

**AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 9566-85BHJK
Issue Date: June 1, 2010**

The Corporation of the Township of Bonnechere Valley
49 Bonnechere St E, Post Office Box, No. 100
Eganville, Ontario, K0J 1T0

Site Location: Eganville Sewage Treatment Plant
131 John St
Bonnechere Valley Township, County of Renfrew

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

modifications to the Eganville Sewage Treatment Plant for the collection, transmission, treatment and disposal of domestic sewage having a *Rated Capacity* of 1,080 m³/d and *Peak Flow Rate* of 2,700 m³/d, consisting of the following *Works*:

PROPOSED WORKS**North Side Pump Station**

- Installation of new control panels and related electrical systems and wireless communication network to allow for remote monitoring of pump station;

Queen Street Pump Station

- Replacement of two existing submersible pumps with two new submersible pumps each pump rated at 15 L/s at a Total Dynamic Head (TDH) of 15 m;
- Replacement of various valves and piping, and modifications to trash rack and other miscellaneous metals;
- Installation of new control panels and related electrical systems and wireless communication network to allow for remote monitoring of pump station;
- Upgrades to concrete wet well structure and control building;
- Installation of various new instrumentation;

South Side Pump Station

- Replacement of two existing submersible pumps with two new submersible pumps each pump rated at 6 L/s at a TDH of 9.5 m;
- Replacement of various valves and piping, and modifications to trash rack and other miscellaneous metals;
- Installation of new control panels and all new electrical systems and wireless communication network to allow for remote monitoring of pump station;
- Installation of various new instrumentation;

Mill Street Pump Station

- Replacement of two existing pumps with two new submersible pumps each pump rated at 8.5 L/s at a TDH of 9 m;
- Replacement of various valves and piping, and modifications to trash rack and other miscellaneous metals;
- Installation of new control panels and all new electrical systems and wireless communication network to allow for remote monitoring of pump station;
- Installation of various new instrumentation;

Sewage Treatment Plant

- Upgrades to the Chemical Building consisting of the following:
 - Modifications to chemical storage secondary containment;
 - Replacement of interior building finishes;
 - Replacement of all chemical day tanks, feed pumps, related piping and appurtenances;
 - Implementation of HVAC/plumbing upgrades including unit heaters, eyewash station, ventilation system, drainage;
 - Replacement of all electrical supply and distribution system;
- Upgrades to the Administrative Building consisting of the following:
 - Replacement of blower room exhaust fan and dampers;
 - Installation of a heat recovery ventilation (HRV) system between the blower room and the office/lab area, including air source heat pump condensing and evaporating units;

including all other controls and appurtenances essential for the proper operation of the aforementioned *Works* ;

all in accordance with the Application for Approval of Municipal and Private Sewage Works submitted by the Township of Bonnechere Valley dated April 23, 2010, and all supporting documentation and information, including Design Brief, Drawings and Contract Specifications prepared by J.L. Richards & Associates Limited.

EXISTING WORKS

North Side Pump Station

- A 2.4 m diameter fibreglass reinforced plastic (FRP) wet well, located on the west side of Bridge Street at Bonnechere Street West, equipped with two (2) submersible pumps, one duty and one standby, each pump rated at 24 L/s against a total dynamic head of 12.5 m, complete with control panel, ultrasonic level controls with 'multitrode' back-up level control including high level alarm, ventilation system, access ladder, service platform, entrance cover, control building, standby diesel generator set, auto-dial system, by-pass piping, and all other appurtenances necessary to have a complete and operable pump station;

all in accordance with the application dated October 26, 2004 and received on December 1, 2004, and all supporting documentation and information, including Design Brief, Final Plans and Specifications prepared by R. Howard, R.W. Howard Engineering Inc.

- An approximate 200 m long, 150 mm nominal diameter forcemain connecting the pump station to a manhole downstream in the collection system.

Queen Street Pump Station

- A 2.4 m by 2.6 m concrete wet well, located on the south side of Queen Street at Water Street, equipped with a trash rack, two (2) submersible pumps operating in duty/standby mode, control panel, float control system, access ladder, service platform, entrance cover, control building, electrical service and standby power supplied from the Eganville Water Treatment Plant, and all other appurtenances necessary to have a complete and operable pump station.
- An approximate 413 m long, 150 mm diameter forcemain connecting the pump station to a manhole downstream in the collection system.

South Side Pump Station

- A 2.3 m diameter concrete wet well, located on the south side of Water Street approximately 100 m west of Bridge Street, equipped with a trash rack, two (2) submersible pumps operating in duty/standby mode, control panel, float control system, access ladder, service platform, entrance cover, and all other appurtenances necessary to have a complete and operable pump station.
- An approximate 165 m long, 75 mm nominal diameter forcemain connecting the pump station to a manhole downstream in the collection system.

Mill Street Pump Station

- A 2.4 m by 2.4 m concrete wet well, located on the south side of Grist Mill Street at John Street, equipped with a trash rack, two (2) submersible pumps, operating in duty/standby mode, control panel, float control system, access ladder, service platform, entrance cover, and all other appurtenances necessary to have a complete and operable pump station.
- An approximate 225 m long, 100 mm nominal diameter forcemain connecting the pump station to a manhole downstream in the collection system.

Sewage Treatment Plant

- A 0.75 m³ capacity raw sewage inlet chamber.
- Two (2) grit removal channels, each 4.4 m long x 0.38 m wide x 0.95 m surface water depth, equipped with two proportional weirs, one (1) coarse bar screen, two (2) sharp crested weirs and two (2) slide gates.
- Two (2) circular package extended aeration biological treatment plants consisting of the following:

Plant No. 1 (Old Plant)

- one (1) comminutor;
- One (1) 650 m³ capacity aeration chamber equipped with fine bubble aeration system;
- one (1) 7.8 m diameter secondary clarifier having a surface area of 47.7 m²;
- one (1) 27 m³ capacity chlorine contact chamber;
- one (1) 53 m³ capacity aerated sludge holding tank/digester;
- one (1) submersible pump rated at 5 L/s at a TDH of 6.5 m located in the secondary clarifier.

Plant No. 2 (New Plant)

- o one (1) communitor;
 - o one (1) 480 m³ capacity aeration chamber equipped with fine bubble aeration system;
 - o one (1) 6.8 m diameter secondary clarifier having a surface area of 36.7 m²;
 - o one (1) 24 m³ capacity chlorine contact chamber;
 - o one (1) 139 m³ capacity aerobic digester;
 - o one (1) submersible pump rated at 5 L/s at a TDH of 6.5 m located in the digester;
- Three (3) air blowers (two duty, one standby) capable of providing 1,270 L/s or air;
 - A chemical treatment building housing the following:

Phosphorus Removal System

- o A phosphorus removal system consisting of a 10,000 L bulk chemical storage tank and three (3) metering pumps, two duty and one standby rated at various capacities;

Chlorination System

- o A chlorination system consisting of 300 L capacity chlorine solution tank feeding two (2) 100 L sodium hypochlorite solution day tanks and three (3) metering pumps, two duty and one standby each rated at 3.3 L/hour at a TDH of 1035 kPa;

Dechlorination System

- o A dechlorination system consisting of a 400 L sodium bisulphite bulk storage tank, and three (3) metering pumps, two duty and one standby each rated at 1.89 L/hour at a TDH of 1035 kPa;
- An effluent outfall consisting of approximately 28 m of 150 mm nominal diameter pipe from Plant No. 2 and 9 m of 200 mm nominal diameter pipe from Plant No. 1 combining into 11 m of 400 mm diameter sewer outfall piping discharging to the Bonnechere River;
 - One (1) 250 kW diesel generator set along with two (2) fuel tanks;

All controls and sensors, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the plant;

all in accordance with the Design Brief entitled "Village of Eganville Water Pollution Control Plant, OCWA Project No. 52-0040-01, Sewage Works Expansion" dated November 1995 prepared by the Greer Galloway Group Inc., Engineers and Planners and all associated data, drawings and supporting information submitted for obtaining previous Certificate(s) of Approval.

- One (1) digested biosolids/septage handling and dewatering facility including the following:
 - One (1) 6.3 L/s capacity submersible pump located in the Stage 2 aerobic digester in Plant No. 1 and a 75 mm diameter forcemain connected to the digested biosolids/septage holding tank located on the south side of John Street;
 - One (1) 45 m³ capacity concrete digested biosolids/septage holding tank equipped with one (1) 5 HP 12 L/s capacity submersible pump for conveying sludge into the Geotubes through 75 mm diameter piping;
 - A small concrete chamber with a quick coupling discharge and one (1) fine bar screen with 13 mm spacing for conveying hauled septage into the biosolids/septage holding tank;
 - One (1) chemical polymer storage/feed system including tank, feed pump with variable speed controller, mixing system and all necessary appurtenances;
 - Three (3) concrete containment pads each providing approximately 123 m² of lay down area for a total of 369 m², equipped with filtrate collection system;
 - A greenhouse structure overtop of one concrete pad for winter operations;
 - One (1) 45 m³ capacity concrete filtrate holding tank to store Geotube filtrate equipped with one (1) 6.3 L/s capacity submersible pump discharging to the inlet chamber of the sewage treatment plant through a 75 mm diameter forcemain;

All controls, sensors, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the facility;

all in accordance with the Application for Approval of Municipal and Private Sewage Works submitted by the Township of Bonnechere Valley dated July 10, 2007, along with a copy of the Preliminary Design Brief entitled "Township of Bonnechere Valley – Village of Eganville Sewage Treatment Plant Biosolids/Septage Dewatering Facility", dated July 2007 prepared by J.L. Richards & Associates Limited.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

"Act " means the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended;

"Annual Average Concentration " means the arithmetic mean of the *Monthly Average Concentrations* of a contaminant in the effluent calculated for any particular calendar year;

"Annual Average Loading " means the value obtained by multiplying the *Annual Average Concentration* of a contaminant by the *Average Daily Flow* over the same calendar year;

"Average Daily Flow " means the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year;

"*By-pass* " means any discharge from the *Works* that does not undergo full treatment before it is discharged to the environment;

"*BOD₅* " (also known as *TBOD₅*) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;

"*CBOD₅* " means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

"*Certificate* " means this entire certificate of approval document, issued in accordance with Section 53 of the *Act* , and includes any schedules;

"*Daily Concentration* " means the concentration of a contaminant in the effluent discharged over any single day, as measured by a composite or grab sample, whichever is required;

"*Daily Loading* " means the value obtained by multiplying the *Daily Concentration* of a contaminant by the average daily flow over the same calendar month;

"*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act* ;

"*District Manager* " means the District Manager of the Ottawa District Office of the Ministry;

"*E. coli* " refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius;

"*Existing Works* " means those portions of the sewage works previously approved and constructed, and existing on-site on the date of issuance of this *Certificate* ;

"*Geometric Mean Density* " is the n^{th} root of the product of multiplication of the results of n number of samples over the period specified;

"*Ministry* " means the Ontario Ministry of the Environment;

"*Monthly Average Concentration* " means the arithmetic mean of all *Daily Concentrations* of a contaminant in the effluent sampled or measured, or both, during a calendar month;

"*Owner* " means The Corporation of the Township of Bonnechere Valley and includes its successors and assignees;

"*Peak Flow Rate* " means the maximum rate of sewage flow for which the plant or process unit was designed;

"*Proposed Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* ;

"*Rated Capacity* " means the *Average Daily Flow* for which the *Works* are approved to handle;

"*Regional Director* " means the Regional Director of the Eastern Region of the Ministry;

"*Substantial Completion* " has the same meaning as "*substantial performance* " in the Construction Lien Act; and

"*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* and includes both the *Existing Works* and the *Proposed Works* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

- (1) The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- (2) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate* , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate* .
- (3) Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate* , the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.
- (4) Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
- (5) The requirements of this *Certificate* are severable. If any requirement of this *Certificate* , or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this certificate shall not be affected thereby.

2. EXPIRY OF APPROVAL

The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have

not been constructed within **five (5) years** of the date of this *Certificate* .

3. CHANGE OF OWNER

- (1) The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes within **thirty (30) days** of the change occurring:
 - (a) change of *Owner* ;
 - (b) change of address of the *Owner* ;
 - (c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager* ; and
 - (d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Informations Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager* .
- (2) In the event of any change in ownership of the *Works* , other than a change to a successor municipality, the *Owner* shall notify in writing the succeeding owner of the existence of this *Certificate* , and a copy of such notice shall be forwarded to the *District Manager* and the *Director* .

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

- (1) Upon the *Substantial Completion* of the *Proposed Works* , the *Owner* shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with this *Certificate* , and upon request, shall make the written statement available for inspection by *Ministry* personnel.
- (2) Within **six (6) months** of the *Substantial Completion* of the *Proposed Works* , a set of as-built drawings showing the *Works* "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the *Works* for the operational life of the *Works* .

5. BY-PASSES

- (1) Any *By-pass* of sewage from any portion of the *Works* is prohibited, except where:
 - (a) the sewage flowrate is in excess of the *Peak Flow Rate* ;
 - (b) it is necessary to avoid loss of life, personal injury, danger to public health or severe property damage;

- (c) the *District Manager* agrees that it is necessary for the purpose of carrying out essential maintenance and the *District Manager* has given prior written acknowledgment of the *by-pass* ; or
 - (d) the *Regional Director* has given prior written acknowledgment of the *By-pass* .
- (2) The *Owner* shall collect at least one (1) grab sample of the *By-pass* and have it analyzed for the parameters outlined in Condition 7 using the protocols in Condition 9.
 - (3) The *Owner* shall maintain a logbook of all *By-pass* events which shall include, at a minimum, the time, location, duration, quantity of *By-pass* , the authority for *By-pass* pursuant to subsection (1), and the reasons for the occurrence.
 - (4) The *Owner* shall, in the event of a *By-pass* event pursuant to subsection (1), disinfect the by-passed effluent prior to it reaching the receiver such that the receiver is not negatively impacted.

6. EFFLUENT OBJECTIVES

- (1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the *Works* .

Table 1 - Effluent Objectives		
Effluent Parameter	Concentration Objective (milligrams per litre unless otherwise indicated)	Loading Objective (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD₅</i>	15	16.2
Total Suspended Solids	15	16.2
Total Phosphorus	1.0	1.1
Total Ammonia Nitrogen	5.0	5.4
<i>E. coli</i>	200 counts/100 mL (<i>Geometric Mean Density</i>)	-

- (2) The *Owner* shall use best efforts to:
 - (a) maintain the pH of the effluent from the *Works* within the range of 6.5 to 8.5 at all times;
 - (b) operate the works within the *Rated Capacity* of the *Works* ; and

- (c) ensure that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.
- (3) The *Owner* shall include in all reports submitted in accordance with Condition 10 a summary of the efforts made and results achieved under this Condition.

7. EFFLUENT LIMITS

- (1) The *Owner* shall design, construct, operate and maintain the *Works* such that the concentrations of the of the materials named in Table 2 as effluent parameters are not exceeded in the effluent from the *Works* .

Table 2 - Effluent Limits		
Effluent Parameter	Concentration (milligrams per litre unless otherwise indicated)	Loading (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD₅</i>	25	27
Total Suspended Solids	25	27
Total Phosphorus	1.0	1.1
Total Ammonia Nitrogen	5.0	5.4
<i>E. coli</i>	200 counts/100 mL (<i>Geometric Mean Density</i>)	-
pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times		

- (2) For the purposes of determining compliance with and enforcing subsection (1):
 - (a) The *Annual Average Concentration* of *CBOD₅* and total suspended solids as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2 of subsection (1).
 - (b) The *Monthly Average Concentration* of total phosphorus as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2 of subsection (1).
 - (c) The *Daily Concentration* of total ammonia nitrogen as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2 of subsection (1).
 - (d) The *Annual Average Loading* of *CBOD₅*, total suspended solids and total phosphorus as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding

maximum loading set out in Column 3 of Table 2 of subsection (1).

- (e) The *Daily Loading* of total ammonia nitrogen as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum loading set out in Column 3 of Table 2 of subsection (1).
 - (f) The monthly *Geometric Mean Density* of *E. coli* as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum density set out in Column 2 of Table 2 of subsection (1).
 - (g) The pH of the effluent shall be maintained within the limits outlined in Table 2 in subsection (1), at all times.
- (3) Paragraphs (a) to (g) of subsection (2) shall apply upon the date of issuance of this *Certificate* .
 - (4) Only those monitoring results collected during the corresponding time period shall be used in calculating the *Annual Average Concentration*, *Monthly Average Concentration* , *Daily Concentration*, *Annual Average Loading*, *Daily Loading* and monthly *Geometric Mean Density* for this *Certificate* .

8. OPERATION AND MAINTENANCE

- (1) The *Owner* shall exercise due diligence in ensuring that, at all times, the *Works* and the related equipment and appurtenances used to achieve compliance with this *Certificate* are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this *Certificate* and the *Act* and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the *Works* .
- (2) The *Owner* shall prepare or update an operations manual within **six (6) months** of the date of issuance of this *Certificate* , that includes, but not necessarily limited to, the following information:
 - (a) operating procedures for routine operation of the *Works* ;
 - (b) inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;
 - (c) repair and maintenance programs, including the frequency of repair and maintenance for the *Works* ;
 - (d) procedures for the inspection and calibration of monitoring equipment;

- (e) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the *District Manager* ; and
 - (f) procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
- (3) The *Owner* shall maintain the operations manual current and retain a copy at the location of the *Works* for the operational life of the *Works* . Upon request, the *Owner* shall make the manual available to *Ministry* staff.
 - (4) The *Owner* shall provide for the overall operation of the *Works* with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 129/04.

9. **MONITORING AND RECORDING**

The *Owner* shall, upon commencement of operation of the *Works* , carry out the following monitoring program:

- (1) All samples and measurements taken for the purposes of this *Certificate* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.
- (2) For the purposes of this condition, "3 per week" means three times in a week Monday to Friday, "weekly" means once every week and "monthly" means once every month.
- (3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 3 - Influent Monitoring (Sampling point at the raw sewage pumping station or at the inlet chamber of the <i>Works</i>)		
Parameter	Sample Type	Minimum Frequency
Column 1	Column 2	Column 3
<i>BOD</i> ₅	24-hour composite	Monthly
Total Suspended Solids	24-hour composite	Monthly
Total Phosphorus	24-hour composite	Monthly
Total Kjeldahl Nitrogen	24-hour composite	Monthly

Table 4 - Effluent Monitoring (Sampling point at the outlet of the disinfection unit or at the outfall sewer as close as possible to the <i>Works</i>)		
Parameter	Sample Type <small>See Note Below</small>	Minimum Frequency
Column 1	Column 2	Column 3
<i>CBOD₅</i>	24-hour composite	Monthly
Total Suspended Solids	24-hour composite	Monthly
Total Phosphorus	24-hour composite	Weekly
Total Ammonia Nitrogen	24-hour composite	Weekly
<i>E. coli</i>	grab	Weekly
Total Chlorine Residual	grab	3 per week
pH	grab/probe	3 per week
Temperature	grab/probe	3 per week

Note: Definitions for grab and composite samples are included in one or more documents below. 24-hour composite sample means a time-composite sample and constitutes of an integrated sample made up of blending 24 hourly aliquots taken by refrigerated autosampler, which are obtained at an hourly frequency having same sample volume.

- (4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:
 - (a) the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;
 - (b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and
 - (c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.
- (5) The temperature and pH of the effluent from the *Works* shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of unionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended, for ammonia (unionized).
- (6) A sufficient number of flow measuring devices, calibrated at regular intervals not exceeding one year to ensure their accuracy to within plus or minus 5% of actual rate of flow within the range of 10% to 100% of the full scale reading of the measuring devices, shall be installed, maintained and operated in order to measure and record:

- (i) the quantity of sewage being conveyed to and through the sewage treatment plant; and
 - (ii) the quantity of sewage being bypassed without treatment.
- (7) The *Owner* shall retain for a minimum of **three (3) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this *Certificate* .

10. REPORTING

- (1) ~~Five~~ **Ten (10) days** prior to the start up of the operation of the *Proposed Works* , the *Owner* shall notify the *District Manager* (in writing) of the pending start up date.
- (2) **Ten (10) days** prior to the date of a planned *By-pass* being conducted pursuant to Condition 5 and as soon as possible for an unplanned *By-pass* , the *Owner* shall notify the *District Manager* (in writing) of the pending start date, in addition to an assessment of the potential adverse effects on the environment and the duration of the *By-pass* .
- (3) The *Owner* shall report to the *District Manager* or designate, any exceedence of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within **seven (7) days** after all laboratory results of the exceedence have been received and tabulated.
- (4) In addition to the obligations under Part X of the Environmental Protection Act, the *Owner* shall, within **ten (10) working days** of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by product, intermediate product, oils, solvents, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *District Manager* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.
- (5) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.
- (6) The *Owner* shall prepare and submit to the *District Manager* a performance report, on an annual basis, within **ninety (90) days** following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

- (a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the *Works* ;
- (b) a description of any operating problems encountered and corrective actions taken;
- (c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works* ;
- (d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- (e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and
- (f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6.
- (g) a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and an outline of the proposed sludge handling methods;
- (h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;
- (i) a summary of all *By-pass* , spill or abnormal discharge events; and
- (j) any other information the *District Manager* requires from time to time.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the *Owners* their responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate* .
2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the *Works* are made aware of the *Certificate* and continue to operate the *Works* in compliance with it.
4. Condition 4 is included to ensure that the *Works* are constructed in accordance with the approval and that record drawings of the *Works* "as constructed" are maintained for future references.
5. Condition 5 is included to indicate that by-passes of untreated sewage to the receiving watercourse is prohibited, save in certain limited circumstances where the failure to *By-pass* could result in greater injury to the public interest than the *By-pass* itself where a *By-pass* will not violate the approved effluent requirements, or where the *By-pass* can be limited or otherwise mitigated by handling it in accordance with an approved contingency plan. The notification and documentation requirements allow the *Ministry* to take action in an informed manner and will ensure the *Owner* is aware of the extent and frequency of *By-pass* events.
6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the *Owner* is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliance limits of Condition 7 are exceeded.
7. Condition 7 is imposed to ensure that the effluent discharged from the *Works* to Bonnechere River meets the *Ministry*'s effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the River.
8. Condition 8 is included to require that the *Works* be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the owner and made available to the *Ministry*. Such a manual is an integral part of the operation of the *Works*. Its compilation and use should assist the *Owner* in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for *Ministry* staff when reviewing the *Owner*'s operation of the *Works*.
9. Condition 9 is included to enable the *Owner* to evaluate and demonstrate the performance of the *Works*, on a continual basis, so that the *Works* are properly operated and maintained at a level which is consistent with the design objectives and effluent limits specified in the *Certificate* and that the *Works* does not cause any impairment to the receiving Bonnechere River.
10. Condition 10 is included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Certificate*, so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 3865-75PJAR, 0369-68UQYM issued on September 4, 2007, January 28, 2005

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 1st day of June, 2010



Jennifer Barolet, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

YK/

c: District Manager, MOE Ottawa
Brian Hein, J.L. Richards & Associates Limited