



Conservation

Climate Change and Environmental Protection Division
Environmental Assessment and Licensing Branch
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CLIENT FILE NO.: 2404.10

January 14, 2011

Kachig Anspikian
Bunge Canada
P.O. Box 546
Russell MB R0J 1W0

Dear Mr. Anspikian:

Enclosed is **Environment Act Licence No. 959 VC RRRR** dated January 14, 2011 issued in accordance with The Environment Act to **Bunge Canada** for the operation of an existing Development being a food processing plant for manufacturing vegetable oils and refining them into edible oils, and for the operation of the existing wastewater treatment and storage facilities, located at Harrowby in the SW ¼ of Section 33, Township 20, Range 29 WPM in the Rural Municipality of Russell.

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 Dave Yunker, Environment Officer at (204) 622-2134.

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

Yours truly,

Tracey Braun, M. Sc.
Director
Environment Act

Enc.

c: Don Labossiere, Director, Environmental Operations
Dave Yunker, Environmental Officer, Dauphin
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 959 VC RRRR (*by the Licencee only*) is required by the Director of Environmental Assessment and Licensing. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by January 28, 2011.

On behalf of Bunge Canada

Date

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

LICENCE

Licence No. / Licence n° 959 VC RRRR
Issue Date / Date de délivrance November 26, 1987
Revised: September 16, 1996
Revised: October 13, 1998
Revised: November 18, 2008
Revised: January 14, 2011

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:

BUNGE CANADA; "the Licencee"

for the operation of an existing Development being a food processing plant for manufacturing vegetable oils and refining them into edible oils, and for the operation of the existing wastewater treatment and storage facilities, located at Harrowby in the SW ¼ of Section 33, Township 20, Range 29 WPM in the Rural Municipality of Russell, in accordance with:

- 1) a Proposal received on April 29, 1982, and approved through Licence No. 959;
 - 2) a variance request received on April 9, 1987 and approved through Licence No. 959 VC (rescinding Licence No. 959);
 - 3) an expansion alteration request received on May 25, 1994, and approved as a minor alteration through Licence No. 959 VC R (rescinding Licence No. 959 VC);
 - 4) a process alteration request received on June 16, 1998, and approved as a minor alteration through Licence No. 959 VC RR (rescinding Licence No. 959 VC R); and
 - 5) a Proposal received on December 7, 2004 for a major alteration to the wastewater management practices whereby the former zero discharge proposal would be replaced with periodic release of treated and stored wastewater to the Assiniboine River;
- 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;

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

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

"effluent" means any treated wastewater released into the environment through the final discharge point;

"final discharge point" means the control point at the northwest corner of the evaporation pond whereat effluent is released into the environment;

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

"evaporation pond" means that structure as identified in Appendix 'A' to this Licence;

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

"grab sample" means one volume of undiluted effluent collected at any given time;

"high water mark" means the line on the interior surface of the wastewater treatment ponds which is normally reached when the cell is at the maximum allowable liquid level;

"low water mark" means the line on the interior surface of the wastewater treatment ponds which is normally reached when the cell is discharged;

"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 the members of the public; if the unwanted sound:
- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90 day period, from 5 different persons falling within clauses a), b), or c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b), or c), and the Director is of the opinion that if the unwanted sound had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90 day period from 5 different persons who do not live in the same household;

“odour nuisance” means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant, or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to 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 or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90 day period from 5 different persons who do not live in the same household;

“opacity” means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

“particulate matter” means any finely divided liquid or solid matter other than water droplets;

“particulate residue” means that part or portion of an atmospheric emission which is deposited onto a surface;

“rip rap” means small, broken stones or boulders placed compactly or irregularly on dykes or similar embankments for protection of earth surfaces against wave action or current;

“SAR” means sodium adsorption ratio;

“sanitary sewage” means household and commercial wastewater that contains human waste;

“sodium adsorption ratio” means the dimensionless value where:

$$\text{SAR} = \frac{0.044 \times \text{Sodium concentration}}{\sqrt{(0.025 \times \text{Calcium concentration}) + (0.041 \times \text{Magnesium concentration})}};$$

“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;

“wastewater” means any liquid process stream or surface run-off containing a pollutant as defined in The Environment Act, associated with or resulting from the Development, which is discharged into the environment; and

“wastewater treatment ponds” means the existing “Aeration Cells”, the “Storage Pond” and the “Evaporation Pond” as identified in Appendix 'A' attached to this Licence.

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. 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 said 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, 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 and air samples in accordance with methodologies approved by the Director;
 - c) ensure that all analytical determinations are undertaken by an accredited laboratory; and
 - d) report the results to the Director within 60 days of the samples being taken.
5. 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.
6. 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.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Air Emissions – Limits

7. 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 from any point source of the Development;
 - ii) exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or
 - iii) results in the deposition of visible particulate residue at any time beyond the property line of the Development; or
 - b) opacity from any point source of the Development equals or exceeds:
 - i) 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
 - ii) 20 percent for more than 16 individual opacity observations within any 1 hour period; or
 - iii) 40 percent for any individual opacity observation.
8. The Licencee shall not cause or permit a noise nuisance to be created as a result of the operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate a noise nuisance.
9. The Licencee shall not cause or permit an odour nuisance to be created as a result of the operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.

Respecting Wastewater Treatment Ponds

10. The Licencee shall maintain a fence, being satisfactory to the Director, around the wastewater treatment ponds to restrict unauthorized access.
11. The Licencee shall maintain, at all times, a minimum of 0.5 metre of freeboard in each of the cells of the wastewater treatment ponds.
12. The Licencee shall ensure that if, in the opinion of the Director, significant erosion of the interior or exterior surfaces of the wastewater treatment ponds occurs, rip rap shall be placed on the interior or exterior dyke surfaces from 0.6 metres above the high water mark to at least 0.6 metres below the low water mark to protect the dykes from wave action or erosion from flood water.
13. The Licencee shall provide and maintain a grass cover on the dykes of the wastewater treatment ponds and shall regulate the growth of the vegetation so that the height of the vegetation does not exceed 0.3 metres on all dykes.
14. The Licencee shall annually remove by mechanical methods all reeds, rushes and trees located above the low water mark in every cell of the wastewater treatment ponds.

15. The Licencee shall implement an ongoing program to remove burrowing animals from the site of the wastewater treatment ponds.
16. The Licencee shall direct all wastewater, excluding sanitary sewage and reject water from the microfiltration and reverse osmosis water treatment system, to the wastewater treatment ponds.

Respecting Reverse Osmosis Reject Water Discharge

17. The Licencee shall conduct an effluent monitoring program of the reverse osmosis reject water as described in Clauses 18 to 21 of this Licence, for a period of one year commencing on the date of this Licence. Following this period, the duration of the monitoring program may be extended by the Director if the results, in the opinion of the Director, indicate that a longer monitoring period is appropriate.
18. The Licencee shall, on a quarterly basis for the duration of the effluent monitoring program, collect grab samples of the reverse osmosis reject water effluent stream.
19. The Licencee shall transport the grab samples collected pursuant to Clause 18 of this Licence to an accredited laboratory for analysis. The samples shall be stored and transported in accordance with procedures specified by Manitoba Water Stewardship to ensure that the samples are suitable for analysis.
20. The Licencee shall, at an accredited laboratory, have the samples collected pursuant to Clause 18 of this Licence, analyzed for the following parameters:
 - a) chloride;
 - b) sodium;
 - c) total dissolved solids; and
 - d) total suspended solids.
21. The Licencee shall, not more than 30 days after the results of each quarterly analysis are available, submit the results to the Director.

Respecting Wastewater Discharge

22. The Licencee shall not discharge any wastewater from the Development:
 - a) where the organic content of the effluent, as indicated by the five day biochemical oxygen demand, is in excess of 25 milligrams per litre;
 - b) that is acutely lethal to *daphnia magna*, as determined by means of a 48-hour exposure period which results in mortality to more than 50 percent of the test *daphnia magna* exposed to undiluted discharge water, with the test carried out in accordance with the most recent edition of Environment Canada, Environmental Protection Service test method EPS 1/RM11, "Biological Test Method: Acute Lethality Test Using *Daphnia spp.*" and with the acute lethality measured according to the most recent edition of Environment Canada, Environmental Protection Service Test Method EPS 1/RM/14, "Reference Method for Determining the Acute Lethality of Effluent to *Daphnia magna*";
 - c) that has a total ammonia concentration in excess of eight milligrams per litre for any grab sample;

- d) that has a pH of greater than nine;
 - e) where the parameters listed in Clause 30 of this Licence exceed the criteria contained in the document titled "*Manitoba Water Quality Standards, Objectives, and Guidelines*";
 - f) between the 1st day of November of any year and the 15th day of May the following year;
 - g) when flooding from any cause is occurring along the effluent drainage route; or
 - h) when such a discharge would cause or contribute to flooding in or along the effluent drainage route.
23. The Licencee, after December 31, 2010, shall not discharge any wastewater from the Development that:
- a) has a total nitrogen concentration in excess of 15 milligrams per litre based on an average of any three consecutive grab samples taken during the discharge period; or
 - b) has a total phosphorus concentration in excess of 1 milligram per litre based on an average of any three consecutive grab samples taken during the discharge period.
24. The Licencee shall ensure that any discharge from the wastewater treatment ponds follows the routes to the Assiniboine River as described on Appendix 'A' to this Licence, and that such discharge does not create a situation which impedes, in any manner, any natural or other man-made surface drainage on this route.
25. The Licencee shall maintain the discharge route of the wastewater treatment lagoon such that it effectively performs its intended service.

Respecting Wastewater Treatment Ponds – Monitoring And Reporting

26. The Licencee shall measure, to an accuracy of $\pm 5\%$, the volume of wastewater being discharged to the wastewater treatment ponds.
27. The Licencee shall measure, to an accuracy of $\pm 5\%$, the volume of wastewater being discharged from the wastewater treatment ponds.
28. The Licencee shall maintain the outfall structure at the wastewater treatment ponds' discharge point such that potential erosion from any necessary discharge is minimized.
29. The Licencee shall record the information collected in Clause 26 and 27 of this Licence and submit a report to the Director by the first day of February of every year. The report shall contain:
- a) a copy of the daily flow recordings for wastewater and recycled wastewater, as litres, from January 1 to December 31 of the preceding year;
 - b) the total combined monthly flow recordings for wastewater and recycled wastewater, as litres, from January 1 to December 31 of the preceding year;
 - c) a listing of any process wastewater other than:
 - i) cooling tower blowdown;
 - ii) boiler blowdown; and
 - iii) brine rinse; and
 - d) a listing of all chemicals and their active ingredients which have been used for the conditioning or treatment of each of the process waters prior to discharge to the wastewater treatment ponds.

30. The Licencee shall, prior to any wastewater discharge from the wastewater treatment ponds, obtain grab samples from the evaporation pond and have these samples analysed for:
 - a) the organic content as indicated by the five-day biochemical oxygen demand and expressed as milligrams per litre;
 - b) acute lethality as described in Clause 22(b);
 - c) alkalinity (total CaCO_3) expressed as milligrams per litre;
 - d) ammonia (un-ionized, NH_3) expressed as milligrams per litre;
 - e) calcium expressed as milligrams per litre;
 - f) chloride expressed as milligrams per litre;
 - g) colour expressed as true colour units;
 - h) dissolved oxygen expressed as milligrams per litre;
 - i) hardness (as CaCO_3) expressed as milligrams per litre;
 - j) Kjeldahl nitrogen expressed as milligrams per litre;
 - k) nitrate-nitrite (as N) expressed as milligrams per litre;
 - l) oil & grease expressed as milligrams per litre;
 - m) pH;
 - n) sodium expressed as milligrams per litre;
 - o) temperature expressed as degrees Celsius
 - p) total dissolved solids expressed as milligrams per litre;
 - q) total nitrogen content expressed as milligrams per litre;
 - r) total phosphorus content expressed as milligrams per litre; and
 - s) total suspended solids content expressed as milligrams per litre.
31. The Licencee shall, during wastewater discharge from the wastewater treatment ponds, obtain three grab samples from the evaporation pond and have these samples analysed for total nitrogen and total phosphorus content.
32. The Licencee shall conduct a monitoring program for the Sodium Adsorption Ratio (SAR) of effluent, prior to each discharge, for a minimum of three years from the date of this Licence.
33. The Licencee shall, not less than 30 days after the results of the sample analysis are available, submit to the Director the results of the monitoring program carried out pursuant to Clauses 30, 31, and 32 of this Licence.
34. The Licencee shall, at the request of the Director, propose a plan for approval by the Director, that the Licencee will implement to reduce the concentrations of effluent constituents that create SAR levels that exceed SAR levels of Manitoba Water Quality Standards, Objectives, and Guidelines.
35. The Licencee shall, at the request of the Director, provide information concerning specific wastewater flow rates and seepage rates, and shall monitor wastewater and groundwater at such locations and for such parameters as are prescribed by the Director.

Respecting Wastewater Treatment Ponds – Remedial Action

36. The Licencee shall, at the request of the Director, determine the condition of the liner system of the aeration cells and submit a report to the Director which addresses the continuity, integrity and permeability of the liner system, and includes a proposal to upgrade the liner system if necessary.
37. The Licencee shall undertake any works deemed by the Director to be necessary to upgrade the liner system, and shall complete the works within a time frame determined by the Director.


Respecting Sludge, Solid Waste and Sanitary Liquid Waste

38. The Licencee shall dispose of sludge, solid and/or liquid wastes generated in the operation of the food processing plant in a manner which has been approved by the Director.

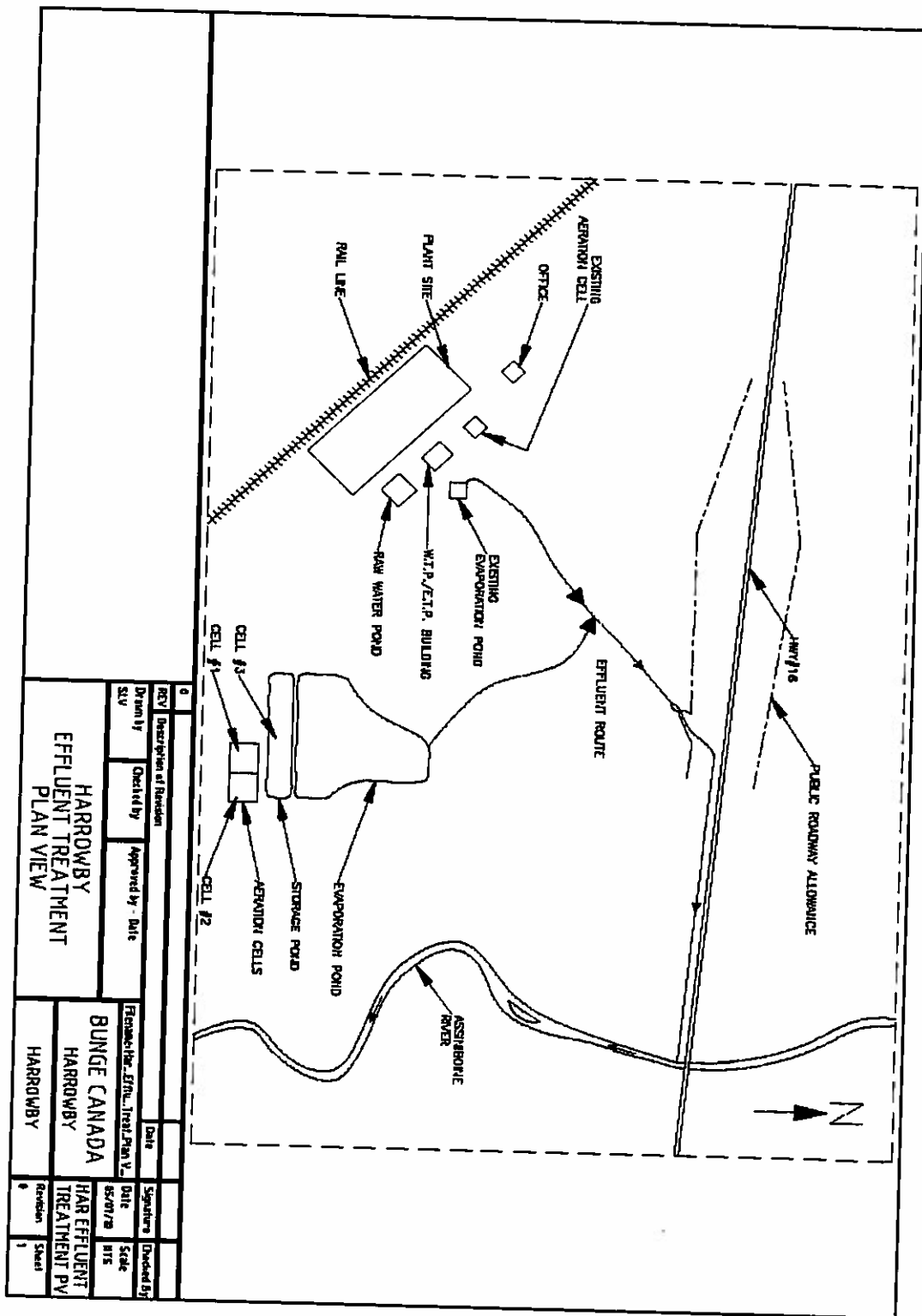
REVIEW AND REVOCATION

- A. This Licence replaces Licence No. 959 VC RRR 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 set out in this Licence, the Director may require the filing of a new proposal pursuant to the Environment Act.

Client File No.: 2404.10


Tracey Braun, M.Sc.
Director
Environment Act

Appendix 'A' to Environment Act Licence No. 959 VC RRRR



REV	Description of Revision	Date	Signature	Checked By
0				
Drawn by	Created by	Approved by - Date	Prepared for: Efflu. Treat. Plan V.	Date
SLV			HARROWBY	RS/OT/RS
HARROWBY EFFLUENT TREATMENT PLAN VIEW			BUNGE CANADA	
			HARROWBY	
			HAR EFFLUENT TREATMENT PV	Date 9
			HARROWBY	Scale NTS Sheet 1