

Environment Act Licence Loi sur l'environnement Licence

Manitoba
Conservation
Conservation
Manitoba



Licence No./Licence n° 2143 S3 RR

Issue Date/Date de délivrance March 24, 2000

Revised: **April 6, 2000**
June 8, 2000

**IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)
THIS STAGE 3 LICENCE IS ISSUED PURSUANT TO SECTIONS 10(1) AND 13(1) TO:**

XPOTENTIAL PRODUCTS INC.; "the Licencee"

for the construction and restricted operation of the Development being an automobile shredder residue (ASR) and plastics recycling plant, located at 999 Redonda Street in Lot 1, Plan 29953 WLTO in the E 1/2 of Section 16, Township 11, Range 4 EPM in the Rural Municipality of Springfield, in accordance with the proposals filed under The Environment Act on October 12, 1993, and September 27, 1995; and the correspondence dated June 6, 1997 and September 22, 1999; 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;

"**ASR**" means that material known as automobile shredder residue that is a by-product of the shredding of discarded goods that have a significant metallic content including motor vehicles and large appliances, and that is comprised mainly of the non-metallic components of those goods;

"**Category 2 resin type**" means high density polyethylene;

"**Category 3 resin type**" means polyvinyl chloride (PVC);

"**Category 4 resin type**" means low density polyethylene;

"**Category 5 resin type**" means polypropylene;

"**Category 7 resin type**" means commingled or mixed plastics of various resin types;

"densification" means that process used to convert thin, film plastics into pelletized plastics by the application of friction, heat and cooling water;

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

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

"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 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;

"**PCB**" means a chlorobiphenyl that has the molecular formula $C_{12}H_{10-n}Cl_n$ in which "n" is greater than 2;

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

"**ppm**" means parts per million by weight;

"**pre-processing**" means any handling, manipulation or other treatment of a material to alter its physical or chemical characteristics to prepare for its use in the manufacture of any product where that manufacture involves the application, either indirectly or directly, of heat or pressure, but does not include natural air drying of ASR in storage cells or the designated drying area;

"**processing**" means the use of any material in the manufacture of any product where that manufacture involves the application, either indirectly or directly, of heat or pressure;

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

"**regular full production**" means the mass of product manufactured at the Development and with ASR as a component;

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

"**sewage**" means human body, toilet, liquid, waterborne culinary, sink or laundry waste;

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

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

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the Development, at all times.
2. The Licencee shall reduce the production and dissemination of wastes by initiating and maintaining waste reduction and waste recycling programs.

3. 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 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.
5. 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.

LIMITS, TERMS AND CONDITIONS

Respecting Site Plans and Building Plans

6. The Licencee shall submit, prior to pre-processing or processing any ASR at the Development, schematic as-constructed drawings of the Development to the satisfaction of the Director, including:
 - a) a current scaled site layout showing and identifying property boundaries, all existing buildings, roadways, storage areas, wells, fence lines, wastewater discharge locations and other man made structures;
 - b) updated schematic process diagram; and
 - c) as constructed drawings of all air ducting systems and any scrubber systems and discharge stacks, including dimensions and heights.All drawings shall be of sufficient size, but no smaller than 11" by 17", so as to clearly identify all features including textural descriptions.

Respecting Processing Material Storage

7. The Licencee shall only store or accumulate at the Development the following materials which are intended for processing:
 - a) ASR;
 - b) waste plastics of Category 2, 4, or 5 resin types;
 - c) waste plastics of Category 7 resin type containing no Category 3 resin type; and
 - d) other materials as approved by the Director.

8. The Licencee shall not store more than 115,000 m³ of ASR at the Development at any time.
9. The Licencee shall, within 7 years of achieving the following conditions, reduce the amount of ASR stored at the Development to that amount needed for 12 months average of regular full production:
 - a) 80% of the monthly average as determined by the requirements of Clause 24 of this Licence has been attained; and
 - b) an 80% monthly average has been attained for any 3 months in any 6 month period.

Respecting ASR Handling/Processing

10. The Licencee shall receive at the Development only that ASR material produced from the shredding facility located at part of the NW ¼ of Section 17, Township 11, Range 4 EPM in the Rural Municipality of Springfield, and:
 - a) which has a PCB concentration of less than 50 ppm determined by methods approved by the Director; and
 - b) which has not been prohibited for use in the Province of Manitoba by a Federal, Municipal or other level of regulatory agency which has the jurisdictional authority to prohibit such use.
11. The Licencee shall not receive at the Development, any material generated by off-site pre-processing of ASR unless approved by the Director.
12. The Licencee shall implement measures to prevent or minimize the entrainment of material in the air resulting from the transportation, storage or handling of ASR at the Development.
13. The Licencee shall prevent the loss of any of the ASR material during their handling and transport of the ASR to the Development, and in the event there is a loss, shall immediately recover and properly dispose of the loss.

16. The Licencee shall submit monthly summaries of the information required in Clauses 14 and 15 of this Licence to the Director by the 21st day of the following month.
17. The Licencee shall notify the Director, in writing, at least 10 working days prior to the initiation of pre-processing or processing of ASR at the Development.
18. The Licencee shall submit in writing to the Director, the date of the initiation of pre-processing and processing of ASR at the Development.
19. The Licencee shall not pre-process ASR for a period of greater than 10 days before initiating processing of the ASR.
20. The Licencee shall submit, within 180 days of the initiation of processing of ASR at the Development, ranges of operating specifications and parameters for all pre-processing or processing equipment which might potentially alter any physical or chemical characteristics of the ASR by means of drying, shredding, separation of components, application either indirectly or directly of heat, addition of other materials, mechanical agitation, pressurization or other processes as may be identified by the Director.
21. The Licencee shall not pre-process, process or in any other way use ASR for any product manufactured at the Development, unless that ASR meets federal and provincial regulatory standards.
22. The Licencee shall provide, to the satisfaction of the Director, such information as is needed to demonstrate compliance with Clause 21 of this Licence.

Respecting the Determination of Regular Full Production & ASR Storage

23. The Licencee shall determine the rate of regular full production within 270 days of the initiation of processing of the ASR at the Development.
24. The Licencee shall submit to the Director, not later than 285 days after the initiation of processing of ASR at the Development, the determined rate of regular full production of product manufactured. The rate shall be stated as:
 - a) a monthly average; and
 - b) daily and hourly averages as calculated from the determined monthly average.

Respecting Densification of Plastics

25. The Licencee shall process only waste plastic derived from Categories 2, 4, 5 and 7 resin types, in the densification operation.
26. The Licencee shall not process waste plastics in the densification process which contain contaminants listed as dangerous goods as per Chapter D12 The Dangerous Goods Handling and Transportation Act and its associated Regulations and, upon the Director's request, shall determine and be able to demonstrate, on a continuous basis satisfactory to the Director, that the waste plastic processed in the densification process is free of contaminants listed as dangerous goods as per Chapter D12 The Dangerous Goods Handling and Transportation Act and its associated Regulations.

27. The Licencee shall transport, handle and store all waste plastic used in the densification process such that none of the material is dispersed beyond the boundaries of the Development.
28. The Licencee shall not operate the densification process equipment unless all emissions from that process equipment are directed to the air pollution control equipment suitable to control those emissions, and the air pollution control equipment is properly maintained and fully operational.

Respecting Used Oil Container Storage and Processing

29. The Licencee may store used oil containers at the Development:
 - a) to a maximum volume of 100 cubic metres;
 - b) only in an area protected from precipitation such that this area is not allowed to become wet;
 - c) only in an area designed and constructed to:
 - i) be impermeable to oil;
 - ii) retain all drained, spilled or leaked oil; and
 - iii) collect and safely transfer all accumulated oil to an approved storage; and
 - d) only if functional fire response equipment is immediately available and operational.
30. The Licencee may not shred or otherwise process used oil containers:
 - a) unless an oil collection system designed to contain, collect and transfer all oil released during the shredding process to an approved oil storage container is in place; and
 - b) unless the oil collection system is fully operational.
31. The Licencee may store shredded plastic manufactured from used oil containers at the Development:
 - a) to a maximum volume of 600 cubic metres;
 - b) only in an area protected from precipitation such that this area is not allowed to become wet;
 - c) only in an area designed and constructed to:
 - i) be impermeable to oil;
 - ii) retain all drained, spilled or leaked oil; and
 - iii) collect and safely transfer all accumulated oil to an approved storage; and
 - d) only if functional fire response equipment is immediately available and operational.

Respecting Air Emissions

32. The Licencee shall, at the written request of the Director, construct a stack or stacks for the sampling of emissions at the Development. The stack or stacks shall be:
 - a) at a location(s);
 - b) completed within a time frame; and
 - c) to the specifications; stipulated by the Director.

33. The Licencee shall construct and maintain, when requested by the Director, stack sampling facilities at the Development. These facilities shall be constructed in accordance with the most recent version of Manitoba Conservation Guideline No. 97-05, *Guideline for Stack Sampling Facilities*, unless otherwise approved by the Director.
34. The Licencee shall submit, within 90 days of the issuance of this Licence, a detailed plan which is acceptable to and approved by the Director, for the sampling and analysis of potential air contaminants, released as stationary point and fugitive emissions, including those compounds listed in Table 1 attached to this Licence. The plan shall identify the rationale for the sampling; the ways and means by which the sampling program will be implemented including any special measures or methods which would be necessitated by influencing factors such as unfavourable weather conditions, the need for large or additional sample volumes, the need for multiple sampling runs, etc.; the methods used for the sampling and the analysis for each contaminant; the detection level to be attained; a comprehensive QA/QC program, and other items as may be identified by the Director.
35. The Licencee shall perform all stack sampling in accordance with the most recent version of Manitoba Conservation Report No. 96-07, *Interim Stack Sampling Performance Protocol*, unless otherwise approved by the Director.
36. The Licencee shall arrange the scheduling of the sampling program described in Clause 34 of this Licence such that Manitoba Conservation is available to monitor and audit the implementation of the sampling program. A minimum of 21 days prior notice must be given a pre-approved method. A minimum of 60 days prior notice must be give for any change to a pre-approved method.
37. The Licencee shall complete the sampling of emissions according to the approved plan as required by Clause 34 of this Licence, within 270 days of the initiation of processing of ASR at the Development.
38. The Licencee shall submit a report of the completed sampling and analysis plan described in Clause 34 of this Licence, within 60 days of the receipt of the analytical results of that sampling plan. The report shall contain at minimum:
 - a) the raw data collected;
 - b) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
 - c) a discussion of the significance of the data gathered with specific attention to:
 - i) the significance for potential acute and chronic impacts to health or environment from exposure to concentrations of any of the parameters detected;
 - ii) the need for risk assessment of the impact of emissions;
 - iii) the need for the establishment of ambient air monitoring stations;
 - iv) the need for dispersion modelling of emissions;
 - v) results and conclusions of the QA/QC program; and
 - vi) other issues as determined by the Director.

39. The Licencee shall not emit from the Development:
- a) particulate matter in any air emission that:
 - i) exceeds 0.23 grams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury, from any point source of the Development;
 - ii) exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or
 - iii) results in the deposition of visible particulate residue at any time beyond the property line of the Development; or,
 - b) particulate matter from any point source with an opacity that equals or exceeds:
 - i) 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
 - ii) 20 percent for more than 16 individual opacity observations within any 1 hour period; or
 - iii) 40 percent for any individual opacity observation.
40. 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.
41. 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 Air Pollution Control Equipment

42. The Licencee shall not operate any process which might cause contaminants to be emitted from the Development unless:
- a) emissions from the process are directed to a fully operational air pollution control device(s) which removes or treats the contaminants of interest;
 - b) all discharges of treated emissions from the air pollution control devices are immediately directed to a stack which meets the conditions as stipulated in this Licence; and
 - c) the emissions shall not contain concentrations of contaminants which are in violation of any limits stipulated in this Licence or otherwise create a significant health or environmental impact beyond the boundaries of the Development.
43. The Licencee shall maintain a log book of the most recent 24 months of maintenance activities and downtimes of the air pollution control device(s). The log book shall be kept at the Development and shall be available upon request for inspection by an Environment Officer. The log book shall record, at minimum, the following:
- a) identification of the unit and the process(s) it serves;
 - b) time/date of log entry;
 - c) nature of event;
 - d) time and duration of event;
 - e) the accumulated downtime for these events for each calendar year; and
 - f) signature of employee/manager.

Respecting Groundwater

44. The Licencee shall determine:
 - a) the recharge rate of each monitoring well identified as Supply Well, MW1, MW2(a, b and c), MW3 and MW4 identified on Diagram 1 attached to this Licence, such that each well might be adequately purged and sampled as required in Clause 45 of this Licence; and
 - b) the direction of flow of the groundwater in this upper aquifer.
45. The Licencee shall collect sufficient samples of groundwater for the analysis of the compounds listed in Table 2 attached to this Licence. The samples shall be taken in a manner approved by the Director, from each of the monitoring wells identified on Diagram 1 attached to this Licence as Supply Well, MW1, MW2(a, b and c), MW3 and MW4. The samples are to be taken:
 - a) once or more as requested by the Director, to establish background concentrations; and
 - b) thereafter, on an annual basis during the summer, unless otherwise requested by the Director.
46. The Licencee shall, for the samples collected as required in Clause 45 of this Licence, have each sample analysed using methods approved by the Director.
47. The Licencee shall analyse each sample collected as required in Clause 45 of this Licence such that the detection level of each analyte reported is sufficient to verify compliance with the most conservative of the, Water: Community Criteria, as listed in the most current *Canadian Environmental Quality Guidelines* published by the Canadian Council of Ministers of the Environment.
48. The Licencee shall submit to the Director, a report of the results of the groundwater sampling and analysis program, within 60 days of receipt of the analytical data. The report shall contain at minimum: a discussion of the sampling and analytical program; a discussion of the data; a discussion of any trends; a copy of all raw data including QA/QC information (blanks, duplicates, methodologies) from the laboratory.
49. The Licencee shall have completed the requirements of Clauses 45a), 46, 47 and 48 of this Licence, to the satisfaction of the Director, by September 30, 2000.

Respecting Surface Wastewater

50. The Licencee shall not discharge surface wastewater beyond the boundaries of the Development unless:
 - a) samples of the wastewater to be discharged have been sampled and analysed for the parameters listed in Table 3 attached to this Licence using methods approved by the Director;
 - b) a report is submitted prior to any discharge, containing at minimum: a discussion of the sampling and analytical program; a discussion of the data; a discussion of any trends; a copy of all raw data including QA/QC information (blanks, duplicates, methodologies) from the laboratory of the results of the wastewater sampling and analysis program, for the approval of the Director;

- c) the results of the analyses of the wastewater meets the Water: Aquatic Life - Freshwater Criteria, as listed in the most current *Canadian Environmental Quality Guidelines* published by the Canadian Council of Ministers of the Environment;
 - d) the surface wastewater is discharged only at the designated wastewater discharge location as identified on the scaled site layout required in Clause 6 of this Licence;
 - e) written approval for surface discharge is received from the Director; and
 - f) the following information is recorded in a log book which is kept at the Development and made available to an Environment Officer upon request:
 - i) date and times of discharge; and
 - ii) measured volume of discharge as litres.
51. The Licencee shall not discharge wastewater from the surface impoundment structure unless:
- a) the wastewater is directed to the designated wastewater discharge location in a manner which will prevent the infiltration of contaminants into the underlying aquifer(s); and
 - b) written approval for discharge is received from the Director.

Respecting Sanitary Wastes

52. The Licencee shall discharge only sanitary wastes to the sewage system.

Respecting Solid Waste

53. The Licencee shall dispose of all solid waste generated from any activity at the Development in a manner acceptable to the Director.

Respecting Decommissioning

54. The Licencee shall submit a decommissioning plan for the Development, suitable to the Director, within 90 days of the issuance of this licence.
55. The Licencee shall remove any or all ASR stored at the Development, upon written request of and in a manner approved by the Director.
56. The Licencee shall decommission and remediate the Development, if so ordered by and to the satisfaction of the Director.

Respecting Financial Assurance

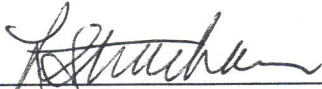
57. The Licencee shall submit an updated financial assurance proposal, prior to pre-processing or processing of any ASR at the Development, for approval of the Director.
58. The Licencee shall establish and maintain the financial assurance required by Clause 57 of this Licence, until otherwise notified in writing by the Director. The financial assurance shall be established within 30 days of the issuance of this Licence.

Respecting Emergency Planning

59. The Licencee shall submit to the Director for approval, within 60 days of the date of this Licence, an updated 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. This Licence replaces Licence No. 2143 S3 R which is hereby rescinded.
- B. This Licence shall be withdrawn one year from the date of initiation of the processing of ASR at the Development if the conditions of Clauses 23, 38, 49 and 58 of this Licence are not met to the satisfaction of the Director.
- 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 10 of The Environment Act.



Larry Strachan, P. Eng.
Director
Environment Act

Client File No.: 3674.00

Diagram 1

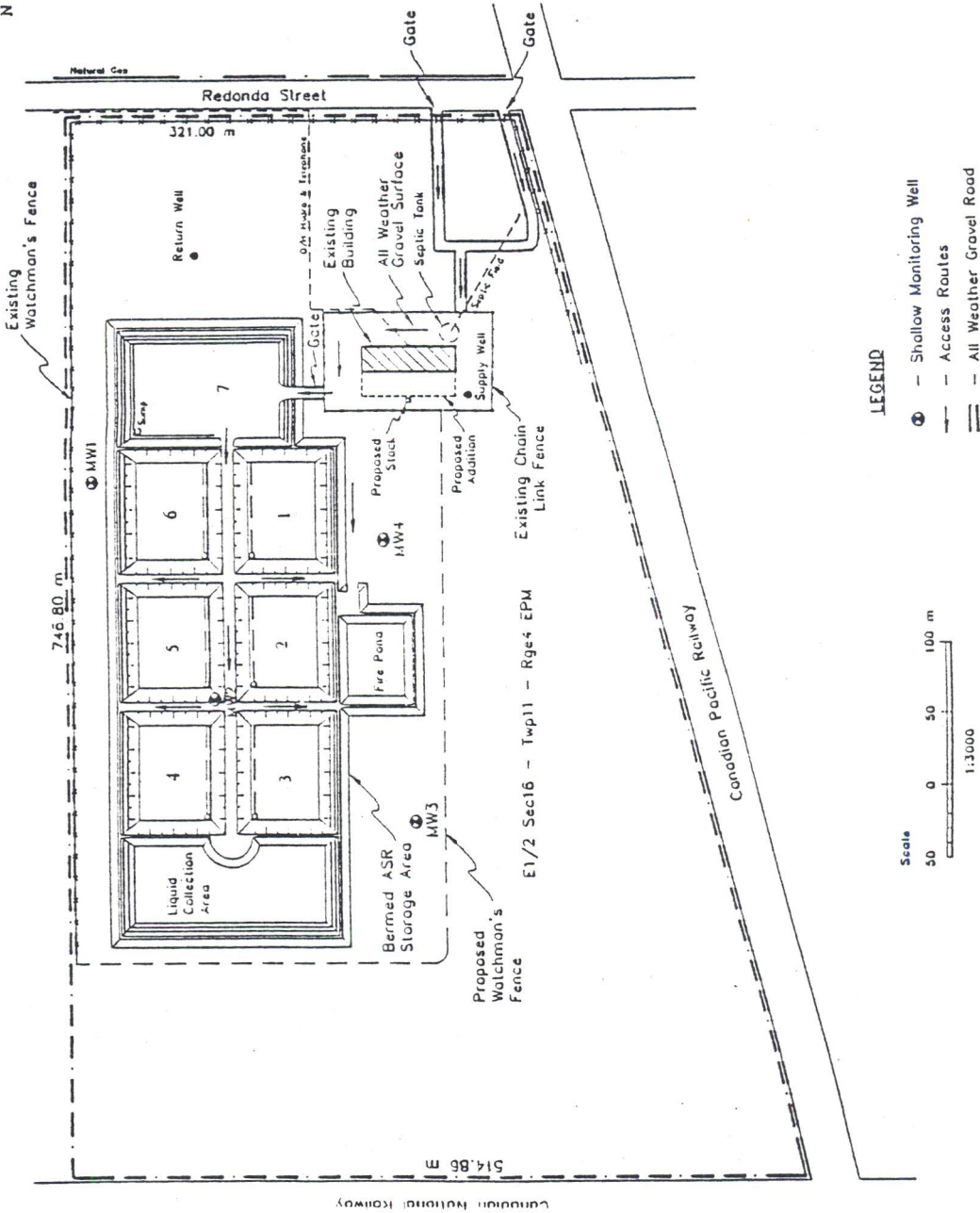


Table 1
Air Contaminants

Group	Compound
Metals/PM	Particulates as TPM; PM _{2.5} ; CPM Arsenic Cadmium Chromium Copper Lead Mercury Nickel Zinc
Chlorinated Solvents	1,1,1-trichloroethane trichloroethylene tetrachloroethylene
Other Organics	benzo(a)anthracene benzo(a)pyrene naphthalene N-nitrosodiethylamine N-nitrosodimethylamine N-nitrosodiphenylamine N-nitrosodi-n-butylamine N-nitrosomethylethylamine N-nitrosodi-n-propylamine N-nitrosopyrrolidine benzene toluene xylenes 2,4-Toluene diisocyanate formaldehyde acrylonitrile polychlorinated byphenyls (PCB's)
Inorganic Acids	HCl HCN H F
Dioxins/Furans	Chlorinated dibenzo-p-dioxins Chlorinated dibenzofurans

Ground Water Assessment Compounds

pH

Temperature

Conductivity

Total Dissolved Solids

Metals (Dissolved) including: aluminum; arsenic; barium; beryllium; boron; cadmium; chromium (total); cobalt; copper; iron; lead; zinc.

ammonia (total)

nitrite

nitrate/nitrite/N

chloride (total)

BTEX (benzene, toluene, ethylbenzene, xylene)

TVH (Total Volatile Hydrocarbons)

THE (Total Extractable Hydrocarbons)

PCP (pentachlorophenols)

2,4-D (dichlorophenols)

Table 3

Surface Waste Water Assessment Compounds

pH

Temperature

Conductivity

Total Dissolved Solids

Metals (Total and Dissolved) including: aluminum; arsenic; barium; beryllium; boron; cadmium; chromium (total); cobalt; copper; iron; lead; zinc.

ammonia (total)

nitrite

nitrate/nitrite/N

chloride (total)

BTEX (benzene, toluene, ethylbenzene, xylene)

TVH (Total Volatile Hydrocarbons)

THE (Total Extractable Hydrocarbons)

PCP (pentachlorophenols)

Pesticides including: 2,4-D (dichlorophenols); 2,4,5-TP; Aldrin & Dieldrin; Chlordane; DDT & Metabolites; Diazinon; Toxaphene; Lindane; Endrin; Heptachlor; Heptachlor Epoxide.