measurements, corrective actions and such other information as may from time to time be requested.
7. 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 "Standard Methods for the Examination of Water and Wastewater" or in accordance with an equivalent analytical methodology approved by the Director;
 - b) certify that all analytical determinations are undertaken by an accredited laboratory; and
 - c) report the results to the Director, in writing or in a format acceptable to the Director, within 60 days of the samples being taken, or within another time frame as specified by the Director.
8. The Licencee shall locate fuel storage and equipment servicing areas established for the construction and operation of the Development a minimum distance of 100 metres from any body of water, and shall comply with the requirements of *Manitoba Regulation 188/2001* respecting *Storage and Handling of Petroleum Products and Allied Products* or any future amendments thereof.
9. The Licencee shall, during construction and operation of the Development, report spills of fuels or other contaminants to an Environment Officer in accordance with the requirements of *Manitoba Regulation 439/87* respecting *Environmental Accident Reporting* or any future amendments thereof.
10. The Licencee shall assign 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 Development and any required remediation action in accordance with the plans, specifications and design report submitted in support of the proposal.

11. The Licencee shall not cause or permit a noise nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps, as the Director may require, to eliminate or mitigate a noise nuisance.
12. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps, as the Director may require, to eliminate or mitigate an odour nuisance.
13. The Licencee shall deposit all waste, other than material intended for recycling or composting, in an active area within the Development.
14. The Licencee shall post adequate signage at the entrance to the Development indicating, but not limited to the following:
 - a) the types of wastes not accepted at the site;
 - b) the hours and days of operation; and
 - c) 24-hour telephone numbers to be called in the event of an emergency occurring at the site.

Construction – General

15. The Licencee shall, prior to initiating construction of any component of the Development, 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.
16. The Licencee shall construct the Development in accordance with the design plans approved by the Director pursuant to Clause 15 of this Licence.
17. The Licencee shall construct and maintain the storm water retention and sedimentation pond(s) and the compost facility with continuous clay liners, under all interior surfaces of the pad or pond in accordance with the following specifications:
 - a) the clay liner is recompacted to a minimum thickness of 1 metre for the side slopes and for the base;
 - b) the hydraulic conductivity of the clay liner is 1×10^{-7} cm/second or less; and
 - c) the liner extends a vertical distance of 1 metre above the normal operating level of the ponds.
18. 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.
19. The Licencee shall take and test undisturbed soil samples, in accordance with Schedule "A" attached to this Licence, from:
 - a) the compacted clay used to construct the cut off walls that surround the waste disposal cell(s);
 - b) the compacted clay liner of the storm water retention and sedimentation pond(s);
 - c) the compacted clay pad of the compost facility.

The number and location of samples and test methods will be specified by the assigned Environment Officer.

20. The Licencee shall, prior to operation of the area tested, receive the approval of the Director for the results of the tests carried out pursuant to Clause 19 of this Licence.
21. The Licencee shall, prior to commencing operation of the new cell at the Development, submit a plan for landscaping and planting of trees, shrubs and/or grasses at the Development to the assigned Environment Officer for approval.
22. The Licencee shall complete the proposed landscaping and planting of trees, shrubs and/or grasses at the Development, as approved pursuant to Clause 21 of this Licence.

Construction – Waste Disposal Cells

23. The Licencee shall, prior to the construction of the new cell waste disposal active area, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.
24. The Licencee shall submit to the Director for approval at least 30 days prior to construction of the waste disposal cells five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba shall address construction specifications of the waste disposal cells and include, but not be limited to the following:
 - a) engineering design with respect to construction of the waste disposal cells base and sides;
 - b) location of access road(s) to the waste disposal cells;
 - c) details of the location of the waste disposal cells with respect to property lines; and
 - d) details of a drainage system to prevent storm water runoff from entering the waste disposal cells.
25. The Licencee shall construct the waste disposal cells in accordance with the design plans approved pursuant to Clause 24 of this Licence.

Construction – Leachate Collection Pond(s)

26. The Licencee shall, prior to the construction of the leachate collection pond(s), remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.
27. The Licencee shall submit to the Director for approval at least 30 days prior to construction of the leachate collection pond(s) five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba shall address construction specifications of the leachate collection ponds and include, but not be limited to the following:
 - a) engineering design with respect to construction of the pond base and sides;
 - b) location of access road(s) to the leachate collection ponds;
 - c) details of the location of the leachate collection ponds with respect to property lines;
 - d) details of a drainage system to prevent storm water runoff from entering the leachate collection ponds; and

- e) details of the fencing around the leachate pond.
28. The Licencee shall construct the leachate collection ponds in accordance with the design plans approved pursuant to Clause 27 of this Licence.
29. Notwithstanding Clause 28 of this licence, the Licencee shall, where the leachate pond is to be constructed with a synthetic liner, construct the continuous liner underlying the leachate ponds as described in Clauses 30 to 35 of this Licence.
30. The Licencee shall construct and maintain a continuous liner underlying the leachate pond(s), 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 double channel fusion seaming;
 - d) the liner is installed to a minimum elevation of 1.0 metre above the maximum design liquid level of the leachate cell(s);
 - e) in accordance with ASTM Standard D-4437, the integrity of all field seams are tested by non-destructive test methods, a testing report is prepared and submitted to the Director within 30 days of commencing the installation of the liner; and
 - f) the liner is secured to prevent lifting of the liner.
31. The Licencee shall complete the installation of the synthetic liner at the leachate pond(s) between the 15th day of May and the 15th day of October of any year.
32. The Licencee shall not cover the liner or use the leachate pond(s) until receiving the approval of the assigned Environment Officer of the report submitted pursuant to sub-Clause 30 e) of this Licence.
33. The Licencee shall construct and maintain an effective gas relief system under the liner for all leachate pond(s).
34. The Licencee shall notify the assigned Environment Officer two weeks prior to commencing the installation of the liner and the gas relief system.
35. The Licencee shall cover all surfaces of the liner of the leachate pond(s) with 0.3 metres of sand or other granular material.

Construction – Waste Wood Stockpile/Chipping Area

36. The Licencee shall, prior to the construction of the waste wood stockpile/chipping area, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.
37. The Licencee shall submit to the Director for approval at least 30 days prior to construction of the waste wood stockpile/chipping area five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the

Association of Professional Engineers and Geoscientists of the Province of Manitoba shall address construction specifications of the waste wood chipping area and include, but not be limited to the following:

- a) engineering design with respect to construction of the waste wood stockpile/chipping area;
- b) location of access road(s) to the waste wood stockpile/chipping area;
- c) details of the location of the waste wood stockpile/chipping area with respect to property lines;
- d) details of the waste wood stockpile/chipping area drainage system; and
- e) details of a drainage system to prevent storm water runoff from entering the waste wood stockpile/chipping area.

38. The Licencee shall construct the waste wood stockpile/chipping area in accordance with the design plans approved pursuant to Clause 37 of this Licence.

Construction – Construction and Demolition Waste Disposal Cell(s)

39. The Licencee shall, prior to the construction of the construction and demolition waste disposal cells, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.

40. The Licencee shall submit to the Director for approval at least 30 days prior to construction of the construction and demolition waste disposal cell(s) five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba shall address construction specifications of the construction and demolition waste disposal cell(s) and include, but not be limited to the following:

- a) engineering design with respect to construction of the construction and demolition waste disposal cell(s) base and sides;
- b) location of access road(s) to the construction and demolition waste disposal cell(s);
- c) details of the location of the construction and demolition waste disposal cell(s) with respect to property lines; and
- d) details of a drainage system to prevent storm water runoff from entering the construction and demolition waste disposal cell(s).

41. The Licencee shall construct the waste disposal cells in accordance with the design plans approved pursuant to Clause 40 of this Licence.

Construction – Compost Facility

42. The Licencee shall, prior to the construction of the compost facility, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.

43. The Licencee shall submit to the Director for approval at least 30 days prior to construction of the compost facility five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional

Engineers and Geoscientists of the Province of Manitoba shall address construction specifications of the compost facility and include, but not be limited to the following:

- a) engineering design with respect to construction of the compost facility;
- b) location of access road(s) to the compost facility;
- c) details of the location of the compost facility with respect to property lines;
- d) details of the compost facility drainage system;
- e) details of a drainage system to prevent storm water runoff from entering the compost facility;
and
- f) details of fencing around the compost facility.

44. The Licencee shall construct the compost facility in accordance with the design plans approved pursuant to Clause 43 of this Licence.

Construction – Storm Water Retention and Sedimentation Ponds

45. The Licencee shall, prior to the construction of the storm water retention and sedimentation ponds, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.

46. The Licencee shall submit to the Director for approval, at least 30 days prior to construction of the storm water retention and sedimentation ponds, five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, shall address construction specifications of the storm water retention and sedimentation ponds and include, but not be limited to the following:

- a) engineering design with respect to construction of the storm water retention and sedimentation ponds;
- b) location of access road(s) to the storm water retention and sedimentation ponds;
- c) details of the location of the storm water retention and sedimentation ponds with respect to property lines; and
- d) details of fencing around each stormwater and sedimentation pond.

47. The Licencee shall construct the storm water retention and sedimentation ponds in accordance with the design plans approved pursuant to Clause 46 of this Licence.

Construction – Waste Transfer Area

48. The Licencee shall submit to the Director for approval, at least 30 days prior to construction of the waste transfer area, five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, shall address construction specifications of the waste transfer area and include, but not be limited to the following:

- a) engineering design with respect to construction of the waste transfer area;
- b) location of access road(s) to the waste transfer area;
- c) details of the location of the waste transfer area with respect to property lines;
- d) details of the waste transfer area drainage system; and

e) details of a drainage system to prevent storm water runoff from entering the waste transfer area.

49. The Licencee shall construct the waste transfer area in accordance with the design plans approved pursuant to Clause 48 of this Licence.

Construction – Metals and Tires Storage Areas

50. The Licencee shall submit to the Director for approval, at least 30 days prior to construction of the metals and tires storage areas, five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, shall address construction specifications of the metals and tires storage areas and include, but not be limited to the following:

- a) engineering design with respect to construction of the metals and tires storage areas;
- b) location of access road(s) to the metals and tires storage areas; and
- c) details of the location of the metals and tires storage areas with respect to property lines.

50. The Licencee shall construct the metals and tires storage areas in accordance with the design plans approved pursuant to Clause 50 of this Licence.

Construction – Weigh Scale

52. The Licencee shall submit to the Director for approval, at least 30 days prior to construction of the weigh scale, five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, shall address construction specifications of the weigh scale and include, but not be limited to the following:

- a) access road(s) to the weigh scale; and
- b) details of the location of the weigh scale with respect to property lines.

53. The Licencee shall construct the weigh scale in accordance with the design plans approved pursuant to Clause 52 of this Licence.

Construction – Cover Material Stockpile Area

54. The Licencee shall submit to the Director for approval, at least 30 days prior to construction of the cover material stockpile area, five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, shall address construction specifications of the cover material stockpile area and include, but not be limited to the following:

- a) access road(s) to the cover material stockpile area;
- b) details of the location of the cover material stockpile area with respect to property lines;
- c) details of the cover material stockpile area drainage system; and
- d) details of a drainage system to prevent storm water runoff from entering the cover material stockpile area.

55. The Licencee shall construct the cover material stockpile area in accordance with the design plans approved pursuant to Clause 54 of this Licence.

Operation – General

56. The Licencee shall not burn waste at the Development unless otherwise approved by the Director.

57. Unless otherwise approved by the Director, the Licencee shall not accept the following wastes at the Development:

- a) liquid industrial waste;
- b) liquid waste;
- c) dead livestock;
- d) biomedical waste;
- e) radioactive waste or materials;
- f) unbagged asbestos;
- g) soils or sediments containing contaminants at concentrations in excess of the criteria specified for industrial occupancy in the Canadian Council of Ministers of the Environment (CCME), Environmental Quality Guidelines (latest edition), and the CCME Canada Wide Standards; and
- h) hazardous wastes.

58. Notwithstanding Clause 57:

- a) dead animals such as dogs or cats may be received at the Development provided that they are buried immediately with a minimum of one meter of earthen cover; and
- b) liquid waste such as that collected from hydro-vac trucks and grit chambers may be received at the Development provided that the liquid waste is directed to the de-watering pond, which the Licencee shall design, construct and operate in compliance with Schedule B of this licence.

59. The Licencee shall position adequate portable litter fences around the active area or such other locations where unloading and handling occurs.

60. The Licencee shall require that at minimum:

- a) an attendant is on duty at the scale at all times during hours of operation;
- b) gates are provided for all access locations to the site;
- c) the gates are kept locked when the attendants are not on duty or the Development is closed; and
- d) other attendants to direct traffic and operate heavy equipment are put on duty as necessary.

61. The Licencee shall, prior to operation of the Development, have in place an on site dust control program.

Operation – Existing Waste Disposal Cell

62. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited in the new waste disposal cell(s), a decommissioning plan for the existing waste disposal cell. The decommissioning plan shall address, but not be limited to:
- a) the closure of the existing waste disposal cell;
 - b) nuisance control at the existing waste disposal cell;
 - c) surface water management at the existing waste disposal cell;
 - d) landfill gas management at the existing waste disposal cell;
 - e) leachate management at the existing waste disposal cell after it has been closed;
 - f) monitoring and reporting; and
 - g) a timetable for implementation of the plan.
63. The Licencee shall not deposit any waste in the existing waste disposal cell at any time after waste has been deposited in the new waste disposal cells.

Operation – New Waste Disposal Cell(s)

64. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the Development, an operations manual for the operation of the new waste disposal cells. The operations manual shall address, but not be limited to:
- a) cell development and sequencing;
 - b) waste receiving, placement and covering;
 - c) nuisance control;
 - d) surface water management;
 - e) landfill gas management;
 - f) leachate management; and
 - g) monitoring and reporting.
65. The Licencee shall operate the new waste disposal cells in accordance with the operations manual approved pursuant to Clause 64 of this Licence.
66. The Licencee shall inspect the leachate collection system annually.
67. The Licencee shall, when waste is delivered directly to the active area, compact the wastes deposited in the active area and cover the waste daily with cover material.
68. The Licencee, upon a written request approved by the assigned Environment Officer, may, during extreme cold weather conditions, utilize temporary covering of wastes deposited in an active area. Such temporary covering material shall be replaced with permanent cover material when the extreme cold weather conditions cease.
69. The Licencee shall, where an increase in the slope of the final cover due to settlement, or erosion of the final cover occurs during the post-closure period, take remedial action to correct the situation and maintain the design slope.

70. The Licencee shall construct and maintain the final side slopes of the above ground deposit of waste, including final cover, in the new cell to not exceed one unit vertical to four units horizontal and the final top slope to not less than one unit vertical to 20 units horizontal.

Operation – Leachate Collection Pond(s)

71. The Licencee shall submit to the Director for approval, at least 30 days prior to the operation of the new waste disposal cells, an operations manual for the leachate collection pond(s). The operations manual shall address, but not be limited to:

- a) leachate management procedures;
- b) handling and treatment procedures; and
- c) inspection and maintenance.

72. The Licencee shall operate the leachate collection pond(s) in accordance with the operations manual approved pursuant to Clause 71 of this Licence.

73. The Licencee shall not recirculate leachate or contaminated water collected at the Development through the landfill cells

74. The Licencee shall not transport leachate or contaminated water from the Development unless approved by the Director.

75. The Licencee shall not implement any method of leachate treatment other than that prescribed in Clause 71 of this Licence, without receiving prior approval of the Director.

Operation – Waste Wood Stockpile/Chipping Area

76. The Licencee shall submit to the Director for approval, at least 30 days prior to the operation of the new waste disposal cells, an operations manual for the wood waste stockpile/chipping area. The operations manual shall address, but not be limited to:

- a) waste receiving and placement;
- b) nuisance control;
- c) surface water management;
- d) wood chip handling and processing procedures;
- e) inspection and maintenance; and
- f) monitoring and reporting.

77. The Licencee shall operate the wood waste stockpile/chipping area in accordance with the operations manual approved by the Director pursuant to Clause 76 of this Licence.

Operation – Construction and Demolition Waste Disposal Cell(s)

78. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the new waste disposal cells, an operations manual for the operation of the construction and demolition waste disposal cells. The operations manual shall address, but not be limited to:

- a) cell development and sequencing;
- b) waste receiving, placement and covering;
- c) nuisance control;
- d) surface water management;
- e) landfill gas management;
- f) leachate management; and
- g) monitoring and reporting.

79. The Licencee shall operate the construction and demolition waste disposal cells in accordance with the operations manual approved pursuant to Clause 78 of this Licence.
80. The Licencee shall inspect the leachate system annually.
81. The Licencee shall cover the construction and demolition wastes daily with cover material.
82. The Licencee, upon a written request approved by the assigned Environment Officer, may, during extreme cold weather conditions, utilize temporary covering of wastes deposited in an active area. Such temporary covering material shall be replaced with permanent cover material when the extreme cold weather conditions ceases.
83. The Licencee shall, where an increase in the slope of the final cover due to settlement, or erosion of the final cover occurs during the post-closure period, take remedial action to correct the situation and maintain the design slope.
84. The Licencee shall construct and maintain the final side slopes of the above ground deposit of waste, including final cover, in the waste cell to not exceed one unit vertical to four units horizontal and the final top slope to not less than one unit vertical to 20 units horizontal.

Operation – Compost Facility

85. The Licencee shall submit to the Director for approval at least 30 days before any wastes are deposited at the compost facility, an operations manual for the compost facility. The operations manual shall address, but not be limited to:
- a) waste receiving and placement;
 - b) nuisance control;
 - c) surface water management;
 - d) compost handling and treatment procedures;
 - e) inspection and maintenance;
 - f) leachate management; and
 - g) monitoring and reporting.
86. The Licencee shall operate the compost facility in accordance with the operations manual approved by the Director pursuant to Clause 85 of this Licence.
87. The Licencee shall not sell or make available to any third party compost generated at the development that does not achieve the quality requirements and specifications as contained in the

most recent edition of the Canadian Council of Ministers of the Environment publication entitled "*Guidelines for Compost Quality – PN1340*".

Operation – Storm Water Retention and Sedimentation Ponds

88. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the new waste disposal cells, an operations manual for the storm water retention and sedimentation ponds. The operations manual shall address, but not be limited to:
- a) surface water management;
 - b) pond inspection and maintenance; and
 - c) monitoring and reporting.
89. The Licencee shall operate the storm water retention and sedimentation ponds in accordance with the operations manual approved pursuant to Clause 88 of this Licence.

Operation – Waste Transfer Area

90. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the new waste disposal cells, an operations manual for the waste transfer area. The operations manual shall address, but not be limited to:
- a) hours of business;
 - b) types of waste to be received for recycling;
 - c) waste receiving and sorting;
 - d) nuisance control;
 - e) security;
 - f) monitoring and reporting; and
 - g) waste shipping.
91. The Licencee shall operate the waste transfer area in accordance with the operations manual approved pursuant to Clause 90 of this Licence.

Operation – Metals and Tires Storage Areas

92. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the new waste disposal cells an operations manual for the metals and tires storage areas. The operations manual shall address, but not be limited to:
- a) metals and tires receiving and placement;
 - b) nuisance control;
 - c) surface water management;
 - d) inspection and maintenance;
 - e) monitoring and reporting; and
 - f) waste shipping.
93. The Licencee shall operate the metals and tires storage areas in accordance with the operations manual approved pursuant to Clause 92 of this Licence.

94. The Licencee shall not store metals or tires for a period exceeding one year.

Operation – Weigh Scale

95. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the new waste disposal cells, an operations manual for the weigh scale. The operations manual shall address, but not be limited to:

- a) procedures for acceptance of waste;
- b) waste receiving and tipping fee recording;
- c) hot loads (loads that are smoking or visibly burning);
- d) waste inspection including procedures to detect radioactive materials;
- e) procedures for rejection of waste; and
- f) procedures for special wastes.

96. The Licencee shall operate the weigh scale in accordance with the operations manual approved pursuant to Clause 95 of this Licence.

Operation – Cover Material Stockpile Area

97. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at the new waste disposal cells, an operations manual for the cover material stockpile area. The operations manual shall address, but not be limited to:

- a) cover storage procedures;
- b) cover dust control;
- c) nuisance control; and
- d) surface water management.

98. The Licencee shall operate the cover material stockpile area in accordance with the operations manual approved pursuant to Clause 97 of this Licence.

Monitoring and Reporting – General

99. The Licencee shall submit to the Director for approval, at least 30 days before any wastes are deposited at any new waste disposal cells, an updated monitoring program for the Development. The monitoring program shall address, but not be limited to:

- a) background information on surface and groundwater quality prior to operation of the Development;
- b) ongoing monitoring during Development operation; and
- c) the frequency of monitoring.

100. The Licencee shall undertake the sampling and analysis of the background water quality for surface water and groundwater in accordance with the plan approved pursuant to Clause 99, of this Licence. Monitoring shall include the chemical and microbiological parameters listed in Table 1 to this Licence.

101. The Licencee shall compare the analytical results obtained for the sampling carried out pursuant to Clause 100 with the levels that were determined in the wells prior to the operation of the Development.
102. The Licencee shall develop a contingency plan to be implemented in the event that a monitoring program identifies any pollutant in surface or ground water, as a result of the operation of the Development, in excess of background levels. The plan shall be submitted to the Director for approval within 60 days of the date of this Licence.
103. Where the Licencee fails to undertake the monitoring program approved pursuant to Clause 100, of this Licence, the Director may cause such monitoring to be undertaken and recover the cost of such monitoring from the Licencee.
104. The Licencee shall inform the assigned Environment Officer whenever an odour complaint is received and provide to the Environment Officer a report on the incident, including information on what action was taken to resolve the concerns.
105. The Licencee shall report to the assigned Environment Officer all incidents requiring contingency plan action regarding groundwater or surface water pollution within 7 days from the occurrence of such incidents, including the nature of the incident, substances involved, the area affected, action taken and follow up action proposed to be taken.
106. The Licencee shall keep for inspection, records of all monitoring at the Development, at the City of Steinbach office and at the Development site office.

Monitoring and Reporting – Cells

107. The Licencee shall maintain records containing the following information:
 - a) the results of the analysis of the chemical and microbiological parameters listed in Table 1 to this Licence, from the monitoring wells; and
 - b) the monthly quantity of wastes deposited at the waste disposal cells.
108. The Licencee shall measure the volume of leachate produced monthly at each leachate sump in the cells and maintain records indicating the volume of leachate generated and how the leachate is to be disposed of or treated. The frequency of leachate measurement may be reviewed after 3 years.
109. The Licencee shall have available for inspection by the assigned Environment Officer upon request the records referred to in Clauses 107 and 108 of this Licence and shall provide annually to the Director a report summarizing the activities at the cells in the annual report pursuant to Clause 123 of this Licence.

Monitoring and Reporting – Leachate Pond

110. The Licencee shall undertake, at a frequency deemed appropriate by the Director, the sampling and analysis of water stored in the leachate pond, for the chemical and microbiological

parameters listed in Table 1 to this Licence, and shall maintain records of the results of all such analyses.

111. The Licencee shall have available for inspection by the assigned Environment Officer, upon request, the records referred to in Clause 110 of this Licence and shall provide annually to the Director a report summarizing the activities at the leachate ponds in the annual report pursuant to Clause 123 of this Licence.

Monitoring and Reporting – Waste Wood Stockpile/Chipping Area

112. The Licencee shall have available for inspection by the assigned Environment Officer, upon request, records containing the following information:
- a) the monthly quantity of waste wood received at the Development; either estimated or actual; and
 - b) the final end use destination of any waste wood removed.

Monitoring – Construction and Demolition Waste Disposal Cell(s)

113. The Licencee shall maintain records containing the following information:
- a) the results of the analysis of the chemical and microbiological parameters listed in Table 1 to this Licence, from the monitoring wells; and
 - b) the monthly quantity of wastes deposited at the waste disposal cells.
114. The Licencee shall have available for inspection by the assigned Environment Officer upon request the records referred to in Clause 113 of this Licence and shall provide annually to the Director a report summarizing the activities at the cell(s) in the annual report pursuant to Clause 123 of this Licence.

Monitoring and Reporting – Compost Facility

115. The Licencee shall maintain, at the operator's office, records of all wastes received at the compost facility. These records shall contain, but not be limited to the following:
- a) the date wastes were received at the compost facility;
 - b) the original location of any industrial source wastes; and
 - c) the volume received, either estimated or actual.
116. The Licencee shall maintain, at the operator's office, records of all waste or compost removed from the compost facility. These records shall contain, but not be limited to the following:
- a) the date the waste or compost were removed;
 - b) the volume removed;
 - c) the final end use destination of the waste or compost removed; and
 - d) any additional information as requested by the Director.
117. The Licencee shall have available for inspection by the assigned Environment Officer upon request the records referred to in Clauses 115 and 116 of this Licence and shall provide annually

to the Director a report summarizing the activities at the compost facility in the annual report pursuant to Clause 123 of this Licence.

Monitoring and Reporting – Storm Water Retention and Sedimentation Ponds

118. The Licencee shall undertake, at a frequency deemed appropriate by the Director, the sampling and analysis of water stored in the storm water retention and sedimentation ponds, for the chemical parameters listed in Table 2 of this Licence.
119. The Licencee shall have available for inspection by the assigned Environment Officer upon request the records referred to in Clause 118 of this Licence and shall provide annually to the Director a report summarizing the activities at the storm water retention pond in the annual report pursuant to Clause 123 of this Licence.

Monitoring and Reporting – Waste Transfer Area

120. The Licencee shall have available for inspection by the assigned Environment Officer, upon request, records containing the following information:
- a) the monthly quantity of recyclables received at the waste transfer area;
 - b) any incidents requiring action to be taken to implement nuisance control; and
 - c) any incidents requiring action to be taken with respect to security.

Monitoring and Reporting – Metals and Tires Storage Areas

121. The Licencee shall have available for inspection by the assigned Environment Officer, upon request, records containing the following information:
- a) the monthly quantity of metals and tires received at the metals and tires storage areas; either estimated or actual; and
 - b) the final end use destination of any metals or tires removed.

Monitoring and Reporting – Weigh Scale

122. The Licencee shall have available for inspection by the assigned Environment Officer, upon request, records containing the following information:
- a) the monthly quantity of incoming waste;
 - b) any incidents concerning delivery of unacceptable wastes; and
 - c) any incidents concerning wastes requiring special handling.

Annual Report

123. The Licencee shall, unless otherwise approved by the Director, on or before the 15th day of April of each year and beginning in 2011, submit to the Director an annual report with respect to all activities at the Development conducted pursuant to this Licence during the previous calendar year. The format of the report shall be approved by the Director and contain, as a minimum, the following information. The report shall be made available to the public by deposit at the City of Steinbach office and at the Development site office.

- a) the amount and type of each waste received and subsequently deposited in the waste cells;
- b) the volume of leachate produced at the Development and the final disposition of the leachate;
- c) the amount of wastes treated at the compost facility and a summary of the results of treated compost and the final disposition of the compost;
- d) a summary of the quantities of recyclables received at the recycling collection area and copies of all reports with respect to any incidents at the recycling collection area;
- e) a summary of the quantities of metals and tires received at the metals and tires storage areas and a summary of the final disposition of the metals and tires;
- f) the amount of liquid wastes received at the de-watering pond and copies of all reports with respect to any incidents at the de-watering pond;
- g) the amount of wastes received at the weigh scale and copies of all reports with respect to any incidents at the weigh scale;
- h) a summary of all citizen complaints about dust from the Development together with a report on each incident that includes information on what actions were taken to resolve the concerns;
- i) copies of all reports with respect to any incidents at the cover stockpile area;
- j) summary reports and details of all incidents that required implementation of the contingency plan;
- k) with respect to the groundwater well monitoring programmes:
 - i) the results for the monitoring wells of the analyses of the chemical and microbiological parameters listed in Table 1 of this Licence;
 - ii) an assessment of the results of the groundwater analyses;
 - iii) the date(s), exact place, and time(s) of sampling or measurements;
 - iv) the date(s) analyses were performed;
 - v) the individual(s) who performed the analyses;
 - vi) documentation to verify the appropriate certification of the laboratory used to perform the analyses; and
 - vii) quality assurance and quality control data;
- l) with respect to the surface water monitoring programmes:
 - i) the results for the surface water analyses of the chemical and microbiological parameters listed in Table 1 of this Licence;
 - ii) an assessment of the results of the surface water analyses;
 - iii) the date(s), exact place, and time(s) of sampling or measurements;
 - iv) the date(s) analyses were performed;
 - v) the individual(s) who performed the analyses;
 - vi) documentation to verify the appropriate certification of the laboratory used to perform the analyses; and
 - vii) quality assurance and quality control data; and
- m) with respect to the leachate monitoring programme:
 - i) the results for the leachate analyses;
 - ii) an assessment of the results of the leachate analyses;
 - iii) the date(s), exact place, and time(s) of sampling or measurements;
 - iv) the date(s) analyses were performed;
 - v) the individual(s) who performed the analyses;

- vi) documentation to verify the appropriate certification of the laboratory used to perform the analyses; and
 - vii) quality assurance and quality control data.
- n) with respect to the landfill gas management programme:
- i) an estimate of the volume of landfill gas released from the Development;
 - ii) a report on landfill gas management actions taken; and
 - iii) a report on proposed future landfill gas management actions.

Financial Assurance/Insurance

124. The Licencee shall 60 days before any wastes are deposited in the new waste disposal cell, provide to the Director confirmation of financial insurance coverage in the form of:

Environmental Impairment Liability insurance providing coverage subject to a minimum limit of \$1.0 million per occurrence or claim, including coverage for gradual, and sudden and accidental pollution. Coverage to include on-site and off-site clean up costs, and be placed with insurers satisfactory to the Province of Manitoba. The Province of Manitoba shall be added as an Additional Insured on the policy. The policy shall contain a clause stating that the Insurer will give Manitoba 60 days prior written notice in case of significant reduction in coverage or policy cancellation.

Contingency/Emergency Response Plans

125. The Licencee shall within 60 days of the date of issuance of this Licence submit, for the approval of the Director, a contingency plan relating to emergency planning and response at the Development. The plan shall be developed and maintained in accordance with the *Industrial Emergency Response Planning Guide* (MIAC September, 1996) or other equivalent standard approved by the Director.
126. The Licencee shall keep for inspection, records of the details of all incidents requiring the implementation of the contingency action plan at the Development, at the City of Steinbach office and at the Development site office.

Closure and Post Closure

127. The Licencee shall submit, within one year of the date of issuance of this Licence, for the approval of the Director, a Closure and Post Closure Plan for the Development. The plan shall address the closure of the existing waste disposal cell and provide a preliminary plan for the closure of the new waste disposal cell. The plan shall include, but not be limited to, information with respect to:
- a) final cover design and maintenance;
 - b) surface water management;
 - c) maintenance of leachate detection;
 - d) groundwater monitoring;
 - e) landfill gas monitoring; and
 - f) financial assurance/insurance required to implement the Plan.

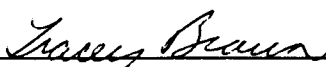
128. The Licencee shall submit for the approval of the Director, not less than one year prior to closure of the new waste disposal cell of the Development, an updated Closure and Post Closure Plan for the Development.
129. The Licencee shall implement and maintain the approved Closure and Post Closure Plan for the Development.

As-Constructed Drawings

130. The Licencee shall:
- a) prepare "as constructed drawings" for the Development and shall label the drawings "as Constructed"; and
 - b) provide to the Director, 30 days after completion of construction, two paper copies and one electronic copy of "as constructed" drawings of the waste disposal ground and all related facilities on the site of the Development.

REVIEW AND REVOCATION

- A. This Licence replaces Licence Numbers 2918 and 2918R which are 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 specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke 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 proposal pursuant to Section 11 of The Environment Act.
- D. The Financial Assurance/Insurance requirements of this Licence shall be reviewed, affirmed or amended by the Director at five-year intervals.



Tracey Braun, M. Sc.
Director
Environment Act

TABLE 1
TO ENVIRONMENT ACT LICENCE NO. 2918 RR
COMPREHENSIVE WATER QUALITY CHEMICAL
AND MICROBIOLOGICAL PARAMETERS

Parameter	Notes
Alkalinity-bicarbonate	Dissolved
Alkalinity-carbonate	Dissolved
Alkalinity-hydroxide	Dissolved
Alkalinity-total	Dissolved
Hardness- as CaCO ₃	Dissolved
pH-units	
Specific Conductivity	Dissolved
Turbidity-NTU	
Residue-filterable	
Residue-non filterable	
Residue-total	
Chloride	Dissolved
Sulphate	Dissolved
Cyanide-total	Dissolved
Ammonia	Dissolved
Nitrate-Nitrite-Nitrogen	Dissolved
Total Kjeldhal Nitrogen	
Phosphorus	Dissolved
Arsenic	Dissolved
Barium	Dissolved
Beryllium	Dissolved
Cadmium	Dissolved
Calcium	Dissolved
Chromium	Dissolved
Copper	Dissolved
Iron	Dissolved
Lead	Dissolved

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

**TABLE 1 (cont'd.)
TO ENVIRONMENT ACT LICENCE NO. 2918 RR
COMPREHENSIVE WATER QUALITY CHEMICAL
AND MICROBIOLOGICAL PARAMETERS**

Parameter	Notes
Magnesium	Dissolved
Manganese	Dissolved
Mercury	Extractable
Nickel	Dissolved
Potassium	Dissolved
Selenium	Dissolved
Silver	Dissolved
Sodium	Dissolved
Zinc	Dissolved
Naphthalene	
Benzo a pyrene	
Anthracene	
CCME Petroleum Hydrocarbon Fraction 1	
CCME Petroleum Hydrocarbon Fraction 2	
CCME Petroleum Hydrocarbon Fraction 3	
CCME Petroleum Hydrocarbon Fraction 4	
Leachable Lead	
Benzene	
Ethylbenzene	
Toluene	
Xylene	
Vinyl Chloride	
Diazinon	
2, 4-D	
Coliforms	Fecal & Total

**TABLE 2
TO ENVIRONMENT ACT LICENCE NO. 2918 RR**

**RUNOFF WATER QUALITY CHEMICAL
PARAMETERS**

Parameter	Notes
Alkalinity-bicarbonate	Dissolved
Alkalinity-carbonate	Dissolved
Alkalinity-hydroxide	Dissolved
Alkalinity-total	Dissolved
Hardness as CaCO ₃	Dissolved
pH-units	
Specific Conductivity	Dissolved
Turbidity-NTU	
Residue-filterable	
Residue-non filterable	
Residue-total	
Chloride	Dissolved
Sulphate	Dissolved
Cyanide-total	Dissolved
Ammonia	Dissolved
Nitrate-Nitrite-Nitrogen	Dissolved
Total Kjeldhal Nitrogen	
Phosphorus	Dissolved
Arsenic	Dissolved
Barium	Dissolved
Beryllium	Dissolved
Cadmium	Dissolved
Calcium	Dissolved
Chromium	Dissolved
Copper	Dissolved
Iron	Dissolved
Lead	Dissolved

**TABLE 2 (cont'd.)
TO ENVIRONMENT ACT LICENCE NO. 2918 RR**

**RUNOFF WATER QUALITY CHEMICAL
PARAMETERS**

Parameter	Notes
Magnesium	Dissolved
Manganese	Dissolved
Mercury	Dissolved
Nickel	Dissolved
Potassium	Dissolved
Selenium	Extractable
Sodium	Dissolved
Zinc	Dissolved

Schedule A to Environment Act Licence No. 2918 RR

Soil Sampling:

1. The Licencee 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 metres. 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 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 were 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: 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.

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Soil Testing Methods:

1. Triaxial Test Method

- a) The soil samples shall 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 shall have a minimum diameter of 70 mm (2.75 inches) and a minimum height of 70 mm (2.75 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 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 were the sample was taken, which ever is greater.
- c) The complete laboratory report, as outlined in ASTM D 5084, 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 D 2435 (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 D 2435, shall be supplied for each soil sample collected in the field.

Schedule B to Environment Act Licence No. 2918 RR

De-Watering pond:

1. The Licencee shall design and construct the de-watering pond as shown in the two drawings that were attachments to the letter from Dillon Consulting to the Director, Environmental Assessment and Licensing, dated November 2, 2010.
2. The Licencee shall, prior to the construction of the de-watering pond, remove all top soil to a minimum depth of 150 mm and store this top soil at a suitable location for future use.
3. The Licencee shall submit to the Director for approval, prior to construction of the de-watering pond, five paper copies and one electronic copy of engineering design plans. The engineering design plans, sealed by an engineer(s) registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, shall address construction specifications of the de-watering pond and include, but not be limited to the following:
 - a) engineering design with respect to construction of the de-watering pond;
 - b) location of access road(s) to the de-watering pond;
 - c) details of the location of the de-watering pond with respect to property lines; and
 - d) details of fencing around the de-watering pond.
4. The Licencee shall construct the de-watering pond in accordance with the design plans approved pursuant to Clause 3 of this Schedule.
5. The Licencee shall submit to the Director for approval at least 30 days before any liquid wastes are deposited in the de-watering pond, an operations manual for the de-watering pond. The operations manual shall address, but not be limited to:
 - a) liquid waste receiving and placement;
 - b) nuisance control;
 - c) liquid waste handling and treatment procedures;
 - d) inspection and maintenance; and
 - e) monitoring and reporting.
6. The Licencee shall operate the de-watering pond in accordance with the operations manual approved by the Director pursuant to Clause 5 of this Schedule.
7. The Licencee shall maintain, at the operator's office, records of all liquid wastes received at the de-watering pond. These records shall contain, but not be limited to the following:
 - a) the date liquid wastes were received at the de-watering pond;
 - b) the original location of any industrial source wastes; and
 - c) the volume received, either estimated or actual.

8. The Licencee shall maintain, at the operator's office, records of all liquid waste or solid residue removed from the de-watering pond. These records shall contain, but not be limited to the following:
 - a) the date the liquid waste or solid residue was removed;
 - b) the volumes removed;
 - c) the final end destination of the liquid waste or solid residue removed; and
 - d) any additional information as requested by the Director.

9. The Licencee shall have available for inspection by the assigned Environment Officer upon request the records referred to in Clauses 7 and 8 of this Schedule and shall provide annually to the Director a report summarizing the activities at the de-watering pond in the annual report pursuant to Clause 123 of the Licence Number 2918 RR.