

Husky Oil Operations Limited

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Aug 17, 2018

Manitoba Sustainable Development
Environmental Approvals
1007 Century Street
Winnipeg, MB R3H 0W4

Attn: Director Tracey Braun
Tracey.Braun@gov.mb.ca

**Re: Husky Oil Operations Limited
Pounder Emulsions Springfield Facility
Manitoba Conservation Licence No. 2540
Proposed Alterations for Polymer Modified Asphalt and Boiler Upgrade Projects**

Dear Director Braun,

In accordance to Section 43 of the Licence No. 2540 issued by Manitoba Conservation to Husky Oil Operations Limited (Husky) for the operation of the Pounder Emulsions Asphalt Cement Terminal and Asphalt Emulsion Blending Facility located in Springfield, Manitoba, Husky hereby requests regulatory approval to complete the proposed facility alterations associated with the Polymer Modified Asphalt (PMA) and Boiler Upgrade Projects described below.

PMA Project Description

To satisfy the growing market demand for Polymer Modified Asphalt, Husky is proposing an upgrade to its Pounder Emulsions Springfield facility to enable PMA production at the site by 2019.

PMA is produced by blending small amounts of polymer pellets and sulphur pellets with straight-run asphalt in a mixer/mill. The main new components of the project are the following:

- Blending skid for polymer and sulphur pellet mixing with straight-run asphalt;
- Two 2,000 bbl (318 m³) heated PMA storage tanks (Tanks XX and YY); and
- One natural gas fired Hot Oil Heater with a capacity of 5 MMBtu/h.

The proposed blending skid will deliver batch production of PMA by mixing the polymer and sulphur pellets with straight-run asphalt. The straight-run asphalt will be heated via an in-line exchanger to the temperature required for optimal mixing, and will be sent to the mill to be blended with the pellets. The dry polymer pellets and sulphur pellets will be transferred from bags to hoppers to be conveyed into the mill. All components will then be blended and the resulting PMA product will be sent to storage tanks prior to loading for sale purposes.

The two new PMA storage tanks, each having a capacity of 2,000 bbl (318 m³), will be heated at 175 to 190°C, and the PMA will be mixed via tank mixers to ensure the PMA remains homogenous and does not go off specification or harden. Due to the growing market demand for PMA, in addition to the two new storage tanks, six existing 1,000 bbl (159 m³) tanks currently in straight-run asphalt service will also be used to store PMA.

The project will include the installation of one natural gas fired Hot Oil Heater with a capacity of 5 MMBtu/h. This heater will heat thermal oil which is used for heating PMA within tanks and heat-tracing process lines associated with this project. The hot thermal oil will be circulated in a closed loop by electric pumps.

The existing tanks WPG71 and WPG74 have been decommissioned and removed from the site to make room for the construction of the PMA blending skid building, polymer storage building, and Hot Oil Heater building. The PMA project construction is proposed to begin in Q3 2018, with expected commercial production by Q2 2019.

A plot plan showing the location of the new equipment associated with the proposed PMA project is attached.

Boiler Upgrade Project Description

Husky is also proposing a project to increase steam capacity and eliminate the periodic need for using a rental boiler at the Pounder Emulsions Springfield facility. This project includes the installation of two natural gas fired boilers, each having a capacity of 5 MMBtu/h, to replace the existing natural gas fired boiler and diesel fired rental boiler, each having a capacity of 4.2 MMBtu/h. Consequently, the proposed net increase in steam capacity will be minimal: $2 \times 5 \text{ MMBtu/h} - 2 \times 4.2 \text{ MMBtu/h} = +1.6 \text{ MMBtu/h}$.

The installation of the two new natural gas fired boilers is proposed for 2018, with the project completion by Q2 2019.

Environmental Impact and Mitigation

With respect to air emissions, the proposed PMA and boiler upgrade projects will result in no change in the nature of emissions compared to the current operations at the Pounder Emulsions Springfield facility.

The proposed blending skid associated with the PMA project will be a very minimal source of particulate matter (PM) emissions. To mitigate the PM emissions associated with the handling facility operation, the polymer and sulphur pellets will be transferred from bags into the hopper with minimal free fall as

to minimize any dust generation. In addition, the skid unit is contained within an enclosed building to also minimize dust migration.

Similarly to the current asphalt truck loading operations at the Pounder Emulsions Springfield facility, the PMA transfer from storage tanks to tanker trucks will be equipped with a vapour recovery system, which prevents the concentrated release of odourous volatile organic compounds and reduced sulphur species such as hydrogen sulphide, carbonyl sulphide, carbon disulphide, and various mercaptans.

For asphalt spill containment, due to the self-sealing/hardening nature of asphalt products, a gravel/sand base has been proposed for the two new PMA storage tanks. The monitoring program for the proposed tanks will be in alignment with that of the existing asphalt storage tanks at the facility.

Since the new Hot Oil Heater and boilers are stationary combustion sources fuelled by sales-grade natural gas, their main air pollutants emitted will be nitrogen oxides (NOx), carbon monoxide (CO) and particulate matter (PM). The table below presents a comparison between the existing and future air emissions from stationary combustion sources at the Pounder Emulsions Springfield facility. The incremental increases in pollutant emissions after the completion of the proposed projects are estimated to be nominal: 0.25 kg/h of NOx emissions, 0.41 kg/h of CO emissions, and 0.01 kg/h of PM emissions.

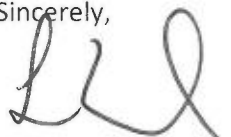
All proposed equipment installation will occur within the current fenced facility limits, in an area that is only available for industrial activity, with no land-use impact outside the facility limits.

Following the projects' regulatory approval and subsequent construction, all relevant procedures and monitoring programs related to the operation and maintenance of the new mill house and PMA storage tanks will be updated to reflect the facility's operation at that time. The Emergency Response Plan will also be updated to reflect the new equipment and additional storage of PMA asphalt onsite.

Once the PMA and boiler upgrade projects are commissioned, Husky will continue to operate the Pounder Emulsions Springfield facility in full compliance with the requirements of the existing Licence No. 2540 issued pursuant The Manitoba Environment Act. Historically, the facility has consistently shown a strong environmental performance by having no community complaints of noise or odour nuisance and no licence noncompliance incidents.

Please confirm the receipt of Husky's notification on the proposed alterations and contact me with any questions in regards to this letter at 306-955-7924.

Sincerely,



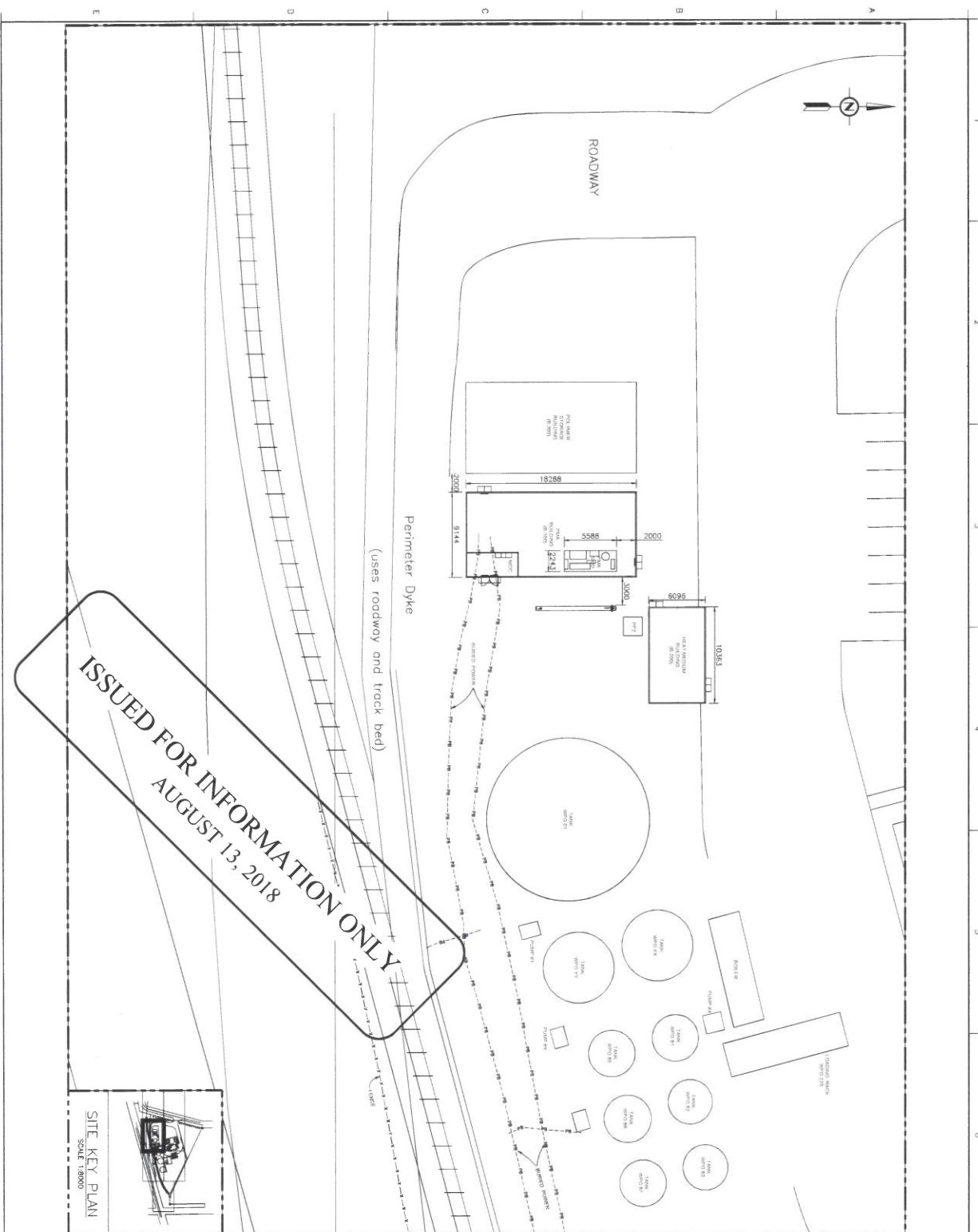
Tristan Koroscil, P.Eng.
Engineering Manager, Pounder Emulsions Operations
Husky Oil Operations Limited
Tel: 306-955-7924
Tristan.Koroscil@huskyenergy.com

Air Pollutant Emissions from Stationary Combustion Sources at the Pounder Emulsions Springfield Facility

Equipment Unit	Capacity (MMBtu/h)	Fuel Type	Fuel Consumption (MMBtu/h)	Pollutant Emission Factors (kg/MMBtu of Energy Input)			Pollutant Emissions (kg/h)		
				NOx	CO	PM	NOx	CO	PM
Existing Hot Oil Heater #1	5.0	Natural Gas	6.2	0.044	0.037	0.003	0.273	0.229	0.019
Existing Hot Oil Heater #2	5.0	Natural Gas	6.2	0.044	0.037	0.003	0.273	0.229	0.019
Existing Boiler	4.2	Natural Gas	5.2	0.044	0.037	0.003	0.229	0.192	0.016
Rental Boiler	4.2	Diesel	5.2	0.065	0.016	0.006	0.338	0.083	0.031
Total Existing Emissions	-	-	-	-	-	-	1.113	0.733	0.085
New Hot Oil Heater #3	5.0	Natural Gas	6.2	0.044	0.037	0.003	0.273	0.229	0.019
New Boiler #1	5.0	Natural Gas	6.2	0.044	0.037	0.003	0.273	0.229	0.019
New Boiler #2	5.0	Natural Gas	6.2	0.044	0.037	0.003	0.273	0.229	0.019
Total Future Emissions	-	-	-	-	-	-	1.365	1.145	0.095
Emission Change	-	-	-	-	-	-	0.252	0.412	0.010

Notes:

- 1) Pollutant emission factors for natural gas combustion in small uncontrolled boilers and heaters are taken from Tables 1.4-1 and 1.4-2 in Section 1.4 Natural Gas Combustion (<https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf>) of the AP-42 Compilation of Air Pollutant Emission Factors published by the United States Environmental Protection Agency.
- 2) Pollutant emission factors for diesel combustion in small uncontrolled boilers are taken from Table 1.3-1 in Section 1.3 Fuel Oil Combustion (<https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s03.pdf>) of the AP-42 Compilation of Air Pollutant Emission Factors published by the United States Environmental Protection Agency.



NOTES

TANK SCHEDULE

No.	Dimension	Content
WNG 01	56' DIA. X 48' HIGH	ASPHALT - WATERFILL
WNG 02	82' DIA. X 48' HIGH	ASPHALT - WATERFILL
WNG 03	153' DIA. X 37' HIGH	PVA - SALES
WNG 04	153' DIA. X 37' HIGH	PVA - SALES
WNG 05	153' DIA. X 37' HIGH	PVA - SALES
WNG 06	153' DIA. X 37' HIGH	PVA - SALES
WNG 07	153' DIA. X 37' HIGH	PVA - SALES
WNG 08	153' DIA. X 37' HIGH	PVA - SALES
WNG 09	250' DIA. X HIGH	PVA - SALES
WNG 10	250' DIA. X HIGH	PVA - SALES

EQUIPMENT SCHEDULE

WNG 210	VARIOUS RECOVERY SYSTEM	DIMENSIONS
B-100	PVA BUILDING	10283 X 6096
B-200	HEAVY MEDIUM BUILDING	18288 X 9144
B-300	POLYMER STORAGE BUILDING	15288 X 9124

ENGINEERING COMPANY (PRINT) STAMP

REGISTERED PROFESSIONAL ENGINEER STAMP

REV	DATE	DESCRIPTION	BY	CHK	ENG	APP
1A	2018/08/13	17' TOE BARR. 1700-207700				

Husky Asphalt
BAR
 Engineering

WINNIPEG PLANT
 ASPHALT STORAGE FACILITY

TITLE PLOT PLAN

SURFACE LOCATION S/W 1/4 16-11-4-EPN

ALTERNATE DWG NUMBER

HUSKY DWG NUMBER WI-00-01-0003

VENDOR DWG NUMBER

AMU/TDC NUMBER

SCALE 1:200

PROJECT NO

Beshada, Eshetu (SD)

From: Tristan Koroscil <Tristan.Koroscil@huskyenergy.com>
Sent: September-27-18 3:07 PM
To: Beshada, Eshetu (SD) <Eshetu.Beshada@gov.mb.ca>
Subject: RE: Pounder Emulsions Application Documentation

Hello Eshetu:

Please see my responses to your queries:

1. Polymer Modified Asphalt (PMA) uses the same straight-run asphalt that we currently receive from our Husky Lloydminster Refinery. The Pounder Emulsions Springfield Facility does not produce straight-run asphalt, but uses it to produce various specialty asphalt products based on market demand, and the objective of the proposed minor alterations to the facility is to allow Husky to also produce PMA products. For PMA production, we need to add to straight-run asphalt and a small amount of two additives (see response 2). The annual anticipated PMA production volumes depend upon customer requirements, but we estimate ~10-55% of asphalt product sales to be PMA.
2. There will be two new raw materials (Styrene-Butadiene-Styrene Polymer pellets and Sulfur pellets) required as additives to straight-run asphalts for PMA production. Note: PMA consists of ~97% Straight Run Asphalts and ~3% polymer and sulfur.
3. The Springfield Facility will continue to receive the same volumes of straight-run asphalt from the Husky Lloydminster Refinery. Since this straight-run asphalt is the basis for all our products, the PMA production will displace the production of other asphalt products by 10-55% and thus, there will be no overall net asphalt product volume changes. Again, these volumes are dependent upon customer requirements.
4. The increases in air emissions associated with the proposed minor alterations are estimated to be minimal as described in Husky's letter submitted to Manitoba Sustainable Development on August 17th. The current emissions of the air pollutants listed in Clause 34 of Licence No. 2540 are below their respective thresholds for reporting to the National Pollutant Release Inventory, and the proposed projects will not change this. To Husky's knowledge and based on publicly available information, the ambient air pollutant concentrations in the facility's airshed are well below Manitoba's maximum acceptable level concentrations listed in Clause 34. As such, Husky expects the proposed projects' air emissions to have a minimal impact on air quality since this impact will be proportional to the nominal increases in air emissions.
5. There have been no odour complaints received at the Springfield Facility based on a discussion with the site Plant Manager who started employment there in 2012.

I hope I have answered your questions adequately. If there are any further clarifications please let me know.

Regards,

Tristan Koroscil, P.Eng

Engineering Manager - Pounder Emulsions

Husky Energy Inc.

W 1-306-955-7924 C 1-306-914-7549

Tristan.Koroscil@huskyenergy.com

From: Beshada, Eshetu (SD) [<mailto:Eshetu.Beshada@gov.mb.ca>]
Sent: Thursday, September 20, 2018 2:02 PM

To: Tristan Koroscil <Tristan.Koroscil@huskyenergy.com>
Subject: RE: Pounder Emulsions Application Documentation

Hello Tristan,

As per my email below and our phone conversation I have reviewed the Notice of Alteration you submitted. The following additional information is required to complete the environmental assessment.

1. Provide if the Polymer Modified Asphalt (PMA) is a new product or process at the development and the volume of production anticipated.
2. Indicate if any new raw material will be used that is not used for the licensed process at the Development.
3. Is PMA production displaces the straight run asphalt production or a total additional process? If it displaces in what percentage? If it is an additional process provide the total increase in the production capacity.
4. What will be the impact on air emission due to the new process/product at the Development. Specially with respect to those limits described under Clause 34 of your licence.
5. Has there been any complaint received due to odour from the nearby residents?

Regards

*Eshetu Beshada, PhD, PEng.
Environmental Engineer
Municipal and Industrial Section
Environmental Approvals Branch*

Ph: (204) 945-7023

Licence No.: 2540

Licence Issued: February 26, 2002

**IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)
THIS LICENCE IS ISSUED PURSUANT TO SECTION 10(1) TO:**

HUSKY OIL OPERATIONS LTD.; "the Licencee"

for the operation of the Development being an asphalt cement terminal and asphalt emulsion blending facility located at pt SW ¼ Section 16 Township 11 Range 4, parcel "A" Plan 39996 WLTO, off Day Street in the Rural Municipality of Springfield, in accordance with the Proposal under The Environment Act dated November 23, 2001, and the additional information received on January 24, 2002 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"accredited laboratory" means facilities accredited by the Standard Council of Canada (SCC), or facilities accredited by another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or facilities which can demonstrate to Manitoba Conservation, upon request, that quality assurance/quality control (QA/QC) procedures are in place equivalent to accreditation based on the Canadian Standard Can/CSA-Z753, extension of the international standard ISO 9000, Guide 25;

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

"approved" means approved by the Director in writing;

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

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

if the odour, smell or aroma

- d. is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90 day period, from 5 different persons falling within clauses a), b), or c), who do not live in the same household; or
- e. is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b), or c), and the Director is of the opinion that if the unwanted odour, smell of 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; and

"wastewater" means any liquid containing a pollutant as defined in The Environment Act, associated with or resulting from the development. Uncontaminated rain water is not wastewater.

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, upon the request of the Director and in addition to any of the limits, terms or conditions specified in this Licence:
 - 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.
3. The Licencee shall, unless otherwise specified in this Licence:
 - a. carry out all sampling of, and preservation and analyses on, water, soil or air samples in accordance with methodologies approved by the Director;
 - b. ensure that all analytical determinations are undertaken by an accredited laboratory; and
 - c. report the results to the Director within 60 days of the samples being taken.
4. The Licencee shall provide to the Director, upon request, all information required under this Licence, in writing and in such form and content (including number of copies), as may be specified by the Director.
5. The Licencee shall ensure that the perimeter of the Development is fenced.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Construction Activities

6. The Licencee shall ensure that there is no burial of any construction waste at the Development.
7. The Licencee shall ensure that there is no burning of any construction waste at the Development.
8. The Licencee shall ensure that any construction waste is recycled and reused wherever possible, or disposed of at a waste disposal ground operating either under a permit issued pursuant to Manitoba Regulation 150/91 Waste Disposal Grounds Regulation or a Licence issued pursuant to The Environment Act.
9. The Licencee shall implement measures to prevent or minimize the entrainment of particulate matter in the air during construction of the Development.
10. The Licencee shall implement measures as outlined in the document Environmental Code of Good Practice for General Construction (EPS 1-EC-80-1) to prevent or minimize the entrainment of particulate matter in any runoff during construction of the Development.

Respecting Asphalt Emulsion Production

11. The Licencee shall ensure that whenever products are being transferred to or from a vehicle, or to or from a storage tank, or to or from drums, the transfer is supervised by trained personnel at all times and in such a manner that the flow of products can be immediately shut off, if necessary.
12. The Licencee shall grade, dike or curb all areas where products are stored, loaded, blended, transferred or otherwise handled in a manner and using materials approved by the Director, such that all product spillage and contaminated run-off water from these areas is contained within the Development.
13. The Licencee shall create and maintain a current duplicate inventory of all products stored at the Development, with one copy stored at the premises of the Development, and the other copy stored at a location off-site from the Development.

Respecting Tanks/Storage

14. The Licencee shall ensure that all storage vessels and spill containment systems are visually inspected for leakage on a weekly schedule, and shall keep a log book of all inspections on site for inspection by an Environment Officer.
15. The Licencee shall ensure that all storage vessels meet the standards specified in the Environment Act Proposal dated November 23, 2001.
16. The Licencee shall ensure that all fuel oil storage vessels are registered with Manitoba Conservation and are in compliance with Manitoba Regulation 188/2001 Storage and Handling of Petroleum Products and Allied Products Regulation.

Respecting Water Emissions

17. The Licencee shall ensure that the Development is adequately diked and that collector sumps are installed to collect surface runoff. The Licencee shall contact the Red River Regional Office in Winnipeg for approval to discharge the liquid in the collector sumps to the Rural Municipality of Springfield ditch system.
18. The Licencee shall ensure that all wastewater generated as a result of any activity at the development is collected for use as process water in the manufacture of asphalt emulsion.
19. The Licencee shall direct all sanitary wastes to a holding tank properly designed to contain sanitary wastes and

shall ensure that the sanitary waste is hauled to an approved wastewater treatment facility.

Respecting Spills

20. The Licencee shall contain on the Development:
 - a. any on-site spill;
 - b. wastewater generated from any response action due to a spill; and
 - c. contaminated water resulting from the extinguishing of any fire.
21. The Licencee shall contain and clean up immediately any spill to prevent soil, surface water or ground water contamination.
22. The Licencee shall immediately report all spills or release of contaminants as required under Manitoba Regulation 439/87 Environmental Accident Reporting Regulation to the 24 hour emergency response line of the Department in Winnipeg at (204) 944-4888, and ensure that all necessary actions are immediately taken to contain the release, leak, or spill, to manage the impacted environment, and to restore the environment to the satisfaction of an Environment Officer or the Director.
23. The Licencee shall ensure that all spills in excess of 5 litres, but less than 100 litres, at the Development are reported within one working day to the Red River Region Office in Winnipeg at (204) 945-7100.

Respecting Financial Assurance/Insurance

24. The Licencee shall, at least 30 days prior to the operation of the Development:
 - a. provide the Director with written proof of Environmental Impairment Liability Insurance providing coverage for the operations associated with the Development. The minimum limit for this insurance shall be \$1,000,000 per occurrence or claim; or
 - b. provide the Director with:
 - i. an irrevocable Letter of Credit from a licenced Canadian financial institution for the minimum amount of \$1,000,000, if no "sudden and accidental" pollution liability insurance is provided for the Development; or
 - ii. an irrevocable Letter of Credit from a licenced Canadian financial institution for the minimum amount of \$500,000, if "sudden and accidental" pollution liability insurance is provided for the Development through the Commercial General Policy, subject to a minimum limit of \$2,000,000 per occurrence or claim for this pollution liability coverage.
25. The Licencee shall, at least 30 days prior to operation of the Development, provide the Director with proof of Commercial General Liability Insurance for the Development and its operations providing coverage for third party bodily injury (including death) and accidental property damage subject to a minimum limit of \$5,000,000 per occurrence.
26. The Licencee shall, at least 30 days prior to the operation of the Development, provide the Director with proof of Automobile Liability Insurance for all vehicles involved in the transport of product to and/or from the Development, providing minimum limits of \$1,000,000 per occurrence.
27. The Licencee shall ensure that the terms and conditions of the required insurance coverages and/or Letters of Credit shall be satisfactory to the Director. All financial assurance shall be maintained for the duration of this Licence, and in the case of claims-made insurance coverages, for a minimum of 12 months following the expiry of this Licence. Renewal certificates shall be provided to the Director annually, unless the financial assurance document states in writing that it is an ongoing obligation.

Respecting Monitoring

28. The Licencee shall, within 60 days of a written request from the Director, submit a proposal for the approval of the Director for a monitoring program, including monitoring of fugitive emissions or ambient air quality for the following parameters:
 - a. particulate matter; and
 - b. any other parameters the Director may request.
29. The Licencee shall complete the monitoring program submitted pursuant to Clause 28 of this Licence in accordance with the approved proposal.
30. The Licencee shall submit to the Director within 90 days of receipt of the analytical results of the monitoring performed pursuant to Clause 28 of this Licence, a report that discusses the monitoring and results. This report shall address any potential health or environmental impacts beyond the boundaries of the Development that might be caused by the emissions studied.

Respecting Emission Control Equipment

31. The Licencee shall maintain and operate all emission control equipment to the specifications and recommendations of the manufacturer.
32. The Licencee shall maintain a log book for all maintenance activities and all downtimes of all emission control devices. The log book shall be kept at the Development and shall be available upon request for inspection by an Environment Officer. The log shall record, at minimum, the following:
 - a. identification of the unit and the processes it serves;
 - b. time/date of log entry;
 - c. nature of event;
 - d. time and duration of event;
 - e. action taken;
 - f. the accumulated downtime for these events for each calendar year; and
 - g. signature of employee/manager.
33. The Licencee shall not operate any processes with emissions, which are normally treated by the emission control equipment, if the emission control equipment is not properly maintained or is not operating to the specifications of the manufacturer.

Respecting Air Emissions

34. The Licencee shall not emit total reduced sulphur determined as hydrogen sulphide, total hydrocarbons, suspended particulate, or sulphur dioxide from the Development such that the ambient concentration of these emissions in air is in excess of:
 - a. 15 micrograms per cubic meter (one-hour average) for hydrogen sulphide at any time when measured at any point beyond the property line of the Development;
 - b. 5 micrograms per cubic meter (24-hour average) for hydrogen sulphide at any time when measured at any point beyond the property line of the Development;
 - c. 160 micrograms per cubic meter (3-hour average) for total hydrocarbons at any time when measured at any point beyond the property line of the Development;
 - d. 120 micrograms per cubic meter (24-hour average) for suspended particulate at any time when measured at any point beyond the property line of the Development;
 - e. 900 micrograms per cubic meter (one-hour average) for sulphur dioxide at any time when measured at any point beyond the property line of the Development; or
 - f. 300 micrograms per cubic meter (24-hour average) for sulphur dioxide at any time when measured

at any point beyond the property line of the Development.

35. The Licencee shall not emit from the Development particulate matter in any air emission that:
 - a. exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or
 - b. results in the deposition of visible particulate residue at any time beyond the property line of the Development.
36. The Licencee shall install the vapour recovery system described in the Environment Act Proposal dated November 23, 2001 prior to any transfer of asphalt cement from a storage tank to a tanker truck at the Development.
37. The Licencee shall not transfer any asphalt cement from a storage tank to a tanker truck at the Development unless the vapour recovery system is being operated.
38. The Licencee shall inform the Director at any time that the vapour recovery system is inoperable due to breakdown or any other cause and shall cease transfer of asphalt cement from a storage tank to a tanker truck at the Development unless otherwise given permission by the Director in writing.
39. 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.
40. 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 Dangerous Goods and Hazardous Wastes

41. The Licencee shall store, handle and dispose of all dangerous goods and hazardous wastes used or generated at the Development in accordance with the provisions of The Manitoba Dangerous Goods Handling and Transportation Act (C.C.S.M. c. D12).
42. The Licencee shall not receive at the Development any hazardous waste from any generator off site of the Development.

Respecting Alteration/Closure

43. The Licencee shall obtain approval from the Director for any proposed alterations to the Development before proceeding with the alterations.
44. The Licencee shall, in the event that the Development is to be permanently closed as an asphalt cement terminal and asphalt emulsion blending facility, or is offered for sale, conduct an investigation, at the Licencee's cost, to the satisfaction of the Director, to identify any contamination which may have resulted from the operation of the Development.
45. The Licencee shall, where the investigation referred to in Clause 44 of this Licence shows that contamination of the environment has occurred, submit a remediation proposal to the Director and, upon approval of this proposal by the Director, the required remediation shall be carried out by the Licencee, at the Licencee's cost.

Respecting Emergency Planning

46. The Licencee shall submit to the Director for approval, at least 30 days prior to the operation of the Development, a contingency plan, in accordance with the Manitoba Industrial Accidents Council (MIAC)

Industrial Emergency Response Planning Guide, outlining procedures to be used in the event of a leak, spill, fire, or other hazardous condition at the Development.

REVIEW AND REVOCATION

- A. 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.
- B. 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.

"original signed by"

Larry Strachan, P. Eng.

Director

Environment Act

Client File No.: 4717.00