



Conservation and Water Stewardship

Climate Change and Environmental Protection Division
Environmental Approvals Branch
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CLIENT FILE NO.: 5093.00

May 16, 2012

Sher Follett
Husky Oil Limited
707 – 8th Avenue SW
Calgary AB T2P 3G7

Dear Ms. Follett:


Enclosed is **revised Environment Act Licence No. 2698 R** dated May 16, 2012 issued to **Husky Oil Limited** for the operation of the Development being an ethanol and distillers dried grain with soluble products manufacturing plant in the Town of Minnedosa, in accordance with the Proposal filed under *The Environment Act* on April 22, 2005, amended on September 20, 2005 and the additional information submitted on October 17, 2011 and February 3, 2012.

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) 945-1923.

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 Compliance and Enforcement
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 2698 R (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 May 30, 2012.

Husky Oil Ltd.

Date

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

LICENCE

Licence No. / Licence n° 2698 R

Issue Date / Date de délivrance May 16, 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 :

HUSKY OIL LIMITED;
"the Licencee"

for the operation of the Development being an ethanol and distillers dried grain with soluble products manufacturing plant, to be located in Parcel 1: Parcel 3 Plan 5222 NLTO in NW ¼ of Section 2, the NE ¼ of Section 3, the SE ¼ of Section 10, and the SW ¼ of Section 11-15-18 WPM; Parcel 2: Parcel 1 Plan 5222 NLTO in NW ¼ of Section 2, NE ¼ of Section 3, SE ¼ of Section 10 and the SW ¼ of 11-15-18 WPM; Parcel 3: Parcel 2 Plan 5222 NLTO in NW ¼ of Section 2, NE ¼ of Section 3, SE ¼ of Section 10 and SW ¼ of 11-15-18 WPM; Parcel 4: Parcel 4 Plan 5222 NLTO in NW ¼ of Section 2, NE ¼ of Section 3, SE ¼ of Section 10 and SW ¼ of 11-15-18 WPM; Parcels 8 to 11 and 13, Plan 5222 NLTO in NW ¼ of Section 2, NE ¼ of Section 3, SE ¼ of Section 10 and SW ¼ 11-15-18 WPM in the Town of Minnedosa, in accordance with the Proposal filed under *The Environment Act* on April 27, 2005, amended on September 20, 2005 and the additional information submitted on October 17, 2011 and February 3, 2012 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;

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

"baghouse" means a chamber containing fabric filter bags that remove particles from stack exhaust gases;

"boiler" means any combustion equipment fired with fossil fuel, biomass or a by-product derived from fossil fuel, for the purpose of generating hot water or steam;

"CCME" means Canadian Council of Ministers of the Environment;

"CO" means carbon monoxide;

"DDGS" means distillers dried grain with solubles;

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

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

"ethanol absorption column" means a two-staged packed column designed to recover ethanol from the gas streams from the fermentation and distillation areas;

"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;

"NO_x" means oxides of nitrogen, including nitric oxide (NO) and nitrogen dioxide (NO₂), expressed collectively as a nitrogen dioxide equivalent;

"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;

"organic compounds" means chemical compounds containing carbon combined with hydrogen, and often also with oxygen, nitrogen and other elements;

"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;

"permanent anhydrous ammonia tank(s)" means any storage container certified for the storage of anhydrous ammonia which is attached to a fixed supporting structure;

"PM₁₀" means particulate matter that is 10 micrometres (μm) or less in diameter;

"PM_{2.5}" means particulate matter that is 2.5 micrometres (μm) or less in diameter;

"point source" means any point of emission from a Development where pollutants are emitted to the atmosphere by means of a stack;

"ppm" means parts per million;

"QA/QC" means quality analysis/quality control;

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

"specific gravity" means the density of a substance relative to the density of water;

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

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

"thermal oxidizer" means an enclosed combustion device for destroying organic compounds in the gas stream in the DDGS;

"TPM" means total particulate matter;

"VOCs" means volatile organic compounds; and

"volatile organic compounds" means any organic compound which participates in atmospheric photochemical reactions, excluding methane, ethane, 1,1,1-trichloroethane, methylene chloride, chlorofluorocarbons, fluorocarbons, hydrochlorofluorocarbons.

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 and 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 pollutant(s) 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 60 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 Waste Stillage and Liquid Wastes Disposal

9. The Licencee shall dispose of any waste stillage from the Development in accordance with the provisions of *The Environment Act* and the regulations issued thereunder.
10. The Licencee shall direct all liquid wastes from the DDGS production process to the Town of Minnedosa wastewater collection system.

Respecting Post Construction Assessment of Surface Drainage Impacts

11. The Licencee shall, after the completion of construction of the Development;
 - a) inspect the sites where work occurred to evaluate the effectiveness of erosion control and sediment control measures and the physical stability of roadside ditches and watercourse crossings; and
 - b) where the inspections identify any problems, immediately take appropriate action to rectify the situation and advise the Department of Fisheries and Oceans – Dauphin District of the situation and any corrective measures taken.

Respecting Air Pollution Control Devices

12. 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).
13. The Licencee 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.
14. 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.

15. 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

16. 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) particulate matter from any point source with an opacity that equals or exceeds:
 - i) 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
 - ii) 20 percent for more than 16 individual opacity observations within any 1 hour period; or
 - iii) 40 percent for any individual opacity observation.

17. The Licencee shall not emit ammonia from the Development such that the ambient concentration of ammonia in air is in excess of:

- a) 10 parts per million at any time when measured at any point beyond the property line of the Development; or
- b) 2 parts per million as an 1-hour average when measured at any point beyond the property line of the Development.

18. The Licencee shall not allow airborne emissions from the DDGS production process to impact any public roadway beyond the Development property boundaries such that a safety hazard is created.

19. 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.

20. 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.
21. The Licencee shall not emit from any boiler at the Development:
 - a) nitrogen oxides (NO_x) in excess of 40 grams per gigajoule of energy input (g/GJ_i), on a higher heating value basis; and
 - b) carbon monoxide (CO) in excess of 125 grams per gigajoule of energy input (g/GJ_i); on a higher heating value basis.
22. The Licencee shall not emit VOCs from the DDGS dryer at a rate greater than 0.32 g/s.
23. The Licencee shall not emit VOCs from the ethanol absorber column in excess of 52 tonnes/year.
24. The Licencee shall install, calibrate, maintain and operate the integrated thermal oxidizer according to manufacturer's specifications and shall install, calibrate, maintain and operate a temperature indicating transmitter on the exhaust stack, the steam loop and the burner.
25. The Licencee shall operate the integrated thermal oxidizer in the temperature range of 800°C to 880°C.
26. The Licencee shall install, calibrate, maintain and operate the ethanol absorption column according to manufacturer's specifications and shall install, calibrate, maintain and operate temperature indicators to monitor the temperature of the liquid streams in the ethanol absorber. The ethanol absorber column shall be operated so that the temperature of the condensate stream entering the ethanol absorber is maintained between 12°C and 30°C.
27. The Licencee shall conduct the following air emission testing, after reaching normal operation and annually thereafter, unless otherwise approved by the Director, to demonstrate compliance with air emission limits using standardized methodologies:
 - a) boiler: NO_x , CO;
 - b) ethanol absorption column: VOC; and
 - c) DDGS dryer: VOC, NO_x , CO.
28. The Licencee shall conduct the following air emission testing every three years beginning in 2014, unless otherwise approved by the Director, to demonstrate compliance with air emission limits using standardized methodologies:
 - a) boiler: TPM;
 - b) bag houses: TPM;
 - c) DDGS dryer: TPM.
29. The Licencee shall provide an annual report on air emissions to the Director for the following parameters:

- a) total particulate matter (TPM), NO_x, CO, VOC; and
 - b) greenhouse gas emissions (as individual species and as CO₂ (equivalent)):
- The emissions should be subdivided into the categories of fermentation emissions and combustion emissions.

Respecting Maintenance and Operation

30. The Licencee shall operate and maintain storage tanks (including ethanol shift A; ethanol shift B; recycle; denaturant; ethanol storage A; ethanol storage B) not specifically exempted by Section 2.2 (Exemptions) of the Canadian Council of Ministers of the Environment (CCME) document *Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks* (CCME-EPC-87E), to conform with Part 4 (Requirements) and Part 5 (Specifications) of this CCME document.
31. The Licencee shall inspect and keep records for those tanks not specifically exempted by Section 2.2 (Exemptions) of the Canadian Council of Ministers of the Environment (CCME) document "*Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks*" (CCME-EPC-87E), to conform with Part 6 (Inspections) and Part 7 (Record Keeping) of this CCME document.

Respecting Air Emissions – Monitoring, Source Sampling, Analysis, Reporting

32. The Licencee shall provide and maintain a stack or stacks 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.
33. The Licencee, upon a written request from the Director, shall submit a detailed plan for any area of the Development 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.
34. 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.

35. The Licencee shall arrange the scheduling of the sampling program approved pursuant to Clause 33 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.
36. The Licencee shall complete the sampling of emissions according to the approved plan submitted pursuant to Clause 33 of this Licence, within a timeframe to be determined by the Director.
37. The Licencee shall submit a report, for the approval of the Director, of the completed sampling and analysis plan approved pursuant to Clause 33 of this Licence, within 90 days of the receipt of the analytical results of that sampling plan. The report shall contain at minimum:
 - a) the raw data collected;
 - b) calculation of emission rates for all parameters;
 - c) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
 - d) 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 O/A/Q/C program; and
 - vi) other issues as may be determined by the Director.

Respecting Chemical Storage and Spill Containment

38. The Licencee shall install and maintain, for all chemical storage structure(s), an automatic system(s) for fire detection and security.
39. The Licencee shall construct and maintain concrete floors with a minimum 10 cm retention curbing around the perimeter of all chemical structure(s) so as to prevent spilled liquids from leaking into the soil.
40. The Licencee shall contain on the Development:
 - a) any on-site chemical spill;
 - b) waste water generated from any response action due to an on-site release of chemicals; and
 - c) contaminated water resulting from the extinguishing of any fire involving chemicals.
41. The Licencee shall provide containment within any curbed chemical tank farm storage area for a volume of liquid equal to 110% of the volume of the largest storage tank located therein.

42. The Licencee shall maintain the containment area volume capacity in Clause 41 of this Licence by the immediate removal and disposal, in a manner approved by the Director, of all accumulated fluids.
43. The Licencee shall comply with all the applicable requirements of:
- Manitoba Regulation 188/2001, or any future amendment thereof, respecting the *Storage and Handling of Petroleum Products and Allied Products*;
 - The Dangerous Goods Handling and Transportation Act*, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the Development; and
 - the Office of the Fire Commissioner – Province of Manitoba.
44. 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.

Respecting Emergency Response Planning

45. The Licencee shall implement and maintain the approved Emergency Response Plan for the Development.

Respecting Anhydrous Ammonia Setback Distances

46. The Licencee shall not locate any permanent anhydrous ammonia tank(s) used for the on-site storage of ammonia prior to redistribution, within:
- 800 metres of residential areas, schools, hospitals or other institutions;
 - 100 metres of a single isolated residence; or
 - 100 metres of the edge of the right of way of a highway.

Respecting Closure and Post Closure Plan

47. The Licencee shall submit, within six months of the date of issuance of this Licence, for the approval of the Director, a Preliminary Closure and Post Closure Plan for the Development outlining the methods and procedures to be initiated at the decommissioning of the Development. The plan shall include, but not be limited to, information with respect to:
- removal of all ancillary equipment associated with the Development;
 - ground water monitoring; and
 - restoration of the site to the satisfaction of the Director.
48. The Licencee shall submit for the approval of the Director, within one year prior to imminent closure of the Development, a formal detailed Closure and Post Closure Plan for the Development.

49. The Licencee shall implement and maintain the approved Closure and Post Closure Plan for the Development.

REVIEW AND REVOCATION

- A. This Licence replaces Licence No. 2698 which is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the 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 10 of The Environment Act.

File: 5093.00


Tracey Braun, M.Sc.
Director
Environment Act

Rescinded