

**AMENDED CERTIFICATE OF APPROVAL  
MUNICIPAL AND PRIVATE SEWAGE WORKS**  
NUMBER 4648-8DVSSR  
Issue Date: April 8, 2011

The Corporation of the Municipality of Kincardine  
1475 Concession 5  
Rural Route, No. 5  
Kincardine, Ontario  
N2Z 2X6

Site Location: Kincardine Wastewater Treatment Plant  
520 Bruce Avenue  
Kincardine Municipality, County of Bruce

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

upgrading of the existing disinfection facilities for the treatment of sanitary sewage and landfill leachate located at the intersection of Bruce Avenue and Mahood - Johnston Drive, rated at an *Average Daily Flow* of 5,910 m<sup>3</sup>/day, consisting of the following:

**PROPOSED WORKS****Ultraviolet Disinfection System**

modification of the existing chlorination building to house the proposed electrical and control equipment and modification of the existing chlorine contact chamber into ultraviolet irradiation (UV) disinfection channels and installation of a new UV disinfection unit consisting of an open channel equipped with two (2) banks of ultraviolet lamp modules, each module having a peak capacity of 12,000 m<sup>3</sup>/d, including all required piping and modified flow-measurement weir, low liquid level sensor, automatic level controller and electrical system, submersible ultraviolet intensity monitoring probe, and tie-in to existing outfall pipe. The existing (Sodium Hypochlorite) disinfection system to be retained to provide standby disinfection if the UV disinfection system is inoperable.

and all associated appurtenances, piping, electrical and control systems necessary to operate the Works,

all in accordance with the following submitted supporting documents:

1. Application for Approval of Sewage Works submitted by the Corporation of the

Municipality of Kincardine dated November 24, 2010 and revised on December 14, 2010 along with a related letter dated November 26, 2010, from Richard Anderson of B.M. Ross and Associates Ltd. to Director of the Ministry of the Environment, Environmental Assessment and Approvals Branch;

2. Electronic mail transmission dated December 14, 2009, from Richard Anderson of B.M. Ross and Associates Ltd. to Fariha Pannu of the Ministry of the Environment;
3. Memo entitled "Application in Support of Increasing the Quantity of Leachate Received by the Kincardine Wastewater Treatment Plant" dated July 20, 2010, from Steve Burns of B.M. Ross and Associates Ltd. to Jim O'Rourke of Municipality of Kincardine Public Works Manager;
4. Specification for Ultraviolet Disinfection System dated October 2010, a Design Brief for the proposed ultraviolet disinfection system dated August 4, 2009 and revised November 26, 2010 and designed drawings dated November 26, 2010, prepared by B.M. Ross and Associates Ltd.;
5. Calgon Carbon Corporation Proposal to B.M. Ross and Associates Ltd. for a C<sup>3</sup>500™ D Ultraviolet Disinfection System for Municipality of Kincardine Wastewater Treatment Plant dated October 28, 2010.
6. Electronic mail transmission dated February 18, 2011, from Richard Anderson of B.M. Ross and Associates Ltd. to Andrew Miernicki of the Ministry of the Environment;

## **EXISTING WORKS**

consolidating Certificates of Approval Nos. 3-0178-76-006 issued on April 27, 1976, 3-0838--84-006 issued on October 26, 1984, 3-1963-90-927 issued on April 15, 1992, presently revoked and replaced Certificate of Approval No. 3-1539-94-956 issued on January 18, 1995 along with three subsequent Notices of amendment dated March 20, 1996 (Notice No. 1), July 25, 2002 (Notice No. 2) and October 21, 2004 (Notice No. 3) related to Kincardine Sewage Treatment Plant located in the Town of Kincardine, rated at average daily flow of 5,910 m<sup>3</sup>/day consisting of:

### **Aerated Lagoon**

an aerated lagoon cell with a design volume of approximately 24,000 m<sup>3</sup> and 0.85 Ha surface area, located south of Bruce Avenue and west of Valentine Avenue, in the Town of Kincardine and equipped with four (4) 11 kW (15 hp) aerators, an inlet structure with a Parshall flume for measuring incoming sewage flow, a control building and a distribution chamber for directing the discharge from the aerated lagoon cell to two (2) conventional stabilization ponds;

### **Conventional Stabilization Ponds**

two (2) conventional stabilization ponds located adjacent to the aerated lagoon cell with a design volume of

approximately 118,000 m<sup>3</sup> each and a total combined volume of 236,000 m<sup>3</sup>;

## Disinfection

an existing disinfection system approved by Certificate of Approval No. 3-1539-94-956 consisting of " a chlorination building and a 120 m<sup>3</sup> chlorine contact tank located on the south side of Bruce Avenue and west of east of Mahood - Johnston Drive to provide 15 minutes contact time at maximum flow of 136 L/s and (as per Notice No. 1 of March 20, 1996) a Hypochlorite disinfection system consisting of a 400 litre day tank and two (2) chemical metering pumps, each with a rated capacity of 2.6 L/h including associated valves and tubing." to be modified to provide the required channels and to house the electrical and control equipment for the proposed ultraviolet (UV) system as described in *Proposed Works* section above.

the existing (Sodium Hypochlorite) disinfection system to be retained to provide standby disinfection if the UV disinfection system is inoperable.

## Phosphorus Removal

phosphorus removal system consisting of a 27 m<sup>3</sup> chemical storage tank equipped with two (2) chemical metering pumps, associated valves, piping and control system, enclosed in a 6.2 m x 6.2 m storage building;

## Outfall Sewer

outfall sewer from the conventional stabilization pond outlet structures to ultraviolet irradiation (UV) disinfection channel located on Bruce Avenue to Lake Huron as follows:

On	From	To
Waste Stabilization Pond and former CNR Right-of-Way	pond outlets	Bruce Avenue
Bruce Avenue	former CNR Right-of-way	UV disinfection channels
Bruce Avenue	UV disinfection channels	Penetangore Row
Bruce Avenue and Lake Huron	Penetangore Row	Approx. 305 m into Lake Huron

all in accordance with the following:

1. All original applications for approval, including design calculations, engineering drawings, and reports prepared in support of the previous Certificate(s) of Approval and Notices of amendment.

*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;

"*Average Flow*" means the total flow to the sewage works during the period of operation upon which the report is based, divided by the number of days in the period;

"*BOD5*" (also known as  $TBOD_5$ ) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;

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

"*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;

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

"*District Manager*" means the District Manager of the Owen Sound 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 constructed and approved under a certificate of approval;

"*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;

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

"*Owner*" means the Corporation of the Municipality of Kincardine and includes its successors and assignees;

"*Operating Authority*" means the *Owner* or the designated agent of the *Owner* ;

"*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 Southwestern Region of the Ministry;

"*Source Protection Plan*" means a drinking water source protection plan prepared under the Clean Water Act, 2006;

"*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 *Previous Works* and *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 *Proposed 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*;

(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 one year 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) it is necessary to avoid loss of life, personal injury, danger to public health or severe property damage;

(b) 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

(c) 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 10(5).

(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)
<i>CBOD<sub>5</sub></i>	25
Total Suspended Solids	30
Total Phosphorus	1.0
<i>E-Coli</i>	150 organisms/100 mL (Monthly <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 9.0, inclusive, at all times;

(b) operate the works within the *Rated Capacity* of the *Works*;

(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 Conditions 10, a summary of the efforts made and results achieved under this Condition.



## 7. EFFLUENT LIMITS

(1) The *Owner* shall design and construct the *Proposed Works* and operate and maintain the *Works* such that the concentrations and waste loadings of the materials named below as effluent parameters are not exceeded in the effluent from the *Works*.

<b>Table 2 - Effluent Limits</b>		
<b>Effluent Parameter</b>	<b>Monthly Average Concentration</b> (milligrams per litre unless otherwise indicated)	<b>Monthly Average Waste Loading</b> (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD<sub>5</sub></i>	30.0	177.0
Total Suspended Solids	40.0	236.0
Total Phosphorus	1.0	5.9
<i>E. Coli</i>	200 <i>E. Coli</i> /100 mL (Monthly <i>Geometric Mean Density</i> )	-
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times		

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) The *Monthly Average Concentration* of *CBOD<sub>5</sub>*, suspended solids, and total phosphorus in Column 1 of Table 2 in subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2 in subsection (1).

(b) The *Monthly Average Loading* of *CBOD<sub>5</sub>*, suspended solids, and total phosphorus in Column 1 of Table 2 in subsection (1) shall not exceed the corresponding average loading set out in Column 3 of Table 2 in subsection (1).

(c) The *Monthly Geometric Mean Density* of *E. Coli* named in Column 1 of subsection (1) shall not exceed the corresponding maximum density set out in Column 2 of subsection (1).

(d) The effluent shall be continuously disinfected so that the monthly *Geometric Mean Density* of *E. Coli* does not exceed 200 organisms per 100 millilitres of effluent discharged from the *works*.

(3) The effluent limits set out in subsections (1 and 2) shall apply upon the issuance of this *Certificate*.

(4) Only those monitoring results collected during the corresponding time period shall be used in calculating the *Monthly Average Concentrations* and *Monthly Average Loading* 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 an operations manual within six (6) months of *Substantial Completion* of the *Proposed Works*, 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. SPECIAL CONDITION - LOADING RATES FOR CO-TREATMENT

(1) The *Owner* shall operate and maintain the *Works* such that the design monthly average landfill leachate flow of 63 cubic metres per day (approximately 30 cubic metres per day from Valentine Avenue Landfill and approximately 33 cubic metres per day from the proposed Kincardine Waste Management Centre) and groundwater (contaminated) flow of approximately 200 cubic metres per day from Valentine Avenue Landfill for co-treatment at the *Works* is not exceeded.

(2) The *Owner* shall operate and maintain the *Works* such that the sum of all daily influent flows during a calendar year, including raw sewage, and groundwater (contaminated) and landfill leachate flow for co-treatment, does not exceed the Rated Capacity of the *Works* .

10. 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, the following definitions apply:

(c) Bi-weekly means once every two weeks;

(g) Semi-annually means once every six months;

(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 - Raw Sewage Monitoring		
Parameters	Sample Type	Frequency
<i>BOD5</i>	Grab	Bi-weekly
Total Suspended Solids	Grab	Bi-weekly
Total Phosphorus	Grab	Bi-weekly
Total Kjeldahl Nitrogen	Grab	Bi-weekly
Alkalinity	Grab	Bi-weekly

<b>Table 4 - Final Effluent Monitoring</b> (Samples to be collected from the lagoon outfall downstream of the UV disinfection unit)		
<b>Parameters</b>	<b>Sample Type</b>	<b>Frequency</b>
<i>CBOD5</i>	Grab	Bi-weekly
Total Suspended Solids	Grab	Bi-weekly
Total Phosphorus	Grab	Bi-weekly
Total Kjeldahl Nitrogen	Grab	Bi-weekly
Total Ammonia (Ammonia + Ammonium) Nitrogen	Grab	Bi-weekly
Nitrite	Grab	Bi-weekly
Nitrate	Grab	Bi-weekly
Alkalinity	Grab	Bi-weekly
<i>E. Coli</i>	Grab	Bi-weekly
pH	Grab	Bi-weekly
Temperature	Grab	Bi-weekly
Total Residual Chlorine (when in use)	Grab	Bi-weekly
Chloride	Grab	Semi-annually
COD	Grab	Semi-annually
DOC	Grab	Semi-annually
Hardness	Grab	Semi-annually
Phenols	Grab	Semi-annually
Metals (total): ICP Metal Scan	Grab	Semi-annually
Volatile Organic Compounds (VOC) US EPA 624 Parameters	Grab	Semi-annually
pH	Grab	Semi-annually
Conductivity	Grab	Semi-annually
Temperature	Grab	Semi-annually

(4) Samples of landfill leachate 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:

<b>Table 5 - Landfill Leachate Monitoring*</b> <i>(Samples of the leachate and groundwater contaminated with leachate to be collected from the Valentine Avenue Landfill and Kincardine Waste Management Centre leachate pumping station, the discharge end of the leachate forcemain, or at the point of addition to the sewer system or to the Works. )</i>		
<b>Parameters</b>	<b>Sample Type</b>	<b>Frequency</b>
Alkalinity	Grab	Semi-annually
BOD5	Grab	Semi-annually
Chloride	Grab	Semi-annually
COD	Grab	Semi-annually
DOC	Grab	Semi-annually
Hardness	Grab	Semi-annually
Nitrate	Grab	Semi-annually
Nitrite	Grab	Semi-annually
Total Kjeldahl Nitrogen	Grab	Semi-annually
Ammonia	Grab	Semi-annually
Metals (Total): ICP 24 Metal Scan	Grab	Semi-annually
Volatile Organic Compounds (VOC): US EPA 624 parameters	Grab	Semi-annually
pH	Grab	Semi-annually
Conductivity	Grab	Semi-annually
Temperature	Grab	Semi-annually

\* Representative samples of landfill leachate shall be collected for analysis on a semi-annually basis, subject to availability of the leachate requiring co-treatment at the STP.

(5) 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;

(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;

(6) The temperature and pH of the effluent from the *Works* shall be measured in the field on a fresh grab sample collected on the day of sampling for Total Ammonia Nitrogen. The concentration of un-ionized 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 (un-ionized).

(7) The *Owner* shall install, maintain and operate 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 the full scale reading of the measuring devices, in order to measure:

(i) the quantity of sewage being conveyed to the sewage treatment plant;

(ii) the quantity of groundwater (contaminated) and leachate being conveyed to the sewage treatment plant;

(iii) the quantity of untreated sewage being bypassed without treatment and/or being bypassed to the disinfection facility;

(8) The *Owner* shall measure and record the daily quantities of leachate and groundwater (contaminated) waste received for co-treatment at the *works* and the flowrate at which the blended hauled sewage is fed into the inlet works for cotreatment.

(9) The *Owner* can use applicable existing samples collected from the Valentine Avenue Landfill site as specified in subsection (4), (5) and (6) of groundwater (contaminated) as required by the Certificate of Approval No. 3-0408-93-006 and of leachate as required by the Certificate of Approval No. 3-0354-94-006 and analyze for parameters as specified in subsections (4).

(10) The measurement frequencies specified in subsections (3) and (4) in respect to any parameter are minimum requirements which may, after 24 months of monitoring in accordance with this Condition, be modified by the *District Manager* in writing from time to time.

(11) 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*.

## 11. REPORTING

(1) One week 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 of the exceedence.

(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, oil, solvent, 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* , including the effectiveness of the cotreatment of leachate and groundwater (contaminated);

(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;

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6;

(g) a tabulation of the quantity of groundwater (contaminated) and landfill leachate added to the *Works* for co-treatment during the reporting period;

(h) 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 a summary of the locations to where the sludge was disposed;

(i) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(j) a summary of all *By-pass*, spill or abnormal discharge events; and

(k) any other information the *District Manager* requires from time to time.

(7) A final report for leachate cotreatment shall be submitted to the *District Manager* within three (3) months of end of the two year period commencing from the date that Kincardine Waste Management Centre is reopen to new waste and conveyance of leachate to the *works* is initiated. The report shall provide an assessment on the treatability of the leachate at the *works* and provide recommendations on any upgrade, if necessary to ensure the leachate is being effectively treated at the *rated capacity* of the plant.

## 12. REVOCATION OF EXISTING APPROVALS

(1) The descriptions of the approved *Works* and conditions of approval in this *Certificate* apply in place of all existing descriptions and conditions in the Certificates of Approval under the Ontario Water Resources Act for sewage works which are part of the *Works* approved by this *Certificate* .

(2) Notwithstanding subsection (1) above, the original applications for approval, including design calculations, engineering drawings and reports prepared in support of the existing Certificate(s) of Approval whose descriptions of the approved *Works* and conditions are now replaced pursuant to subsection (1) above, shall form part of this *Certificate* .

(3) Where an existing Certificate of Approval referred to in subsection (1) above applies to *Works* in addition to the *Works* approved by this *Certificate* , it shall continue to apply to those additional *Works* .

## 13. SOURCE WATER PROTECTION

The *Owner* shall, within sixty (60) calendar days of the Minister of the Environment posting approval of a *Source Protection Plan* on the environmental registry established under the Environmental Bill of Rights, 1993 for the area in which this *Certificate* is applicable, apply to the *Director* for an amendment to this *Certificate* that includes the necessary measures to conform with all applicable policies in the approved *Source Protection Plan*.

*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 applicable at the time of Approval of the *Works* are still applicable 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 the Lake Huron 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 receiving water body.
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 work.
9. Condition 9 is included to ensure that the *Works* are operated within the design capacity, including groundwater (contaminated) and landfill leachate co-treatment capability and capacity.
10. Condition 10 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 watercourse.

11. Condition 11 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.
12. Condition 12 is included to stipulate that this *Certificate* replaces all previous approvals for the *Works* being the subject of this *Certificate*, and that the existing approvals remain in force for the purpose of any *Works* which are not subject to this *Certificate*.
13. Condition 13 is included to ensure that the works covered by this *Certificate* will conform to the significant threat policies and designated Great Lakes policies in the *Source Protection Plan*.

**This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 3-1539-94-956, Notice No. 1, Notice No. 2 and Notice No. 3 issued on January 18, 1995, March 20, 1996, July 25, 2002 and October 21, 2004, respectively.**

*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](http://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 8th day of April, 2011

A handwritten signature in black ink, appearing to read 'Ian Parrott', with a long horizontal flourish extending to the right.

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Ian Parrott, P.Eng.  
Director  
Section 53, *Ontario Water Resources Act*

AM/

c: District Manager, MOE Owen Sound  
Richard R. Anderson, P.Eng., B. M. Ross and Associates Limited