



**AMENDMENT TO CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS**

NUMBER 3-1377-87-896

Notice No. 1

Issue Date: March 12, 2008

The Corporation of the Township of Edwardsburgh/Cardinal
18 Centre St
Post Office Box, No. 129
Edwardsburgh Cardinal, Ontario
K0E 1X0

Site Location: 2301 County Road 21
Lot 23, Concession 6
Edwardsburgh/Cardinal Township, United Counties of Leeds and Grenville

You are hereby notified that I have amended Certificate of Approval No. 3-1377-87-896 issued on November 7, 1989 for construction of a sanitary sewage system to serve the Village of Spencerville in the Township of Edwardsburgh Cardinal, as follows:

weekly injection of 10 litre doses of a sewage digester additive, in a form of an organic hydrocarbon liquid, to wet wells of Sewage Pumping Stations No. 2 and No. 3 on an alternating basis to promote biodigestion and breakdown of organic solids in sewage;

all in accordance with the following submitted supporting documents:

1. Application for Approval of Municipal and Private Sewage Works dated November 20, 2007, submitted by Russell Trivett, Chief Administrative Officer of the Corporation of the Township of Edwardsburgh Cardinal, received on November 28, 2007;
2. Reports dated April 12, 2007 and July 18, 2007 providing results of tests conducted to assess benefits of the sewage digester additive in operations of the Spencerville Wastewater Treatment Lagoons prepared by MTS Environmental Products, 215 Pickard Road, Exeter, Ontario N0M 1S3;
3. Material Safety Data Sheet for the proposed additive.

The reason for this amendment to the Certificate of Approval is as follows:

- to promote reduction of the accumulation of biosolids in the stabilization ponds.

SUPPLEMENTARY TERMS AND CONDITIONS

1. GENERAL PROVISION

(1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the additive injection system is notified of this Certificate of Approval and the conditions herein and shall take all reasonable measures to ensure that any such person complies with the same;

(2) For greater certainty, this Notice of amendment is specific to the works described above. The commercial sewage digester additive to be used by the Township of Edwardsburgh Cardinal in this works is not approved for the use in every sanitary sewage system owned or operated by the municipality.

2. OPERATIONS AND MAINTENANCE

CONTENT COPY OF ORIGINAL

- (1) The Owner shall ensure that the additive storage and injection are set up and operated by qualified personnel.
- (2) The Owner shall prepare and maintain an operations manual and ensure that the operations manual and associated safety procedures are made available to the operators.
- (3) The Owner shall ensure that contingency plans and procedures are established and adequate equipment and material are available for dealing with emergencies, upset conditions and equipment breakdowns in the works.

3. NOTIFICATION AND REPORTING

- (1) One (1) week prior to the start up of the proposed works, the Owner shall notify the District Manager of the Kingston District Office of the Ministry, in writing, of the pending start up date.
- (2) The Owner shall notify the District Manager immediately of any spills or other emergencies involving the additive storage and injection system and report on the measures taken to minimize the potential impact of the incident.
- (3) The Owner shall keep a record of the process operations addressing the system performance in light of the expected impact of the additive on the reduction of the accumulation of biosolids in the stabilization ponds and have the record available for review by an inspector of this Ministry from time to time.

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

1. Supplementary Condition 1 is included to ensure that the Owner is advised of their responsibility to notify any person that they authorize to carry out work pursuant to this Notice of the existence of this Notice of Amendment to the Certificate of Approval and its content.
2. Supplementary Condition 2 is included to ensure that the works will be operated and maintained in a manner enabling compliance with the terms and conditions of this Certificate, such that the environment is protected and deterioration, loss, injury and damage to any person or property is prevented.
3. Supplementary Condition 3 is included to ensure that all pertinent information is available for the evaluation of the performance of the works.

This Notice shall constitute part of the approval issued under Certificate of Approval No. 3-1377-87-896 dated November 7, 1989

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:

CONTENT COPY OF ORIGINAL

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 12th day of March, 2008

Mansoor Mahmood, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

WW/

c: District Manager, MOE Kingston - District
David Grant, The Corporation of the Township of Edwardsburgh/Cardinal



Ontario

Ministry
of the
EnvironmentMinistère
de
l'EnvironnementCertificate of Approval (Sewage)
Certificat d'autorisation (eaux usées)

Number / Numéro 3-1377-87-896

Whereas / Attendu que

TOWNSHIP OF EDWARDSBURGH

J. GRANT

~~XXXX~~

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:
a fait, conformément à l'article 24 de la loi sur les ressources en eau de l'Ontario, une demande d'autorisation:
Construction of a sanitary sewage system to serve the Village of Spencerville
in the Township of Edwardsburgh as follows:

SANITARY SEWERS

<u>STREET</u>	<u>FROM</u>	<u>TO</u>
Centre Street (County Road 21)	Approx. 250 metres southwest of Cedar Street	Bennet Street (County Road 44)
Cedar Street	Charles Street	Approx. 35 metres southeast of David Street
Charles Street	Cedar Street	Cherry Street
David Street	Cedar Street	Cherry Street
James Street	Cherry Street	South Street
Easement	Centre Street	Approx. 165 metres northwest of Centre Street (Community Centre)
Water Street	South Street	Bennet Street
South Street	Water Street	Approx. 35 metres southeast of Centre Street

.../2

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

Le présent document certifie qu'après vérification en bonne et due forme la construction dudit projet d'ouvrages a été approuvée aux termes de l'article 24 de la loi sur les ressources en eau de l'Ontario.

DATED AT TORONTO this
DATE À TORONTO ce

10th

day of
jour d

January, 1989

Attn:-Mr. B. Casselman, Clerk, Twp. of Edwardsburgh
cc:-Mr. D. Guscott, MOE SE, Reg. Dir.
-H.S. Thompson & Assoc. Ltd.



Certificate of Approval (Sewage)
Certificat d'autorisation (eaux usées)

Number / Numéro 3-1377-87-896
(CONTINUED)

- 2 -

<u>STREET</u>	<u>FROM</u>	<u>TO</u>
South Street	Centre Street	West Street
Bennet Street (County Road 44)	Water Street	Goodin Road South
Victoria Street	Prince Street	Bennet Street
Goodin Road South	Approx. 120 metres southwest of Bennet Street	Bennet Street

PUMPING STATIONS

Pumping Station No. 2 will be located on the south side of Centre Street and approximately 240 metres southwest of Cedar Street. The station will be equipped with two submersible sewage pumps each capable of 1.3 liters per second at 22.9 metres TDH, emergency bypass system, all related piping, valves, instrumentation, mechanical and electrical equipment including a 75 mm forcemain along Centre Street from the pumping station to Centre Street/Cedar Street.

Pumping Station No. 3 will be located on the east side of Cherry Street at Charles Street. The station will be equipped with two submersible sewage pumps each capable of 1.2 liters per second at 14.6 metres TDH, emergency bypass system, all related piping, valves, instrumentation, mechanical and electrical equipment including a 75 mm forcemain from the pumping station along Charles Street and George Street to David Street.

Pumping Station No. 1 will be located on the northwest side of Bennet Street and the South Nation River. The station will be equipped with two submersible sewage pumps each capable of 14 liters per second at 16.7 metres TDH, a diesel generator set, alum dosing equipment (chemical feed pump, chemical tank, and injection system), flow recorder and timer, emergency bypass system, all related piping, valves, instrumentation, mechanical and electrical equipment including a 150 mm forcemain from the pumping station along Old Highway 16, County Road 22 and an easement to the Waste Stabilization Ponds as well as a forcemain drainage chamber on County Road 22.



Ministry
of the
Environment

Ministère
de
l'Environnement

WED 11:25 MS THOMPSON 132 2nd

P. 84

Certificate of Approval (Sewage)
Certificat d'autorisation (eaux usées)

Number / Numéro 3-1377-87-896
(CONTINUED)

- 3 -

WASTE STABILIZATION PONDS

To be located to the east of Highway 416/County Road 22 intersection and on Lot 23 Concession 6. The proposed works involve a distribution chamber, intercell level control chamber, effluent control chamber with related outfall sewer northwesterly to the South Nation River, all related piping, valves, appurtenances as well as two sewage lagoon cells with a total water surface area of 6.86 hectares, a total storage capacity of 116,000 cubic metres and a berm elevation of 90.28 metres.

All in accordance with the preliminary design report dated June, 1987 and Addendum dated November, 1987 as prepared by M.S. Thompson & Associates Ltd., Consulting Engineers, at a total estimated cost, including engineering and contingencies, of THREE MILLION TEN THOUSAND SEVEN HUNDRED AND FORTY SEVEN DOLLARS (\$3,010,747.00), subject to the following special terms and conditions:

SPECIAL TERMS AND CONDITIONS

1. No portion of the works shall be constructed and no tenders for construction accepted on any portion of the works until final plans, specifications and engineer's report are submitted to and approved by the Director of the Approvals Branch, Ministry of the Environment.
2. The waste stabilization pond shall be operated on an annual discharge basis, the discharge time coinciding generally with peak flows in the receiving stream but not before March 15th nor after April 21st. The lagoon contents shall be discharged over a minimum period of 8 days, but in no case shall the discharge exceed 30 days.
3. The following effluent criteria shall be maintained:

<u>Parameter</u>	<u>Maximum Concentration</u>
BOD ₅	
Suspended Solids	25 mg/L
Total Phosphorus	30 mg/L
Ammonia	1 mg/L
Hydrogen Sulphide	20 mg/L
	5 mg/L

- (a) "BOD₅" means the parameter known as the five-day Biochemical Oxygen Demand, measured in unfiltered sample.
- (b) "mg/L" means milligrams per litre.



- 4 -

- * 4. Non-compliance with respect to BOD₅, suspended solids, ammonia, hydrogen sulphide, and phosphorus is considered to have occurred when the average mean of the BOD₅, suspended solids, ammonia, hydrogen sulphide, and phosphorus concentrations in the samples taken as determined by the following sample procedure exceeds the concentrations in the above table.

5. The minimum sampling program to be followed in assessing non-compliance for BOD₅, suspended solids, ammonia, hydrogen sulphide, and phosphorus is as follows:

* Two effluent samples (either grab or composite) are to be taken a week prior to discharge as well as two samples per week during the discharge period as part of a routine sampling program by the Corporation of the Township of Edwardsburgh ("the operating authority"), and supplemented by spot-sampling by the Ministry of the Environment staff as deemed necessary. The procedures to be followed in the routine sampling program shall be approved from time to time by the local District Officer in the Southeastern Region of the Ministry of the Environment.

- * 6. The operating authority shall report the results of the monitoring program described in Condition No. 5 and shall report on compliance with Condition No. 2, including dates of discharge, to the District Officer for the Kingston District of the Ministry of the Environment by June 30 of each year.

- * 7. The operating authority shall ensure that raw sewage is not entering the cell which is being discharged to the receiving stream, but shall divert that sewage to the other cell.

- * 8. The operating authority shall consult with each individual landowner at the time of construction of the sanitary sewage system in order to provide the landowner with the most cost-effective and convenient location for the connecting link.

9. During construction of the lagoons, geotechnical inspections shall be carried out to find any pockets of sand or gravel in the base and sides of the lagoons. Any sand or gravel deposits shall be removed and replaced with a till material compacted to 95% Standard Proctor Density.

REASONS

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

The above condition No. 1 is to make the municipality aware that the Joint Board approves in principle the proposed works and is of the opinion that they may be carried out on the basis of sound planning engineering and environmental principles, notwithstanding that sufficient detailed designs of the works have not been submitted to the Director for a final technical determination.



Ministry
of the
Environment

Ministère
de
l'Environnement

Certificate of Approval (Sewage)
Certificat d'autorisation (eaux usées)

Number / Numéro 3-1377-87-896
(CONTINUED)

- 5 -

It is in the public interest to issue a conceptual approval in order that the municipality may know that the Joint Board approves of the general concept of the proposed works before the applicant is put to the expense of preparing detailed plans, specifications and an engineer's report and make whatever other arrangements necessary in connection with undertaking the works sufficient for the Director to give an approval to construct.

The reason for condition No. 2 is to ensure that only one discharge per year of treated effluent is made to the receiving watercourse, and that it is made during peak flow conditions in the watercourse. This will maximize the benefits of dilution of the treated effluent and assist in protection of the aquatic environment.

The dates of March 15th and April 21st generally coincide with peak flows in the spring of the year. The minimum discharge period of eight days is to ensure that the overall discharge rate will not cause water quality impairment. The 30 day maximum is required to ensure that the lagoon contents are not being discharged beyond the peak flow period.

Condition No. 3 represents the standard treatment policy levels, except for BOD₅, which limit the effluent discharge parameters to levels in which detrimental water quality effects are minimized. Since the evidence at the hearing was that a maximum concentration of 25 mg/L BOD₅ could be consistently achieved, that higher standard is imposed.

The effluent criteria related to BOD₅ and suspended solids are being imposed to minimize adverse effects of oxygen demanding material discharged in the effluent on dissolved oxygen concentration in the receiving waters.

The effluent criteria related to phosphorus concentration is being imposed to protect aquatic life from adverse effects of eutrophication.

The effluent criteria related to ammonia and hydrogen sulphide is to ensure that the toxic effects of these constituents on the stream biota is minimized.

The reason for conditions No. 4 and No. 5 is to ensure that an adequate program to monitor the performance of the approved facility is carried out during the discharge period. It is being imposed to ensure compliance with surface water quality management policy two of the "Blue Book" (Water Management Goals, Policies and Objectives of MOE).

The type and frequency of samples during the discharge period is set out to ensure there is sufficiently detailed knowledge of effluent quality during the discharge period, and to allow the creation of a statistical database for future comparison and use.



- 6 -

The reason for condition No. 6 is to ensure that documented records are available which will allow both the operating authority, the Ministry, and the public to be informed of the operation of the wastewater treatment system.

Condition No. 7 is imposed in order to ensure that raw sewage does not enter the receiving watercourse.

Condition No. 8 is imposed in response to a landowner's concern that the Township might require him to connect his sewer line to the main sanitary sewer in a location inconvenient and expensive for him. Each landowner is responsible for the costs of his connecting link. This condition merely codifies the stated practice of the Township.

The reason for Condition No. 9 is to ensure that the lagoon and berms will not allow waste water to leach through soils and contaminate ground or surface water.

THIS IS A TRUE COPY OF THE
ORIGINAL CERTIFICATE MAILED
JAN 20 1989

ON


(Signed)

Owner/Operator / Propriétaire/exploitant:

Township of Edwardsburgh
 P.O. Box 129
 Centre Street
 Spencerville, Ontario
 K0E 1X0

This approval is for / La présente autorisation s'applique:

A two cell sewage lagoon system with a total water surface area of 6.86 hectares, a total storage capacity of 116,000 cubic metres, and a berm elevation of 90.28 metres.

Located at / Situé(e)(s) à:

east of Highway 416/Country Road 22 intersection and on Lot 23, Concession 6, Township of Edwardsburgh

Your application has been reviewed on the basis of the information submitted and is approved under Section 8 of the Environmental Protection Act, subject to the terms and conditions stated below.

Nous avons étudié votre demande à la lumière des renseignements présentés et l'avons approuvée aux termes de l'article 8 de la Loi sur la protection de l'environnement, sous réserve toutefois des modalités et conditions stipulées ci-dessous.

THIS IS A TRUE COPY OF THE
 ORIGINAL CERTIFICATE MAILED
 ON JAN 20 1989


 (Signed)

DATED AT TORONTO this
 DATÉ À TORONTO ce

10th

day of
 jour d

January, 1989

Attn: -Mr. B. Casselman, Clerk, Twp. of Edwardsburgh
 cc: -Mr. D. Guscott, MOE SE, Reg. Dir.