



Conservation and Water Stewardship

Climate Change and Environmental Protection Division
Environmental Assessment and Licensing Branch
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CLIENT FILE NO.: 5553.00

March 6, 2012

Ben Hofer
Rock Lake Colony
Box 10
Grosse Isle MB R0C 1G0

Dear Mr. Hofer:

Enclosed is **Environment Act Licence No. 2996** dated March 6, 2012 issued in accordance with *The Environment Act* to **Rock Lake Holding Ltd.** for the construction and operation of the Development being a carbonizer to convert woody biomass to biocarbon and syngas (gasification plant) at SW 1-13-1 WPM in the Rural Municipality of Rockwood, in accordance with the Proposal dated November 22, 2011.

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 Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact Ryan Coulter, Environmental Engineer (204) 945-7023.

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. 2996 (*by the Licencee 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 March 20, 2012.

Rock Lake Holding Ltd.

Date

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

LICENCE

Licence No. / Licence n°

2996

Issue Date / Date de délivrance

March 6, 2012

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 10(1) / Conformément au Paragraphe 10(1)

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

ROCK LAKE HOLDING LTD.;
"the Licencee"

for the construction and operation of the Development being a carbonizer to convert woody biomass to biocarbon and syngas (gasification plant) at SW 1-13-1 WPM in the Rural Municipality of Rockwood, in accordance with the Proposal dated November 22, 2011, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"**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;

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

"**approved**" means approved by the Director or assigned Environment Officer in writing;

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

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

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

"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 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 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;

"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 a Development where pollutants are emitted to the atmosphere by means of a stack;

"**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; and

"**wastewater**" means any liquid containing a pollutant as defined in *The Environment Act*, associated with or resulting from the Development which is discharged into the environment.

GENERAL TERMS AND CONDITIONS

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.

1. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the Development, at all times.
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 pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants 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 pollutants from the Development; or
 - c) 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, in the event of a release, spill, leak, or discharge of a pollutant or contaminant in an amount or concentration, or at a level or rate of release, that exceeds the limit that is expressly provided under this Act, another Act of the Legislature, or an Act of Parliament, or in a regulation, licence, permit, order, instruction, directive or other approval or authorization issued or made under one of those Acts, immediately report the release, spill, leak, or discharge by calling

- 204-944-4888. The report shall indicate the nature of the release, leak, or discharge, the time and estimated duration of the event and the reason for the release, spill, leak, or discharge.
5. 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, soil, compost, and 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 format acceptable to the Director, within 60 days of the samples being taken.
 6. The Licencee shall carry out any remedial measures, modifications, or alterations, as deemed necessary by the Director, in respect to matters authorized under this Licence.
 7. 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 specified by the Director, and each submission shall be clearly labelled with the Licence Number and Client File Number associated with this Licence.
 8. The Licencee shall designate an employee, within 30 days of the date of issuance of this Licence, as the Licencee's Environmental Coordinator, whose job description will include assisting the Licencee in complying with the limits, terms and conditions in this Licence and assisting Senior Management of the Licencee to manage environmental issues at the Development. The name of the Environmental Coordinator shall be submitted in writing to the Director within 14 days of appointment.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Air Emissions – Limits

9. The Licencee shall not emit particulate matter from the Development such that:
 - a) particulate matter:
 - 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 Development;
 - ii) exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or

- iii) results in the deposition of visible particulate residue at any time beyond the property line of the Development; or
 - b) opacity from any point source of the Development 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.
10. 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.
11. 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.

Respecting Fugitive Air Pollution Control

12. The Licencee shall control, by methods acceptable to the Director, the entrainment of particulate matter into the air at the Development resulting from the operation of vehicles or the transportation, storage or handling of woody biomass and/or biocarbon.

Respecting Air Pollution Control Devices

13. The Licencee shall direct all air streams, which contain a pollutant(s) of concern to the Director, to a pollution control device which has been designed for and demonstrated to be capable of reducing, altering, eliminating or otherwise treating the pollutant(s).
14. The Licencee shall submit for the Director's approval, within 90 days of the issuance of this Licence, a standard operating procedural manual and a maintenance schedule for each air emission pollution control device based on the manufacturer's specifications and recommendations.
15. The Licencee, upon receiving the Director's approval as required in Clause 14 of this Licence, shall not operate any process directing an emission to an air pollution control device at the Development unless:
- a) the operating and maintenance measures and status of the device are in full compliance with the approved procedures and timetables;
 - b) all emissions from the process are directed to the fully operational air pollution control device;
 - c) all discharges of treated emissions from the air pollution control devices are immediately directed to a stack; and
 - d) the emissions do not contain concentrations of pollutants which:

- i) are in violation of any other applicable legal instrument including an Act, Regulation or by-law; or
 - ii) otherwise create a significant negative environmental or health impact in the affected area.
16. The Licencee shall maintain a log book of the most recent 24 month period to record any downtime of an air pollution control device due to either the breakdown or maintenance of that air pollution control device. The log book shall be kept at the Development and shall be available upon request for inspection by an Environment Officer. The log book shall record, at minimum, the following information:
- a) identification of the air pollution control device and the process(es) it serves;
 - b) time/date of log entry;
 - c) nature of event;
 - d) duration of event;
 - e) the accumulated downtime of this air pollution control device for the events for each calendar year; and
 - f) signature of the Environmental Coordinator.
17. The Licencee shall handle, store and dispose of all pollutants collected by the air pollution control equipment in a manner suitable to their characterization as type of waste or dangerous good.

Respecting Air Emissions – Sampling, Analysis, Reporting

18. The Licencee shall provide a stack or stacks at the carbonizer at the Development including all necessary sampling facilities for the sampling of air emissions at the Development. The stack or stacks shall be provided:
- a) at a location(s) and within a time frame satisfactory to the Director; and
 - b) to the specifications and in accordance with the most recent version of Manitoba Conservation Guideline, *Guideline for Stack Sampling Facilities*, unless otherwise approved by the Director.
19. The Licencee, within 30 days of the date of this Licence, and at any other time as requested by the Director, shall submit a detailed plan which is acceptable to and approved by the Director, for the sampling and analysis of potential air pollutants, released as stationary point and fugitive emissions, including any compounds determined by the Director. The plan shall identify the rationale for the sampling, the ways and means by which the sampling program will be implemented including any special measures or methods which would be necessitated by influencing factors such as unfavourable weather conditions, the need for large or additional sample volumes, the need for multiple sampling runs, the methods used for the sampling and the analysis for each compound, the detection level to be attained, a comprehensive QA/QC program, and other items as may be identified by the Director.

20. The Licencee shall perform all stack sampling in accordance with the most recent version of Manitoba Conservation Report No. 96-07, *Interim Stack Sampling Performance Protocol*, unless otherwise approved by the Director.
21. The Licencee shall arrange the scheduling of the sampling plan, approved pursuant to Clause 18 of this Licence, such that a representative of Manitoba Conservation and Water Stewardship is available to monitor and audit the implementation of the sampling program.
22. The Licencee shall complete the sampling of emissions according to the approved plan submitted pursuant to Clause 19 of this Licence, within a timeframe to be determined by the Director.
23. The Licencee shall submit a report, for the approval of the Director, of the completed sampling and analysis plan approved pursuant to Clause 19 of this Licence, within 60 days of the receipt of the analytical results of that sampling plan. The report shall contain at minimum:
 - a) the raw data collected;
 - b) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
 - c) a discussion of the significance of the data gathered with specific attention to:
 - i) the significance for potential acute and chronic impacts to health or environment from exposure to concentrations of the compounds detected;
 - ii) the need for risk assessment of the impact of emissions;
 - iii) the need for the establishment of ambient air monitoring stations;
 - iv) the need for dispersion modeling of emissions;
 - v) results and conclusions of the QA/QC program; and
 - vi) other issues as may be determined by the Director.
24. The Licencee, upon the written request of and in a timeframe stipulated by the Director, shall comply with any air emission or ambient air quality criteria specified by the Director for any pollutant of concern to the Director which has been identified pursuant to Clauses 3, 13, or 23 of this Licence.

Respecting Air Dispersion Modelling of Emissions

24. The Licencee shall submit, upon the request and for the approval of the Director, a proposal for the air dispersion modelling of all emissions from the Development such that any health, environmental or nuisance impact is assessed.
25. The Licencee shall submit, within a time frame stipulated by the Director, a report discussing the results of the air dispersion modelling performed in accordance with the proposal approved pursuant to Clause 24 of this Licence.

Respecting Chemical Storage and Spill Containment

26. The Licencee shall provide containment for all vessels containing chemicals and in each area of the development where the chemicals are stored, loaded, transferred, used or otherwise handled, in compliance with the National Fire Code of Canada (2010), or any future amendment thereof, such that any product leakage or spillage and any contaminated liquid generated is contained within the Development and contamination of groundwater and surface water is prevented.
27. The Licencee shall, in a manner approved by the Director, remove and dispose of all spilled dangerous goods.

Respecting Feedstock Receipt, Storage, and Processing

28. The Licencee shall only accept at the Development natural plant material as feedstock material which is intended for processing.
29. The Licencee shall only store or accumulate at the Development natural plant material as feedstock material which is intended for processing.
30. The Licencee shall only process natural plant material in the gasification plant.
31. The Licencee shall not accept dangerous goods or hazardous waste at the Development, at any time.
32. The Licencee, notwithstanding Clause 31 of this Licence, shall remove all dangerous goods or hazardous waste from the feedstock material prior to processing, and shall properly segregate, store and dispose of the dangerous goods in a manner approved in writing by the Director.
33. The Licencee shall not store any feedstock material within 100 metres of a surface watercourse, surface water body, spring, or well.
34. The Licencee shall not accept biomedical waste at the Development at any time.
35. The Licencee shall not allow litter beyond the property boundaries of the Development resulting from the transportation, storage or processing of feedstock material at the Development.

Respecting Feedstock Material Recordkeeping

36. The Licencee shall account for and record all feedstock material received at the Development on a 24 hour basis and shall maintain the most recent 24 months of records at the development. This 24 hour period shall begin at 12:00 am. The record shall identify for each day that feedstock material is received:
 - a) the type of feedstock material received;
 - b) the date of receipt of the feedstock material; and

- c) the 24 hour period gross mass of the feedstock material received in tonnes.
37. The Licencee shall account for and record all feedstock material gasified at the Development on a 24 hour basis and shall maintain the most recent 24 months of records at the development. This 24 hour period shall begin at 12:00 am. The record shall identify for each day that feedstock material is processed:
- a) the type of feedstock material processed;
 - b) the date of processing of the feedstock material; and
 - c) the 24 hour period gross mass of the feedstock material gasified in tonnes.
38. The Licencee shall submit to the Director, upon written request of the Director, monthly summaries of the information required by Clauses 36 and 37 of this Licence by the last day of the following month.

Respecting Waste

39. The Licencee shall collect and contain all liquid condensate generated at the Development in a manner that does not allow pollution of soil, surface water, or groundwater.
40. The Licencee shall dispose of liquid condensate in a manner acceptable to the Director.
41. The Licencee shall dispose of all solid waste at a waste disposal ground operating either under a permit issued pursuant to *Manitoba Regulation 150/91* respecting *Waste Disposal Grounds*, or any future amendment thereof, or a Licence issued pursuant to *The Environment Act*.

Respecting Emergencies

42. The Licencee shall, within 60 days of the issue date of this licence, submit to the Director an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety emergency planning guidelines.

REVIEW AND REVOCATION

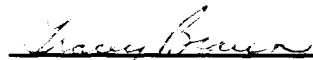
- A. This Licence will be reviewed the later of the following:
- a) within one year of the date of this Licence; or
 - b) at such time that Rock Lake Holding Ltd. assumes full responsibility for the Development from Manitoba Hydro; at which time it may be amended or revoked
- B. If in the opinion of 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.

Rock Lake Holding Ltd.

Licence No. 2996

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- C. If the Licencee has not commenced construction of the Development within three years of the date of this Licence, the Licence is revoked.
- D. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions set out in this Licence, the Director may require the filing of a new proposal pursuant to the Environment Act.



Tracey Braun, M.Sc.

Director

Environment Act

Client File No.: 5553.00