



Conservation and Water Stewardship

Environmental Stewardship Division
Environmental Approvals Branch
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File: 5366.00

April 8, 2014

Chris Fulsher
Chief Administrative Officer
Rural Municipality of Headingley
1 – 126 Bridge Road.
Headingley, MB R4H 1G9

Dear Mr. Fulsher:

**Re: Rural Municipality of Headingley Sewage Treatment Plant - Environment Act
Licence No. 2869 RRR**

Receipt of the December 18, 2013 letter regarding the Rural Municipality (RM) of Headingley Sewage Treatment Plant - Environment Act Licence No. 2869 RRR is acknowledged as a Notice of Alteration (NoA) in accordance with Section 14 of *The Environment Act*.

In your letter, you requested an amendment to Sub-Clauses 21(b) and (c) regarding the testing requirements for fecal and total coliform. You requested a reduction in the frequency of testing for fecal and total coliforms in accordance with the following rationale:

- Compliance with the licence limits since the facility was successfully commissioned;
- Regular maintenance of the UV system, including bulb changes; and
- The significant cost of sampling per the current requirements (24 samples per month).

I have reviewed your request and have decided to remove the Sub-Clause 21(c) for testing of total coliform, while keeping the frequency of testing for fecal coliform the same pursuant to Sub-Clause 21(b). The potential environmental effects of this change are considered to be minor and are approved as a minor alteration in accordance with section 14(2) of *The Environment Act*. The licence will be revised in the near future after receiving the report for options for treated waste solids and sewage sludge disposal as required by Clause 5 and which is due in June 2014.

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If you have any questions, please contact Mr. Rafiqul Chowdhury, P.Eng., Environmental Engineer, at (204) 945-2614 or by e-mail at Rafiqul.Chowdhury@gov.mb.ca.

Yours truly,

“original signed by”

Tracey Braun, M.Sc.

Director

Environmental Approvals Branch

- c. Don Labossiere, Director, Environmental Compliance and Enforcement Branch
Donna Smiley, Provincial Manager, Environmental Compliance and Enforcement Branch
Public Registries

LICENCE

Licence No. / Licence n°	<u>2869 RRR</u>
Issue Date / Date de délivrance	<u>February 24, 2009</u>
Revised :	<u>June 11, 2009</u>
Revised :	<u>February 9, 2012</u>
Revised :	<u>November 5, 2012</u>

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 Sections 11(1) and 14(2) / Conformément au Paragraphe 11(1) et 14(2)

THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉE À:

RURAL MUNICIPALITY OF HEADINGLEY
"the Licencee"

for the construction and operation of the Development being a wastewater collection system and a sewage treatment plant located on parcel 1, plan 12359, excluding plan 16269 org, river lots 35 – 38, Parish of Headingley, Rural Municipality of Headingley and with discharge of treated effluent into the Assiniboine River, in accordance with the Proposal filed pursuant to The Environment Act on August 19, 2008, and subsequent information submitted on November 5, 2008, December 4, 2008, December 17, 2008, December 22, 2008, February 12, 2009, and the Notice of Alteration submitted on December 13, 2011 and July 9, 2012 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 a 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;

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

"acute lethality" means a toxic effect resulting in death in an organism by a substance or mixture of substances within a short exposure period (usually 96 hours or less);

"affected area" means a geographical area excluding the property of the development;

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

"appurtenances" means machinery, appliances, or auxiliary structures attached to a main structure to enable it to function, but not considered an integral part of it;

"bioassay" means a method of determining toxic effects of industrial wastes and other wastewaters by using viable organisms;

"composite sample" means a quantity of undiluted wastewater consisting of a minimum of 10 equal volumes of effluent, or flow proportional volumes collected over a 24-hour period, and may be collected manually or by means of an automatic sampling device;

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

"effluent" means treated wastewater flowing or pumped out of the sewage treatment plant;

"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 (BOD₅)" means that part of the oxygen demand usually associated with biochemical oxidation of organic material within five days at a temperature of 20°C;

"five-day carbonaceous biochemical oxygen demand (CBOD₅)" means that part of the oxygen demand usually associated with biochemical oxidation of carbonaceous organic matter within five days at a temperature of 20°C, excluding the oxygen demand usually associated with the biochemical oxidation of nitrogenous organic matter;

"flow proportional composite sample" means a combination of not less than ten individual samples of equal volumes of wastewater taken at equal increments of wastewater flow over a specified period of time;

"grab sample" means a quantity of wastewater taken at a given place and time;

"influent" means water, wastewater, or other liquid flowing into the sewage treatment plant;

"mixing zone" means an area adjacent to a discharge where a receiving water may not meet all water quality objectives included in the most recent version of the "Manitoba Water Quality Standards, Objectives, and Guidelines";

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

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

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public; if the odour, smell or aroma
- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director, and within a 90-day period, from 5 different persons falling within clauses a), b) or c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c), and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

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

"septage" means the sludge produced in individual on-site wastewater disposal systems such as septic tanks;

"sewage" means household and commercial wastewater that contains human waste;

"sewage effluent" means sewage after it has undergone at least one form of physical or biological treatment;

"sewage treatment plant" means the component of this development which consists of the central facility of the wastewater treatment facilities which contain all treatment processes exclusive of the wastewater collection systems;

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

"sludge solids" means solids in sludge;

"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;

"total coliform" means a group of aerobic and facultative anaerobic, Gram-negative, non-spore 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;

"UV disinfection" means a disinfection process for treating wastewater using ultraviolet radiation;

"UV dose" means the units of intensity of ultra violet light that is required to kill bacteria and viruses present in the sewage effluent;

"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*;

"waste solid" means a dissolved, suspended, or volatile substance that is contained in or removed from wastewater and that can no longer be used for its original purpose;

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

"wastewater collection system" means the sewer and pumping system used for the collection and conveyance of domestic, commercial and industrial wastewater.

GENERAL SPECIFICATIONS

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. 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.

2. 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;
 - b) have analytical determinations undertaken by an accredited laboratory; and
 - c) report the results to the Director, in writing, within 60 days of the samples being taken.
3. 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, and each submission shall be clearly labelled with the Licence Number and Client File Number associated with this Licence.
4. The Licencee shall operate the sewage treatment plant in such a manner that:
 - a) all of the wastewater generated within the Rural Municipality of Headingley, including the Headingley Correctional Institution (HCI) and the proposed Women's Correctional Centre (WCC) is directed towards the sewage treatment plant or other approved sewage treatment facilities;
 - b) only wastewater as defined in this Licence is discharged into the sewage treatment plant;
 - c) primary screenings are disposed in a waste disposal ground operated under:
 - i) a permit issued in accordance with Manitoba Regulation 150/91 or any future amendment thereof; or
 - ii) the authority of a Licence issued under *The Environment Act*;
5. The Licencee shall submit to the Director for approval, on or before June 30, 2013, a report containing a re-assessment of the options for treated waste solids and sewage sludge disposal which shall include the sampling results of waste solids and sewage sludge produced from the operation of the facility.
6. The Licencee shall install, operate and maintain an effluent discharge pipeline from the sewage treatment plant into the Assiniboine River such that freezing of the effluent in the pipeline is prevented.
7. The Licencee shall not spill, or allow to be spilled, wastewater and/or sludge in the area around the sewage treatment plant.
8. The Licencee shall obtain and maintain classification of the Development pursuant to *Manitoba Regulation 77/2003 respecting Water and Wastewater Facility Operators* or any future amendment thereof and maintain compliance with all requirements of the regulation including, but not limited to, the preparation and maintenance of a Table of Organization, Emergency Response Plan and Standard Operating Procedures.

9. The Licencee shall carry out the operation of the Development with individuals properly certified to do so pursuant to *Manitoba Regulation 77/2003 respecting Water and Wastewater Facility Operators* or any future amendment thereof.
10. 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.
11. The Licencee shall:
 - a) develop an emergency response plan (ERP) for the Development in accordance with the “Manitoba Industrial Accidents Council (MIAC) Industrial Emergency Response Planning Guide”;
 - b) submit the ERP for approval of the Director, in written and electronic format, on or before July 31st, 2012; and
 - c) implement the ERP in accordance with the approval of the Director, on or before December 31st, 2012.
12. The Licencee shall actively participate in any future watershed based management study, plan or nutrient reduction program, approved by the Director, for the Assiniboine River and associated waterways and watersheds.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

13. The Licencee shall notify the assigned Environment Officer prior to beginning construction of the sewage treatment plant. The notification shall include the intended starting date of construction and the name of the Licencee’s contact person at the construction site.
14. The Licencee shall:
 - a) conduct all ditch related work activities during no flow or dry conditions and not during the April 1 to June 15 fish spawning and incubation period;
 - b) not construct the wastewater treatment lagoon during periods of heavy rain;
 - c) place and/or isolate all dredged and construction material where it will not erode into any watercourse;
 - d) implement effective long-term sediment and erosion control measures to prevent soil-laden runoff, and/or silt from entering any watercourse during construction and until vegetation is established;
 - e) routinely inspect all erosion and sediment control structures and immediately complete any necessary maintenance or repair;
 - f) vegetate any disturbed areas by planting and seeding preferably native trees, shrubs or grasses and cover such areas with mulch to prevent soil erosion and to help seeds germinate; and
 - g) use rock that is free of silt and clay for rip rap.

15. The Licencee shall operate and maintain the sewage treatment plant in such a manner that:
 - a) the hydraulic loading does not exceed 5,200 cubic metres over any 24-hour period;
 - b) the organic loading does not exceed 1,602.6 kilograms of five-day biochemical oxygen demand over any 24-hour period; and
 - c) the release of offensive odours is minimized.

16. The Licencee shall have adequate instrumentation installed to provide constant monitoring of the UV disinfection treatment process to ensure compliance with the UV 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 and shutdown systems;
 - 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.

17. The Licencee shall utilize UV lamps in the UV disinfection process that have a rated output of at least 254 nanometres (nm) capable of delivering a germicidal dose in excess of 30,000 microwatt seconds/sq cm.

18. The Licencee shall operate and maintain the UV disinfection system to give a germicidal dose of 80% or more of the design UV germicidal dose, at the end of the lamp life.

19. The Licencee shall locate fuel storage and equipment servicing areas established for the construction of the Development 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 Petroleum Products and Allied Products*.

20. The Licencee shall install and maintain a security fence around all components of the sewage treatment plant that are not enclosed within secured buildings.

21. The Licencee shall not discharge effluent from the sewage treatment plant, as sampled at the monitoring station located after UV disinfection, where:
 - a) the organic content of the effluent, as indicated by the five-day carbonaceous biochemical oxygen demand (CBOD₅), is in excess of 25 milligrams per litre;
 - b) 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 intervals on each of a minimum of 3 consecutive days per week;
 - c) 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 intervals on each of a minimum of 3 consecutive days per week;

- d) the total suspended solids content of the effluent, as indicated by the non-filterable residue is in excess of 25 milligrams per litre;
- e) the total phosphorus is in excess of 1.0 milligrams per litre based on a 30 day rolling average;
- f) the total nitrogen is in excess of 15 milligrams per litre based on a 30 day rolling average; and
- g) the ammonia nitrogen content (as N) of the effluent is in excess of the following limits:

Period	Ammonia Nitrogen (as N) in Wastewater Effluent (kilograms/any 24 hour period)
Month of January	15.1
Month of February	15.1
Month of March	15.1
Month of April	7.6
Month of May	7.6
Month of June	7.6
Month of July	7.6
Month of August	7.6
Month of September	7.6
Month of October	15.1
Month of November	15.1
Month of December	15.1

22. The Licencee shall not release a quality of effluent from the sewage treatment plant which:
- a) on any day, 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) 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 100 percent concentration of effluent, with the test carried out in accordance with the protocol outlined in Environment Canada's "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout: EPS 1/RM/13 Second Edition – December 2000" or any future amendment thereof.
23. The Licencee shall install and maintain rip rap on the river bed and bank at the location of the outfall of the effluent discharge pipeline to prevent erosion of the river bed and bank to the satisfaction of an Environment Officer.

MONITORING AND REPORTING SPECIFICATIONS

24. The Licencee shall monitor, and make the records of such monitoring available to the Director as may be requested, the sewage treatment process for the following parameters:
- a) Total flow rate(s) into the plant;
 - b) flow rate(s) into and through the sequencing batch reactor components of the plant;
 - c) flow rates into and through the UV disinfection system; and
 - d) other process parameters approved or required by the Director.
25. 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 sewage treatment plant influent wastewater pipelines;
 - b) ensure that the monitoring stations are accessible to an Environment Officer at all times;
 - c) install and maintain flow measuring devices at the monitoring stations or at locations acceptable to the Director which are capable of measuring the volume of influent with an accuracy of ± 2 percent;
 - d) have the flow measuring devices re-calibrated biannually or on the request of an Environment Officer;
 - e) equip the monitoring stations with flow-proportional sampling devices equipped to function with the flow measuring device and have the sampling devices available on request for use by an Environment Officer; and
 - f) equip the monitoring stations with an electrical power source of 15 amperes at 110 volts.

26. 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 following the UV disinfection;
 - b) ensure that the monitoring stations are accessible to an Environment Officer at all times;
 - c) install and maintain flow measuring devices at the monitoring stations or at locations acceptable to the Director which are capable of measuring the volume of influent with an accuracy of ± 2 percent;
 - d) have the flow measuring devices re-calibrated biannually or on the request of an Environment Officer;
 - e) equip the monitoring stations with flow-proportional sampling devices equipped to function with the flow measuring device and have the sampling devices available on request for use by an Environment Officer; and
 - f) equip the monitoring stations with an electrical power source of 15 amperes at 110 volts.
27. The Licencee shall arrange for the taking of samples of influent wastewater before the wastewater enters the sewage treatment plant and of the effluent at locations that are accessible during all weather conditions.
28. The Licencee shall:
- a) take one flow proportional composite sample of effluent from the effluent monitoring station during the discharge period once each week;
 - b) take three grab samples of the effluent from the effluent monitoring station during the discharge period once each week;
 - c) have the flow proportional composite effluent sample analyzed for:
 - i) carbonaceous biochemical oxygen demand (CBOD₅);
 - ii) total suspended solids;
 - iii) ammonia;
 - iv) total nitrogen;
 - v) total phosphorus;
 - vi) pH; and
 - vii) temperature; and
 - d) have the grab samples analyzed for:
 - viii) fecal coliform content; and
 - ix) total coliform content; and
 - e) 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 twelve (12) grab samples.
29. The Licencee shall report the results from the sampling required by Clause 28 of this Licence to the Director in accordance with the requirements of Clause 2 c) of this Licence.

30. The Licencee shall:
 - a) take one flow proportional composite sample of effluent over a 24 hour period from the effluent monitoring station once each week;
 - b) have the flow proportional composite effluent sample analyzed for total nitrogen and total phosphorus;
 - c) calculate the thirty-day rolling average value for total nitrogen and total phosphorus for the day during which sample was collected;
 - d) prepare a monthly report on the thirty-day rolling average total nitrogen and total phosphorus load; and
 - e) file a copy of the report with the Director within 30 days of the end of each month during which the concentrations were determined.

31. The Licencee shall:
 - a) take two flow proportional composite samples of effluent from the sewage treatment plant over a 24 hour period every three months each year with a minimum separation time of 90 days between samples;
 - b) have one bioassay sample of the effluent analyzed at 100 percent concentration for acute lethality in accordance with the protocol outlined in Environment Canada's "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout: EPS 1/RM/13 Second Edition – December 2000", or any future amendment thereof;
 - c) have one sample of the effluent analyzed for chronic toxicity in accordance with a method approved by the Director; and
 - d) report the results to the Director within 30 days of the end of the month during which the samples were taken.

32. The Licencee shall, in the event of a release, spill, leak, or discharge of a pollutant or contaminant in an amount or concentration, or at a level or rate of release, that exceeds the limit that is expressly provided under this Act, another Act of the Legislature, or an Act of Parliament, or in a regulation, licence, permit, order, instruction, directive or other approval or authorization issued or made under one of those Acts, immediately report the release, spill, leak, or discharge by calling 204-944-4888. The report shall indicate the nature of the release, leak, or discharge, the time and estimated duration of the event and the reason for the release, spill, leak, or discharge.

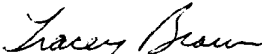
33. The Licencee shall:
 - a) prepare "record drawings" for the Development, including the effluent discharge pipeline, complete with final elevations, and shall label the drawings "as constructed"; and
 - b) provide to the Director, not later than six months after construction of the Development is completed, two sets of "as constructed drawings" of the Development.

34. The Licencee shall, during the first year of operation of the Development following the construction and expansion of the sewage treatment plant, obtain a grab sample of the

effluent and shall be analyzed and reported in accordance with Schedule "A" attached to this licence.

REVIEW AND REVOCATION

- A. Environment Act Licence No. 2869 R is hereby rescinded.
- B. Environment Act Licence No. 2435 RR is rescinded upon decommissioning of the existing sewage treatment plant.
- 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*.


Tracey Braun, M.Sc.
Director
Environment Act

Client File No.: 5366.00

Schedule "A" to Environment Act Licence No. 2869 RRR

Initial Characterization of Wastewater Pursuant to Clause 34

Facility Size: Medium (greater than 2500 m³/day but less than 17,500 m³/day)

Facility Type: Sewage Treatment Plant - Continuous discharge

Effluent Sampling:

During the first year of operation:

1. a grab sample shall be collected on a bi-weekly basis;
2. a grab sample shall be collected on a quarterly basis; and
3. a grab sample shall be collected on a daily basis, if chlorine is used.

Effluent Analysis:

1. Have the bi-weekly sample analyzed for:
 - a) the organic content as indicated by the five-day biochemical oxygen demand and expressed as milligrams per litre;
 - b) the organic content as indicated by the five-day carbonaceous biochemical oxygen demand and expressed as milligrams per litre;
 - c) the total suspended solids content expressed as milligrams per litre;
 - d) the *Esherichia coli* (*E. Coli*) content as indicted by the MPN index and expressed as MPN per 100 millilitres per sample;
 - e) the fecal coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
 - f) the total coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
 - g) total ammonia nitrogen expressed as milligrams per litre;
 - h) nitrate-nitrite nitrogen expressed as milligrams per litre;
 - i) total Kjeldahl nitrogen, TKN (ammonia + organic N) expressed as milligrams per litre;
 - i) dissolved phosphorus expressed as milligrams per litre;
 - j) total phosphorus expressed as milligrams per litre;
 - k) temperature; and
 - l) pH.
2. Have the quarterly sample analyzed for:
 - a) fluoride;
 - b) nitrate;
 - c) nitrate + nitrite;
 - d) total extractable metals and metal hydrides (full range);
 - e) chemical oxygen demand (COD);
 - f) organochlorine pesticides;
 - g) polychlorinated biphenyls (PCBs);

- h) polycyclic aromatic hydrocarbon (PAHs);
- i) cyanide (total);
- j) pH;
- k) volatile organic compounds;
- l) mercury;
- m) phenolic compounds;
- n) surfactants;
- o) acute toxicity; and
- p) chronic toxicity.

3. Have the daily sample analyzed for total residual chlorine (TRC), if required.

Effluent Reporting:

Report the results to the Director, in writing or in an electronic format acceptable to the Director, within 60 days of the sampling date. The report shall include the sampling date, sample temperature, the dates of the effluent discharge, and copies of the laboratory analytical results of the sampled effluent.