



Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 6667-54YKBT

Ontario

Crystal Lake Mobile Home Court Limited
67 Walt Lane
Mitchell, Ontario
N0K 1N0

Site Location: Part of Lot 11, Concession 1
Perth East Township, County Of Perth

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

replacement of the existing on-site individual Class 4 sewage waste disposal systems with a new sewage works for the collection, transmission, treatment and subsurface disposal of approximately 5,900 litres per day of domestic sewage, servicing Lots 171, 172, 173 and 174, a site of Phase I of the Crystal Lake Mobile Homes Court Ltd. development, located on the south side of Birch Street, at the intersection with Oak Street, in the Township of East Perth and consisting of the following:

- **two (2) existing septic tanks** (located on the site between Lots 171 & 172, and Lots 173 & 174, respectively) providing for primary settling, each tank with a volume of approximately 4,500 litres; equipped with service connections; discharging to:
- **one (1) package wastewater treatment plant** (located on the site, approximately 3.20 meters southeast of a mobile home #174) providing for extended aeration, activated sludge and filtration processes with a rated operating capacity of approximately 5,700 litres per day and a total system capacity of approximately 22,000 litres, consisting of:
 - one (1) baffled pretreatment chamber with a capacity of approximately 5,700 litres;
 - two (2) cell aeration chamber with a capacity of approximately 5,900 litres; equipped with
 - two (2) aspirator aerators, each rated at approximately 1.42 litres per second;
 - one (1) settling (clarification) chamber with a capacity of approximately 1,300 litres, equipped with
 - two (2) sludge returns; and
 - three (3) Bio-Kinetic flow equalization and micro-screening devices; discharging to:
- **one (1) dosing pump chamber** providing for chemical dosing and hydraulic lift of effluent; consisting of:
 - one (1) concrete chamber with a capacity of approximately 9,900 litres;
 - one (1) effluent submersible pump with a rated capacity of approximately 6 meters of TDH;
 - complete with level switches, alarms and control panel; and
 - force main discharging effluent to distribution system via:
- **one (1) automatic distributor** providing for mechanical alternate effluent distribution to each subsurface disposal cell; discharging effluent to distribution system of:
- **two (2) cell subsurface disposal system** designed as shallow buried trench, located a minimum of approximately 7.72 meters south of mobile units of Lots 172 - 174, consisting of:
 - two (2) contour trench units, with
 - a total of approximately 160 meters of pressurized distribution piping; approximately 75 millimeters in diameter, in four parallel runs at approximately 20 meter length, approximately 2 meters on centre;

including all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper installation and operation of the aforementioned sewage works; all in accordance with the following supporting documents:

1. *Application for Approval of Municipal and Private Water and Sewage Works*, by Joseph Waite, President of Crystal Lake Mobile Home Court Limited, dated April 17, 2001; and a *Letter* dated April 4, 2001 from R.J. Burnside & Associates Limited;
2. *Design Brief for Replacement of Private Sewage Systems, Phase I: Lots 171, 172, 173 and 174*, prepared by R.J. Burnside & Associates Limited, dated November 2000; including *Design Drawing: On-Site Sewage System Replacement*,

CONTENT COPY OF ORIGINAL

prepared by R.J. Burnside & Associates Limited, dated November 2000;

3. *Letter* dated March 13, 2001 from J. Patrick Spezowka of the Ministry of the Environment, London District Office;

4. *A letter with additional documentation for the Design Brief*, dated July 18, 2001 from Mikel Doupe of R.J. Burnside & Associates Limited.

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

(1) "certificate" means this entire certificate of approval document, issued in accordance with Section 53 of the *Ontario Water Resources Act*, and includes any schedules;

(2) "Director" means any Ministry employee appointed by the Minister pursuant to section 5 of the *Ontario Water Resources Act*;

(3) "Ministry" means the Ontario Ministry of the Environment;

(4) "Regional Director" means the Regional Director of the Southwestern Region of the Ministry;

(5) "District Manager" means the District Manager of the London District Office of the Ministry's Southwestern Region;

(6) "Owner" means Crystal Lake Mobile Home Court Limited;

(7) "licensed installer" means a person who holds a licence under Article 2.12.3.1 of the Ontario Building Code.

(8) "Professional Engineer" means a person entitled to practice as a Professional Engineer in the Province of Ontario under a licence issued under the Professional Engineers Act;

(9) "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;

(10) "sewage system" means the entire sewage treatment and subsurface disposal system;

(11) "grab sample" means an individual sample of at least 1000 millilitres collected in an appropriate container at a randomly selected time over a period of time not exceeding 15 minutes;

(12) "average daily flow" means the cumulative total sewage flow to the sewage works during a particular calendar month divided by the number of days during which sewage was flowing to the sewage works that month;

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

(14) "E. Coli" refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius; and

(15) "Environmental Appeal Board" means the Environmental Review Tribunal, as defined in the Environmental Review Tribunal Act, as amended from time to time.

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

TERMS AND CONDITIONS

GENERAL CONDITION

(A) 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.

(B) 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.

1. CONSTRUCTION

1.1 The Owner shall ensure that the construction of the works is supervised by a licensed installer or a Professional Engineer.

1.2 Upon construction of the works, the Owner shall prepare a statement, certified by a licensed installer or a Professional Engineer, that the works are constructed in accordance with this Certificate of Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.

2. PERFORMANCE

2.1 The Owner shall ensure that the average daily flow of sewage into the sewage system does not exceed approximately 5, 900 L/d for any period of time greater than one (1) calendar month.

3. MONITORING, RECORDING AND REPORTING

3.1 The Owner shall ensure that the following monitoring program is carried out upon commencement of operation of the works:

(a) Daily quantities of effluent being disposed of through the subsurface disposal system shall be measured or estimated, and recorded.

(b) If any flow measuring devices are installed, the Owner shall ensure that the said flow measuring devices are calibrated at regular intervals not exceeding one year to ensure their accuracy to within plus or minus 5% of actual flow from 10% to 100% of sewage flow range.

(c) Grab samples of raw sewage, final effluent from the sewage treatment plant ahead of the subsurface disposal system, shall be collected **at locations satisfactory to the District Manager** and analysed for at least the following parameters at the indicated **minimum** frequencies:

Raw Sewage Parameters Minimum Frequency

CBOD₅ upon commencement of operation

Total Suspended Solids of the sewage works and once every

Total Phosphorus two (2) years thereafter.

Total Kjeldahl Nitrogen

Final Effluent Parameters Minimum Frequency

CBOD₅ Annually

Total Suspended Solids Annually

E. Coli Annually

Final Effluent Parameters Minimum Frequency

Total Phosphorus Upon commencement of operation

Total Ammonia (Ammonia + Ammonium) of the sewage works and once every

Nitrates two (2) years thereafter.

Nitrites

(d) The sampling and analyses required by clause (b) above shall be performed in accordance with the Ministry's Procedure F-10-1 (formerly Policy No. 08-06); "Procedure for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", Ministry of Environment and Energy, December 31, 1994; or as described in the American Public Health Association's publication "Standard Methods for Examination of Water and Wastewater", 20th Edition, 1998, or a more recently published edition.

3.2 The Owner shall retain for a minimum of three years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this certificate.

3.3 Following review of any of the analytical results required by Condition 3.1 or any of the reports required by Condition 5.2 of this certificate, the District Manager may alter the frequencies and locations of sampling and parameters for analysis required by Condition 3.1 if he/she considers it necessary for proper assessment of the operation of the sewage system and its impact on the environment or if he/she is requested to do so by the Owner and considers it acceptable by the evidence of information submitted in support of the request.

4. OPERATION AND MAINTENANCE

4.1 The Owner shall use best effort to operate the sewage treatment facilities with the objective that effluent criteria concentrations of the materials named below as effluent parameters are not exceeded in the effluent ahead of the subsurface disposal system:

Effluent Parameters Concentrations

BOD₅ 15 mg/L

Total Suspended Solids 10 mg/L

4.2 Based on the operational objectives stipulated above in Condition 4.1, the Owner shall prepare an operation and maintenance manual within six (6) months of introducing sewage to the sewage works and keep it up to date. Upon request, the Owner shall make the manual available for inspection by the Ministry personnel and furnish a copy to the Ministry.

4.3 The Owner shall prepare and make available for inspection by Ministry personnel upon request, a maintenance agreement with the manufacturer of the treatment process/technology and a complete set of drawings within one (1) year of substantial completion of the sewage works. The drawings shall show the sewage works as constructed at that time.

4.4 A complete set of the record drawings, incorporating any amendments made from time to time and a maintenance agreement with the manufactures of the treatment process/technology, shall be kept by the Owner at the site of the sewage works for as long as the sewage works are kept in operation.

5. REPORTING

5.1 One week prior to the start up of the operation of the works, the Owner shall notify the District Manager (in writing) of the pending start up date.

5.2 The Owner shall prepare, and upon request, submit to the District Manager annual performance reports for the sewage system. The first such report shall cover the period from the commencement of operation of the sewage works to the end of the calendar year and shall be prepared within the following ninety (90) calendar days. Each subsequent annual report shall be prepared within ninety (90) calendar days following the completion of the calendar year being reported upon. The reports shall contain the following information in a format acceptable to the District Manager:

(a) a tabulation of all monitoring and analytical results obtained during the reporting period, including sampling/monitoring locations and dates;

(b) a tabulation of daily volumes of effluent disposed of through the subsurface disposal system during the reporting period;

(c) a record of system maintenance undertaken during the reporting period; and

(d) an account of any environmental and operating problems encountered at the site and the mitigative measures taken during the reporting period.

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

General Conditions A & B are 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.

1. Conditions 1.1 and 1.2 are included to ensure that the works are constructed, and may be operated and maintained such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented.
2. Condition 2.1 is included to ensure that the flow of sewage to the sewage system is within the approved treatment capacity of the works.
3. Conditions 3.1 through 3.3 relating to monitoring and recording the quality and quantity of raw sewage and treated effluent discharged to the subsurface disposal system, and the quality of the groundwater and surface water of the receivers are required to enable the Owner to evaluate the performance of the works and to ensure that it is operated and maintained at a level which is consistent with the design objectives and other requirements of this certificate.
4. Conditions 4.1 through 4.4 are 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 or damage to any person or property is prevented.
5. Conditions 5.1 and 5.2 are included to ensure that all pertinent information is available for the evaluation of the performance of the sewage works.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 2454-4XWRU3 issued on July 25, 2001

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
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

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

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

DATED AT TORONTO this 30th day of November, 2001

Mohamed Dhalla, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

PS/
c: District Manager, MOE London - District
Nancy Roulston, P.Eng., R.J. Burnside & Associates Ltd.
Clerk, Township of Perth East
Clerk, County of Perth