

**Licence No.: 2543 R**

**Licence Issued: March 12, 2002**

**Licence Revised: September 25, 2002**

**IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)  
THIS LICENCE IS ISSUED PURSUANT TO SECTIONS 11(1) AND 14(3) TO:**

**CITY OF PORTAGE LA PRAIRIE; "the Licencee";  
MCCAIN FOODS LTD.; "LRAR Operator"; and  
RURAL MUNICIPALITY OF PORTAGE LA PRAIRIE; "LSAF Operator"**

for the alteration and operation of the Development being a wastewater collection system and a wastewater treatment plant located on Lot 108, Plan 436 and with discharge of treated effluent to the Assiniboine River, in accordance with the Proposal filed under The Environment Act on May 2, 1994, the alterations dated June 5, 1996, July 11, 2001, November 14, 2001 and February 15, 2002, and the Manitoba Clean Environment Commission February 2002 Report on Public Hearings 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 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 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;

**"acutely lethal conditions"** means conditions within a waterway where the concentration of a pollutant and the duration of exposure to the pollutant result in the death of aquatic life;

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

**"anaerobic WAS digester"** means the anaerobic WAS digester specified in the Notice of Alteration filed with the Director November 14, 2001 and supporting documents dated December 5, 2001 and December 10, 2001;

**"approved"** means approved by the Director in writing;

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

**"average McCain industrial dry weather flow"** means the monthly average daily influent flow to the LRAR;

**"average municipal dry weather flow"** means the average daily influent municipal wastewater flow to the wastewater treatment plant during periods when flow from precipitation runoff does not enter the municipal wastewater collection system;

**"average Poplar Bluff industrial dry weather flow"** means the monthly average daily influent flow from Poplar Bluff;

**"average total dry weather flow"** means the sum of the average municipal dry weather flow, the average McCain industrial dry weather flow, and the average Poplar Bluff industrial dry weather flow;

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

**"ASAE"** means the American Society of Agricultural Engineers;

**"biogas"** means combustible gas derived from the anaerobic digestion of organic materials containing primarily methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>);

**"biosolids"** means accumulated organic solids, resulting from wastewater treatment processes, that have received adequate treatment to permit the material to be recycled;

**"calibrate"** means to determine, check or rectify the graduation of any instrument giving quantitative measurement;

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

**"effluent"** means treated or untreated wastewater flowing or pumped out of the wastewater treatment facility or any component of the facility;

**"fecal coliform"** means aerobic and facultative, Gram-negative, nonspore-forming, rod-shaped bacteria capable of growth at 44.5° C, and associated with fecal matter of warm-blooded animals;

**"five-day biochemical oxygen demand"** means that part of the oxygen demand usually associated with biochemical oxidation of organic matter within 5 days at a temperature of 20° C;

**"grab sample"** means a quantity of undiluted effluent collected at any given time;

**"hydraulic conductivity"** means the quantity of water that will flow through a unit cross-sectional area of a porous material per unit of time under a hydraulic gradient of 1.0;

**"industrial use agreement"** means an agreement to discharge industrial wastewater to municipal wastewater collection and treatment systems;

**"Industrial Services Agreement (McCain)"** means the industrial use agreement dated April 18, 1996, between the City of Portage la Prairie and McCain Foods Limited;

**"Industrial Services Agreement (Simplot)"** means the industrial use agreement between the City of Portage la Prairie, the Rural Municipality of Portage la Prairie, and Simplot Canada Limited;

**"industrial wastewater"** means wastewater derived from an industry which manufactures, handles or processes a product and does not include wastewater from commercial or residential buildings;

**"influent"** means water, wastewater or other liquid flowing into the wastewater treatment facility or any component of the facility;

**"LRAR"** means the low rate anaerobic reactor located on-site;

**"LSAF"** means the Poplar Bluff lift station and forcemain;

**"MPN index"** means the most probable number of coliform organisms in a given volume of wastewater which, in accordance with statistical theory, would yield the observed test result with the greatest frequency;

**"municipal wastewater"** means the wastewater generated within the limits of the City of Portage la Prairie, excluding the LRAR effluent, and directed toward the wastewater treatment plant;

**"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, and 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;

**"Operating Agreement"** means the Operating Agreement dated April 18, 1996, between the City of Portage la Prairie and McCain Foods Limited;

**"peak McCain industrial dry weather flow"** means the 5 day peak industrial influent flow to the LRAR;

**"peak McCain industrial wet weather flow"** means the 2 day peak industrial influent flow to the LRAR;

**"peak municipal dry weather flow"** means the maximum daily influent municipal wastewater flow to the wastewater treatment plant during periods when flow from precipitation runoff does not enter the municipal wastewater collection system;

**"peak municipal wet weather flow"** means the maximum daily influent municipal wastewater flow to the wastewater treatment plant during periods occurring on the same day as maximum precipitation runoff enters the municipal wastewater collection system;

**"peak Poplar Bluff industrial dry weather flow"** means the 5 day peak industrial influent flow from Poplar Bluff;

**"peak Poplar Bluff industrial wet weather flow"** means the 2 day peak industrial influent flow from Poplar Bluff;

**"peak total dry weather flow"** means the sum of the peak municipal dry weather flow, the peak McCain industrial dry weather flow and the peak Poplar Bluff industrial dry weather flow;

**"peak total wet weather flow"** means the sum of the peak municipal wet weather flow, the peak McCain industrial wet weather flow and the peak Poplar Bluff industrial wet weather flow;

**"Poplar Bluff"** means the Poplar Bluff Agricultural Industrial Park located in the Rural Municipality of Portage la Prairie;

**"precipitation runoff"** means rain, snow melt water, or ice melt water;

**"preliminary treatment"** means unit operations, such as screening, comminution, and grit removal, that prepare the wastewater for subsequent treatment;

**"SBR"** means sequencing batch reactor;

**"security"** means a letter of credit provided by a Canadian Chartered Bank in favour of the City of Portage la Prairie and the Minister of Finance of Manitoba;

**"Simplot"** means the potato processing facility owned by Simplot Canada Limited and located on Lots 40 and 41 in the Parish of Portage la Prairie in the Poplar Bluff Agricultural Industrial Park in the Rural Municipality of Portage la Prairie;

**"Simplot LRAR"** means the low rate anaerobic reactor, owned and operated by Simplot Canada Limited, located on

the Simplot site;

"**Simplot Phase I**" means the Simplot potato processing facility operating with one line of pre-formed products and one line of french fries, which will produce approximately 20 415 kg of potato products per hour;

"**Simplot Phase II**" means the Simplot potato processing facility operating as expanded by the addition of another production line;

"**sludge**" means accumulated solid material containing large amounts of entrained water, which has separated from wastewater during processing;

"**sludge solids**" means solids in sludge;

"**south lagoon cell**" means the on-site wastewater treatment lagoon located to the south of the SBR basins;

"**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;

"**TKN**" means total Kjeldahl nitrogen;

"**total coliform**" means a group of aerobic and facultative anaerobic, Gram-negative, nonspore-forming, rod-shaped bacteria, that ferment lactose with gas and acid formation within 48 hours at 35° C, and inhabit predominantly the intestines of man or animals, but are occasionally found elsewhere and include the sub-group of fecal coliform bacteria;

"**WAS**" means waste activated sludge removed from the SBR basins;

"**waste disposal ground**" means an area of land designated by a person, municipality, provincial government agency, or crown corporation for the disposal of waste and approved for use in accordance with Manitoba Regulation 150/91 or a Licence pursuant to The Environment Act;

"**wastewater**" means the spent or used water of a community or industry which contains dissolved and suspended matter; and

"**wet industry**" means an industry that generates manufacturing or processing wastewater but does not include an industry that generates only cooling process 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 direct all wastewater generated within the limits of the City of Portage la Prairie toward the wastewater treatment plant or other approved wastewater treatment facilities.
2. The LSAF Operator shall direct all wastewater generated by Simplot within the limits of Poplar Bluff toward the wastewater treatment plant or other approved wastewater treatment facilities.
3. 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 segment, component or aspect of pollutant storage, containment, handling, treatment and disposal systems, for such

- pollutants, ambient quality, aquatic toxicity, seepage characteristics 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, bioassay data, flow rate measurements and such other information as may from time to time be requested.
4. The Licencee shall, unless otherwise specified in this Licence:
    - a. carry out all preservations and analyses of liquid samples in accordance with the methods prescribed in the Standard Methods for the Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director; and
    - b. ensure that all analytical determinations are undertaken by an accredited laboratory or a laboratory approved by the Director.
  5. 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.
  6. The Licencee and/or LSAF Operator shall, in an event where a physical or mechanical breakdown of the wastewater collection system or the wastewater treatment plant results in or may result in the discharge of raw or partly treated wastewater or in non-compliance with any specification, limit, term or condition of this Licence:
    - a. notify the Director by facsimile or any other notification procedure approved by the Director, stating the nature of the event, the time and estimated duration of the event and the reason for the event as follows:
      - i. as soon as possible but no later than within 12 hours of the event; or
      - ii. before noon of the first business day following an event on a weekend or statutory holiday;
    - b. identify the repairs required to the wastewater collection system or the wastewater treatment plant; and
    - c. complete the repairs in accordance with any written instructions of the Director.
  7. The Licencee and/or LSAF Operator shall carry out, as deemed necessary by the Director, any remedial measures or modifications in respect to matters authorized under this Licence.
  8. The Licencee and/or LSAF Operator shall not allow the discharge of any industrial wastewater from a wet industry into the Development unless the wet industry discharging the wastewater has first entered into an industrial use agreement with the Licencee. The agreement shall specify the quality, quantity and timing of discharges into the wastewater collection system and shall require the industry to advise the Licencee of any changes to these parameters.

### **SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS**

#### **Respecting Construction:**

9. The Licencee shall notify the assigned Environment Officer prior to beginning construction of the alteration to the Development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.
10. The Licencee shall construct and maintain silt fences in the drainage routes transporting surface runoff off the property of the Development until vegetation has been re-established on the disturbed areas.

11. The Licencee shall ensure that fuel storage and equipment servicing areas established for the construction and operation of the Development are located a minimum distance of 100 metres from any waterbody, and shall comply with the requirements of Manitoba Regulation 188/2001 respecting Storage and Handling of Gasoline and Associated Products.
12. The Licencee shall construct and maintain a continuous liner underlying each reactor basin of the SBR system such that:
  - a. for the three pre-existing SBR basins:
    - i. the liner is constructed from HDPE geosynthetic membrane;
    - ii. the liner constructed of HDPE has a minimum thickness of 80 mils; and
    - iii. in accordance with ASTM Standard D-4437, the integrity of all field seams are tested by non-destructive test methods and a testing report is prepared; and
  - b. for the fourth SBR basin:
    - i. a copy of the liner type, installation and testing specifications is submitted to the Director for approval, unless the final specifications do not differ from the specifications identified in the Notice of Alteration dated February 15, 2002;
    - ii. the HDPE double liner is installed in accordance with the ASAE Standard EP340.2 for the installation of Flexible Membrane Linings;
    - iii. the inner primary liner has a minimum thickness of 1.5 mm (60 mil), and the outer secondary liner has a minimum thickness of 1.0 mm (40 mil);
    - iv. each liner is free of holes and has a hydraulic conductivity not exceeding  $1.0 \times 10^{-9}$  centimetres per second over the entire surface area of each liner;
    - v. the primary and secondary liner are separated by a porous geonet membrane in accordance with the specifications approved by the Director;
    - vi. a gas relief system is installed under the primary liner as well as under the secondary liner in accordance with the specifications approved by the Director; and
    - vii. each liner is tested for the integrity of all field seams in accordance with the specifications approved by the Director, and that a testing report, or any progressive testing report, is prepared and submitted to the Director for each liner, with:
      - I. the testing report or any progressive testing reports, on the secondary liner seams, submitted to the Director no less than two weeks before the secondary liner, or any tested portion thereof in the case of progressive testing, is overlain with the geonet material and the primary liner; and
      - II. the testing report or any progressive testing reports on the primary liner, submitted to the Director no later than two weeks after the seam testing on the primary liner, or any portion thereof in the case of progressive testing, has been completed.
13. The Licencee shall construct and maintain a continuous liner underlying the LRAR system such that:
  - a. the liner is constructed from 8130 XR-5 geosynthetic membrane;
  - b. the liner has a minimum thickness of 30 mils; and
  - c. in accordance with ASTM Standard D-4437, the integrity of all field seams are tested by non-destructive test methods and a testing report is prepared.
14. The Licencee shall construct and maintain a gas relief system under the liner for the SBR and LRAR.
15. The Licencee shall:

- a. prior to giving authorization pursuant to Clause 31 of this Licence:
    - i. perform a leak detection test on each of the three pre-existing SBR basins;
    - ii. provide the results of the leak detection tests to the Director; and
    - iii. repair or replace the liner in accordance with any written instructions of the Director; and
  - b. upon the physical breakdown of any equipment within any SBR basin:
    - i. notify the Director in accordance with Clause 6 of this Licence;
    - ii. at the written request of the Director, perform a leak detection test on the liner of the SBR basin within such time as specified by the Director;
    - iii. provide the results of the leak detection test to the Director within two weeks of completion of the leak detection test; and
    - iv. repair or replace the liner in accordance with any written instructions of the Director.
16. The Licencee shall pressure test the integrity of the connections of any underground piping, which is intended to transport wastewater under pressure, before such pipe connections are backfilled with earth.
17. The Licencee shall construct and maintain an anaerobic WAS digester such that:
- a. the digester is constructed using an insulated steel tank and a steel cover;
  - b. the digester contents are continually mixed;
  - c. the digester contents are maintained at a minimum temperature of 30° C; and
  - d. the digester provides a minimum solids retention time of 21 days.
18. The Licencee shall construct and maintain a biosolids storage facility such that:
- a. the biosolids storage facility is constructed of reinforced concrete in accordance with the specifications identified in the Notice of Alteration dated February 15, 2002;
  - b. piezometers are installed into the granular fill to monitor for groundwater or seepage; and
  - c. the biosolids storage tanks are constructed with covers for foul air collection.
19. The Licencee shall install and maintain a security fence around the entire wastewater treatment plant, with the exception of the operations and preliminary treatment buildings, to control access.

**Respecting Poplar Bluff LSAF:**

20. The LSAF Operator shall construct and maintain an all-weather access road to the Poplar Bluff lift station.
21. The LSAF Operator shall install the forcemain such that:
- a. if the water supply main and wastewater forcemain are installed in the same trench:
    - i. a minimum horizontal separation of one metre is maintained between the water supply main and wastewater forcemain;
    - ii. a vertical separation of 450 millimetres is maintained between the water supply main and wastewater forcemain; and
    - iii. the water supply main is located above the wastewater forcemain; or
  - b. if the water supply main and wastewater forcemain are installed in separate trenches, a minimum horizontal separation of three metres is maintained between the water supply main and wastewater forcemain.
22. The LSAF Operator shall construct waterway crossings by augering, tunneling or boring. Open cut waterway

- crossings shall not be made unless prior consultation with Manitoba Conservation Fisheries staff and Department of Fisheries and Oceans staff has occurred and the prior written approval of the Director has been obtained.
23. The LSAF Operator shall utilize casing pipes at all railway, highway and service road crossings and conform to the requirements of Manitoba Transportation and Government Services and Canadian Pacific Railway.
  24. The LSAF Operator shall construct the Assiniboine River Diversion crossing such that:
    - a. casing pipes are installed beneath the Diversion using directional boring methods;
    - b. casing pipes extend beyond the existing dykes of the Diversion;
    - c. casing pipes are installed a minimum of two metres below the bottom of the Diversion channel; and
    - d. standpipes are installed at the ends of the casing pipes.
  25. The LSAF Operator shall revegetate soil exposed during the construction of the Development with native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction. Revegetation is not required for pipelines installed by chain trenching or ploughing on previously disturbed ground including road allowances.
  26. The LSAF Operator shall ensure that local drainage patterns are not altered by the construction of the Development, including inflows and outflows from small wetlands adjacent to the route of pipelines.
  27. The LSAF Operator shall, where open cut stream crossing techniques are used, minimize disturbance to riparian areas and restore the bottom and banks of the waterways to their original elevations and shapes.
  28. The LSAF Operator shall separate and replace topsoil from backhoe and trenching operations in accordance with the methodology described in Figures 1, 2, and 3 attached to this Licence. This requirement is not applicable where the topsoil has been previously disturbed due to the construction of roads or drains.
  29. Notwithstanding Clause 22 of this Licence, the LSAF Operator shall not construct open cut crossings of streams associated with the Development between April 1 and June 15 of any year. Open cut crossings shall comply with the provisions of the November 1999 publication "Watercourse Crossings Second Edition" published by the National Energy Board.
  30. The LSAF Operator shall ensure that wastewater, other than from Simplot is not discharged into the Poplar Bluff lift station unless otherwise approved by the Director.

**Respecting Commissioning:**

31. The Licencee and the LSAF Operator shall, upon completion of the alterations to the Development, and being satisfied that the Development is ready to accept wastewater from Poplar Bluff:
  - a. jointly authorize Simplot in writing that the transfer of wastewater to the Development may commence, with a copy of the authorization sent to the Director; and
  - b. copy the Director on any written requests or authorizations provided by the Licencee or the LSAF Operator to Simplot or the LRAR Operator concerning the subsequent management of influent wastewater flow rates or influent pollutant loading rates.

**Respecting Operation - LRAR:**

32. The LRAR Operator shall maintain the security of five million dollars (\$5,000,000) as approved by the Director, on December 19, 1996, until June 30, 2005.
33. The LRAR Operator shall, in addition to the other requirements of this Licence, carry out all aspects of the

operation of the LRAR in compliance with the Industrial Services Agreement (McCain) and the Operating Agreement.

34. The LRAR Operator shall continually maintain the biogas containment cover of the LRAR in a state of proper function to minimize biogas leakage to the atmosphere.
35. The LRAR Operator shall:
  - a. collect all biogas from the LRAR;
  - b. utilize the biogas at the Development as an energy source; and
  - c. flare excess or non-required amounts of collected biogas to the atmosphere.

**Respecting Operation - Wastewater Treatment Plant:**

36. The Licencee shall ensure that adequate instrumentation is installed to provide constant monitoring of the UV process to ensure compliance with the disinfection requirements. Such instrumentation shall include but not be limited to the following:
  - a. a UV sensor to monitor lamp intensity;
  - b. an appropriate alarm;
  - c. a lamp monitoring system to identify the location of individual lamp failures;
  - d. an hour meter which cannot be reset to display actual hours of UV lamp operation; and
  - e. protective circuits for overcurrent and ground current leakage detection.
37. The Licencee shall:
  - a. construct and make available for use by an Environment Officer, secured and heated influent monitoring stations with direct access to the influent pipelines for the industrial wastewater to the LRAR and the municipal wastewater;
  - b. ensure that all monitoring stations are accessible to an Environment Officer at all times;
  - c. install and maintain a flow measuring device at each monitoring station or at a location acceptable to the Director which is capable of measuring the volume of influent with an accuracy of  $\pm 2$  percent;
  - d. have the flow measuring device re-calibrated biannually or on the request of an Environment Officer;
  - e. submit to the Director a certificate of calibration, signed by a person qualified to calibrate the flow measuring device, for each flow measuring device within two weeks of the completion of each calibration, identifying the plus or minus percent error associated with each calibrated flow measuring device; and
  - f. ensure that each monitoring station is equipped with a flow-proportional sampling device equipped to function with the flow measuring device and have the sampling device available on request for use by an Environment Officer.
38. The Licencee shall:
  - a. construct and make available for use by an Environment Officer, secured and heated effluent monitoring stations, with direct access to the effluent discharge pipeline from the LRAR and effluent discharge pipeline from the wastewater treatment plant;
  - b. ensure that all monitoring stations are accessible to an Environment Officer at all times;
  - c. install and maintain a flow measuring device at each monitoring station or at a location acceptable to the Director which is capable of measuring the volume of effluent with an accuracy of  $\pm 2$  percent;
  - d. have the flow measuring device re-calibrated biannually or on the request of an Environment Officer;
  - e. submit to the Director a certificate of calibration, signed by a person qualified to calibrate the flow

measuring device, for each flow measuring device within two weeks of the completion of each calibration, identifying the plus or minus percent error associated with each calibrated flow measuring device; and

- f. ensure that each monitoring station is equipped with a flow-proportional sampling device equipped to function with the flow measuring device and have the sampling device available on request for use by an Environment Officer.

39. The Licencee shall continually maintain the biogas containment cover of the anaerobic WAS digester in a state of proper function to minimize biogas leakage to the atmosphere.

40. The Licencee shall:

- a. collect all biogas from the anaerobic WAS digester;
- b. utilize the biogas at the Development as an energy source; and
- c. flare excess or non-required amounts of collected biogas to the atmosphere.

41. The Licencee shall:

- a. continually maintain the foul air containment cover of the biosolids storage facility in a state of proper function to minimize foul air leakage to the atmosphere; and
- b. de-odourize the foul air in a manner approved by the Director before release to the atmosphere.

**Respecting Discharge Limits:**

42. The Licencee shall not discharge effluent from the wastewater treatment plant, as sampled in the effluent monitoring station located near the point of discharge from the ultraviolet disinfection channel, where:

- a. the organic content of the effluent, as indicated by the five day biochemical oxygen demand, is in excess of 30 milligrams per litre;
- b. the total suspended solids content of the effluent is in excess of 30 milligrams per litre;
- c. the fecal coliform content of the effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample, as determined by the monthly geometric mean of 1 grab sample collected at equal time intervals on each of a minimum of 3 consecutive days per week;
- d. the total coliform content of the effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample, as determined by the monthly geometric mean of 1 grab sample collected at equal time intervals on each of a minimum of 3 consecutive days per week;
- e. the ammonia nitrogen content (as N) of the effluent is in excess of the following limits:

<b>Period</b>	<b>Ammonia Nitrogen (as N) (kilograms/any 24 hour period)</b>
Month of January	673.0
Month of February	560.1
Month of March	589.3
Month of April	1068.2
Month of May	691.8
Month of June	264.6
Month of July	213.2
Month of August	129.6
Month of September	134.4

Month of October	286.4
Month of November	448.0
Month of December	646.4

43. The Licencee shall not, on any day, release a quality of effluent from the Development which:
- a. causes or contributes to the mixing zone for the effluent in the Assiniboine River being acutely lethal to aquatic life passing through the mixing zone; or
  - b. which can be demonstrated to be acutely lethal to fish within the mixing zone for the effluent in the Assiniboine River by using a 96-hour static acute lethality test which results in mortality to more than 50 percent of the test fish exposed to 75 percent strength effluent, with the test carried out in accordance with the protocol outlined in Environment Canada's "Biological Test Method: Acute Lethality Test Using Rainbow Trout", Report No. EPS 1/RM/13 dated July 1990, or any future amendment thereof.
44. The Licencee shall, if in the opinion of the Director the nutrient levels in the effluent from the Development are causing or contributing to an unacceptable water quality condition in the Assiniboine River at any point between the effluent outfall of the Development and the Rural Municipality of Headingley, restrict the operation of the Development to such a degree and for such a period as may be specified by the Director, or otherwise reduce the input of nutrients into the Assiniboine River to the satisfaction of the Director.
45. The Licencee shall actively participate in any future nutrient reduction program, approved by the Director, for the Assiniboine River.
46. The Licencee shall not permit any pollutants to be directed into, or transported by, any surface drainage route leading off the property of the Development.

**Respecting Air Emissions:**

47. 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 Biosolids:**

48. The Licencee shall ensure that:
- a. all sludge solids from the LRAR and the SBR treatment facilities are treated in accordance with Environment Act Licence No. 1907 or subsequent revision thereof;
  - b. biosolids are disposed of in accordance with the requirements of Environment Act Licence No. 1907 or subsequent revision thereof; and
  - c. sludge solids from the preliminary treatment processes are treated and disposed of in accordance with Environment Act Licence No. 1907 or subsequent revision thereof, or are disposed of at a waste disposal ground operated under a permit issued in accordance with Manitoba Regulation 150/91.

**Respecting Monitoring and Reporting:**

49. The Licencee shall:
- a. continuously measure and record the volume of the industrial wastewater discharged into the LRAR;
  - b. take one flow proportional sample of the industrial wastewater discharged into the LRAR over a 24 hour period every 6 days;

- c. have the samples analyzed for chemical oxygen demand, total suspended solids, TKN, nitrate-nitrite, and total phosphorous;
- d. calculate the chemical oxygen demand, total suspended solids, total nitrogen, and total phosphorous loads (kilograms per day) for the days during which samples were collected;
- e. prepare a monthly report on:
  - i. the daily, average, peak, minimum and total monthly volume of the industrial wastewater discharged into the LRAR; and
  - ii. the chemical oxygen demand, total suspended solids, total nitrogen and total phosphorous loads and the flow conditions on the days the samples were collected; and
- f. file a copy of the report with the Director within 30 days of the end of each month during which the loads were determined.

50. The Licencee shall:

- a. continuously measure and record the volume of the wastewater discharged from the LRAR into the SBR;
- b. take one flow proportional sample of wastewater discharged from the LRAR over a 24 hour period every 6 days;
- c. have the samples analyzed for five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, TKN, nitrate-nitrite, and total phosphorous;
- d. calculate the five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, total nitrogen, and phosphorous loads (kilograms per day) for the days during which samples were collected;
- e. prepare a monthly report on:
  - i. the daily, average, peak, minimum and total monthly volume of wastewater discharged from the LRAR into the SBR; and
  - ii. the five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, total nitrogen, and phosphorous loads and the flow conditions on the days the sample were collected; and
- f. file a copy of the report with the Director within 30 days of the end of each month during which the loads were determined.

51. The LRAR Operator shall, in an event where the wastewater discharged from the LRAR exceeds the limits set out in Schedule A attached to this Licence, and the effluent from the wastewater treatment plant does not exceed a limit, term, condition, or specification of this Licence:

- a. determine the cause of the event;
- b. determine the duration of the event and estimate the frequency of any future events resulting from a similar cause;
- c. assess the impact of the event on the downstream components of the wastewater treatment plant;
- d. assess the risk of causing the effluent from the wastewater treatment plant to exceed a limit, term, condition, or specification of this Licence;
- e. determine the alternatives and need to stop the event and any future events;
- f. develop a preferred course of action to mitigate any adverse impacts of the event and any future similar events on the downstream components of the wastewater treatment plant;
- g. report the above determinations and assessments to the Director within 60 days from the identification of the event or such other date as may be approved in advance by the Director; and
- h. take any action deemed necessary by the Director to stop the event or any future events.

The LRAR Operator may submit, to the Director for approval, proposed amendments to the course of action to stop the event or any future events. The LRAR Operator shall implement any amendments

approved by the Director in a manner and within the time frames specified by the Director.

52. The LRAR Operator shall, in an event where the wastewater discharged from the LRAR exceeds the limits set out in Schedule A attached to this Licence, and the effluent from the wastewater treatment plant exceeds a limit, term, condition, or specification of this Licence:
- a. notify the Director by facsimile, or any other notification procedure approved by the Director, stating the nature of the event, the time and estimated duration of the event and the reason for the event as follows:
    - i. as soon as possible but no later than within 12 hours of the event; or
    - ii. before noon of the first business day following an event on a weekend or statutory holiday;
  - b. restrict the loading from the LRAR or take any other action deemed necessary by the Director to stop the event and any future events where the limits set out in Schedule A attached to this Licence are exceeded, within the time frame specified by the Director;
  - c. assess the impact of the LRAR discharging an effluent that exceeds the limits set out in Schedule A attached to this Licence on the downstream components of the wastewater treatment plant;
  - d. determine the alternatives to stop the discharge of effluent from the wastewater treatment plant in excess of a limit, term, condition, or specification of this Licence, where the effluent from the LRAR is determined to cause or contribute to the discharge of effluent from the wastewater treatment plant in excess of a limit, term, condition, or specification of this Licence;
  - e. develop a preferred course of action;
  - f. report the above determinations and assessments to the Director within 30 days from the identification of the event or such other date as may be approved in advance by the Director; and
  - g. take any actions respecting the operation of the LRAR, deemed necessary by the Director in a manner and within the time frames specified by the Director, to stop the discharge of effluent from the wastewater treatment plant in excess of a limit, term, condition, or specification of this Licence.

The LRAR Operator may submit, to the Director for approval, proposed amendments to the course of action to stop the event or any future events. The LRAR Operator shall implement any amendments approved by the Director in a manner and within the time frames specified by the Director.

53. The Licencee shall:
- a. continuously measure and record the volume of the municipal wastewater discharged into the SBR;
  - b. take one flow proportional sample of the municipal wastewater discharged into the SBR over a 24 hour period every 6 days;
  - c. have the samples analyzed for five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, TKN, nitrate-nitrite, and total phosphorous;
  - d. calculate the five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, total nitrogen, and total phosphorous loads (kilograms per day) for the days during which samples were collected;
  - e. prepare a monthly report on:
    - i. the daily, average, peak, minimum and total monthly volume of the municipal wastewater discharged into the SBR; and
    - ii. the five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, total nitrogen, and total phosphorous loads and the flow conditions on the days the sample were collected; and
  - f. file a copy of the report with the Director within 30 days of the end of each month during which the loads were determined.

54. The Licencee shall accept and provide the monitoring information submitted by Simplot pursuant to Clause 84 of Environment Act Licence No. 2518 or subsequent revision thereof or:

- a. continuously measure and record the volume of the wastewater discharged from Poplar Bluff into the SBR;
- b. take one flow proportional sample of wastewater discharged from Poplar Bluff over a 24 hour period every 6 days;
- c. have the samples analyzed for five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, TKN, nitrate-nitrite, and total phosphorous;
- d. calculate the five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, total nitrogen, and total phosphorous loads (kilograms per day) for the days during which samples were collected;
- e. prepare a monthly report on:
  - i. the daily, average, peak, minimum and total monthly volume of wastewater discharged from Poplar Bluff into the SBR; and
  - ii. the five day biochemical oxygen demand, chemical oxygen demand, total suspended solids, total nitrogen, and total phosphorous loads and the flow conditions on the days the sample were collected; and
- f. file a copy of the report with the Director within 30 days of the end of each month during which the loads were determined.

55. The Licencee shall, in an event where any municipal or total wastewater load to the SBR exceeds any design load set out in Schedule B attached to this Licence, and the effluent from the wastewater treatment plant does not exceed a limit, term, condition, or specification of this Licence:

- a. determine the cause of the event;
- b. determine the duration of the event and estimate the frequency of any future events resulting from a similar cause;
- c. assess the risk of causing the effluent from the wastewater treatment plant to exceed a limit, term, condition, or specification of this Licence;
- d. determine the alternatives and need to stop the event and any future events;
- e. develop a preferred course of action to stop the event and any future events;
- f. report the above determinations and assessments to the Director within 60 days from the identification of the event or such other date as may be approved in advance by the Director; and
- g. take any action deemed necessary by the Director to stop the event or any future events.

The Licencee may submit, to the Director for approval, proposed amendments to the course of action to stop the event or any future events. The Licencee shall implement any amendments approved by the Director in a manner and within the time frames specified by the Director.

56. The Licencee shall, in an event where any total wastewater load to the SBR exceeds the design load set out in Schedule B attached to this Licence, and the effluent from the sewage treatment plant exceeds a limit, term, condition or specification of this Licence:

- a. notify the Director by facsimile or any other notification procedure approved by the Director, stating the nature of the event, the time and estimated duration of the event and the reason for the event as follows:
  - i. as soon as possible but no later than within 12 hours of the event; or
  - ii. before noon of the first business day following an event on a weekend or statutory holiday;
- b. restrict the loading to the SBR or take any other action deemed necessary by the Director to stop

further events where a design total load to the SBR set out in Schedule B attached to this Licence is exceeded, within the time frame specified by the Director;

- c. determine the cause of the event;
- d. determine the alternatives to stop the discharge of effluent from the sewage treatment plant in excess of a limit, term, condition or specification of this Licence;
- e. develop a preferred course of action;
- f. report the above determinations and assessments to the Director within 30 days from the identification of the event or such other date as may be approved in advance by the Director; and
- g. take any actions deemed necessary by the Director, in a manner and within the time frames specified by the Director to stop the discharge of effluent from the sewage treatment plant in excess of a limit, term, condition or specification of this Licence.

The Licencee, may submit, to the Director for approval, proposed amendments to the course of action to stop the event or any future events. The Licencee, shall implement any amendments approved by the Director in a manner and within the time frames specified by the Director.

57. The Licencee shall:

- a. take one flow proportional sample of effluent from the sewage treatment plant over a 24 hour period every 6 days;
- b. have the samples analyzed for five day biochemical oxygen demand, ammonia, TKN, nitrate-nitrite, total phosphorous, total suspended solids and total phenol; and
- c. report the results to the Director within 30 days of the end of the month during which the samples were taken.

58. The Licencee shall:

- a. once each day at equal time intervals for a minimum of three (3) consecutive days per week, collect a grab sample of effluent from the sewage treatment plant;
- b. have the grab sample analyzed for pH and temperature, fecal coliform content and total coliform content using methods from the Standard Methods for the Examination of Water and Wastewater, or using other methods approved by the Director;
- c. determine and record the monthly geometric mean for each of the fecal coliform and total coliform counts based on all the data collected during each month, from a minimum of 12 grab samples; and
- d. report the results to the Director within 30 days of the end of the month during which the samples were taken.

59. The Licencee shall:

- a. take one flow proportional sample of effluent from the sewage treatment plant over a 24 hour period during each month on days when the wet industries are processing and with a minimum separation time of 27 days between samples; and
- b. have the samples analyzed for acute lethality by a method approved, in advance by the Director; and
- c. report the results to the Director within 30 days of the end of the month during which the samples were taken.

60. The Licencee shall:

- a. in consultation with the Director, develop a detailed study plan for a monitoring program to be undertaken on the Assiniboine River for the purposes of gathering additional water quality data and calibrating the computer model used in the Assiniboine River water quality modelling study;
- b. within two months of the date of issuance of this Licence, submit for the approval of the Director a copy of the detailed study plan;
- c. undertake the approved detailed study plan of the Assiniboine River, subject to such modifications as may from time to time be requested by the Director; and

- d. submit to the Director, once every six months following the date of issuance of this Licence for the duration of the Assiniboine River monitoring study, a progress, data summary and interpretation report on the detailed study plan and the impact of any calibration refinements made to the river modelling computer program.

61. The Licencee and LSAF Operator shall:

- a. prepare "as constructed drawings" for the wastewater treatment plant and the LSAF, respectively, and shall label the drawings "As Constructed"; and
- b. provide to the Director, within two months of providing authorization pursuant to Clause 31 of this Licence, two copies of the "as constructed drawings" of the wastewater treatment plant and LSAF, respectively.

**Respecting Emergency Response Planning:**

62. The Licencee shall submit to the Director for approval, prior to providing authorization pursuant to Clause 31 of this Licence, 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.

**Respecting Decommissioning:**

63. The Licencee shall:

- a. prior to providing authorization pursuant to Clause 31 of this Licence, submit to the Director for approval a plan to decommission the south lagoon cell; and
- b. carry out the decommissioning plan approved by the Director within such time as may be prescribed by the Director.

**REVIEW AND REVOCATION**

- A. Licence No. 2543 is hereby rescinded.
- B. This Licence shall be reviewed for variation and consideration of the inclusion of nutrient removal requirements by the Director forthwith upon the passage of 3 years from the date of this Licence, or at an earlier date upon two months written notice to the Licencee, LRAR Operator and LSAF Operator.
- C. 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.
- D. 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.

"original signed by"  
**Larry Strachan, P. Eng.**  
**Director**  
**Environment Act**

**Client File No.: 1020.50**

**SCHEDULE A TO ENVIRONMENT ACT LICENCE NO. 2543 R**

**Industrial (McCain) Pre-treatment Effluent Limits**

<b>Parameter</b>	<b>Average</b>	<b>Peak</b>
Flow (ML/d)	6.602	8.970
COD (kg/d)	5056	10 111
TSS (kg/d)	3276	6610
TKN (kg/d)	1361	2686

**COD** means chemical oxygen demand

**TSS** means total suspended solids

**TKN** means total Kjeldahl nitrogen

**SCHEDULE B TO ENVIRONMENT ACT LICENCE NO. 2543 R**

**Design Municipal Wastewater Loads to the SBRs**

<b>Parameter</b>	<b>Average<sub>m</sub></b>	<b>Peak<sub>m</sub></b>
Flow (ML/d)	12.5	21.8
COD (kg/d)	10 271	25 447
BOD (kg/d)	2976	7380
TSS (kg/d)	3554	14 148
TKN (kg/d)	400	915
TP (kg/d)	63	98

**Design Total Wastewater Loads to the SBRs**

<b>Parameter</b>	<b>Average<sub>t</sub></b>	<b>Peak<sub>t</sub></b>
Flow (ML/d)	25.4	34.7
COD (kg/d)	19 496	34 672
BOD (kg/d)	5415	9819
TSS (kg/d)	8564	19 158
TKN (kg/d)	2675	3978
TP (kg/d)	600	858

**Average<sub>m</sub>** means the municipal wastewater monthly average;

**Peak<sub>m</sub>** means the municipal wastewater maximum day;

**Average<sub>t</sub>** means the total wastewater monthly average;

**Peak<sub>t</sub>** means the total wastewater maximum day;  
**COD** means chemical oxygen demand;  
**BOD** means five day biochemical oxygen demand;  
**TSS** means total suspended solids;  
**TKN** means total Kjeldahl nitrogen; and  
**TP** means total phosphorous.

(Figures 1, 2 and 3 please refer to File copy.)