
Appendix A.2

Certificate of Approval (Sewage) No. 3-1720-90-916 (Leachate Treatment and Disposal by Spray Irrigation)



Ministry
of the
Environment

Ministère
de
l'Environnement

RECEIVED SEP 11 1991

APPROVALS BRANCH

250 Davisville Avenue
Toronto, Ontario
M4S 1H2

250, avenue Davisville
Toronto (Ontario)
M4S 1H2

September 4, 1991

Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road
P.O. Box 5057, Station A
Burlington, Ontario
L6R 3Y8

Attn: Mr. J.R. Marsh
Regional Landfill Manager

Dear Mr. Marsh:

Re: Richmond Township Landfill
Certificate of Approval (Sewage) 3-1720-90-916

Please find enclosed the above noted Certificate of Approval for leachate treatment and disposal works on Laidlaw's Richmond Township site.

This Certificate has been issued to your company subject to the terms and conditions outlined therein. The reasons for the conditions are outlined in the accompanying Notice.

There is a need for a comprehensive monitoring program to assess the effects of the spray irrigation program. This is addressed in Condition 7. Under Condition 9 reporting of the monitoring results is to be done in conjunction with the landfill site annual report.

Until the monitoring program has been approved and the background soil samples taken, only a portion of the proposed irrigation area is allowed, under Condition 8, to be used. This is to ensure that representative background samples are obtained.

Please note that Certificate of Approval No. 3-1720-90-916 constitutes the authority to construct the sewage works as required by Section 24, Ontario Water Resources Act. However, as the spray irrigation system may emit a contaminant to the air, an approval under Section 8, Environmental Protection Act is also required. Construction of the spray irrigation system should not begin until this additional approval is obtained.

Should you have any questions regarding the requirements of Certificate of Approval (Sewage) No. 3-1720-90-916, please contact Mr. J. Connelly of this office at (416) 440-3567.

Yours truly,

D.J. Andrijiw, Supervisor
Waste Sites & Systems Approvals Unit
Industrial Approvals Section

Encl.
JC/ec

cc: B.R. Ward - Director, S.E. Region
J.D. Bishop - District Officer, Kingston District Office



Whereas / *Attendu que* LAIDLAW WASTE SYSTEMS (RICHMOND) LTD.

of / *d* BURLINGTON, ONTARIO

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:

a leachate pipe collection system, leachate pumping station, leachate forcemain, leachate treatment lagoon, spray pumping station and spray distribution system; all in accordance with the items listed in Schedule "A" attached and subject to the following conditions:

1. For the purpose of this Certificate of Approval:
 - a) "Company" means Laidlaw Waste Systems (Richmond) Ltd., its successors or assignees;
 - b) "Director" means the Director of Approvals Branch, Ministry of the Environment.
2. The Company shall establish and maintain a buffer zone of 150 meters from the wastewater treatment works and effluent spray irrigation system to the nearest residence and a buffer zone of 100 meters from the effluent spray irrigation system to the nearest water course.
3. Spray irrigation shall be carried out in a manner to ensure that spray runoff to any area water course or ponding of spray irrigated effluent will not occur at any time.
4. When wind speeds exceed 15 km/hr during spray irrigation operations, the Company shall assess the potential for the spray to cause adverse impacts on water courses or on neighbouring properties and shall implement any necessary modifications to site operations to ensure that adverse impacts do not occur. Spray irrigation operation shall be terminated when wind speeds exceed 30 km/hr.

.../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 4th day of September, 1991
DATÉ À TORONTO ce jour d

JC/ec

Director / Directeur



5. The Company shall provide and maintain a fence around the entire land area which will be spray irrigated with leachate.
6. The perimeter fences and gates shall be provided with appropriate signs designating the nature of the facility and prohibiting trespassing.
7. Within 120 days of the date of issuance of this Certificate of Approval, the Company shall submit to the Director, for approval, a detailed program for monitoring the effects of the leachate application. This program shall include but not be limited to the following:
 - a) initial pre-irrigation analysis of soil properties and subsequent regular analyses
 - b) monitoring of shallow groundwater flow within and adjacent to the spray irrigation area including background monitoring
 - c) sampling of nearby surface water flow including storm events
 - d) weather conditions
 - e) spatial variability of application rates over the application area
 - f) rates and daily quantities of leachate application
 - g) chemical characteristics of the spray irrigation effluent
 - h) air quality during spray irrigation events; and
 - i) effects of the effluent on the vegetation.
8. Until the monitoring program required under Condition 7 above is approved and the initial soil samples required under Condition 7a) above are taken, application of effluent may only be made onto 6 of the 9 spray areas.
9. Results of all monitoring undertaken in accordance with Condition 7 above shall be reported in any annual report required to be submitted to the Ministry under Provisional Certificate of Approval (Waste Disposal Site) No. A 371203 dated March 30, 1988 or its successors.



Ontario

Ministry
of the
Environment

Ministère
de
l'Environnement

Notice Avis

TO: Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road
P.O. Box 5057, Station A
Burlington, Ontario
L6R 3Y8

You are hereby notified that Certificate of Approval (Sewage) No. 3-1720-90-916 has been issued to you subject to the conditions outlined therein.

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

1. The reason for Condition 1 is to simplify the wording of subsequent conditions and define the specific meaning of terms used in this Certificate.
2. The reason for Conditions 2, 3, 4, 5 and 6 is to ensure that adverse effects of spray irrigation do not occur off-site, that access to the site is restricted and that surface water bodies are not contaminated by the spray. Otherwise the spray irrigation may create a nuisance, may be a threat to the health and safety of any person or may cause harm to the environment which would not be in the public interest.
3. The reason for Conditions 7, 8 and 9 is to ensure that comprehensive monitoring of this leachate disposal program is undertaken and reported to the Ministry. Spray irrigation without this monitoring and reporting may result in a nuisance, a danger to the health and safety of any person, or harm to the environment which would not be in the public interest.

You may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board. Section 63 of the Ontario Water Resources Act, R.S.O. 1980, C. 361, as amended, provides that the Notice requiring the hearing shall state the portions of each term or condition in the approval in respect of which the hearing is required and the grounds on which you intend to rely at the hearing.

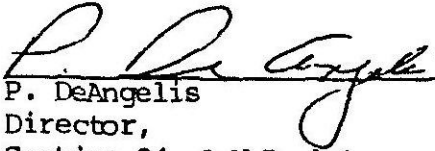
This Notice should be served upon:

The Secretary,
Environmental Appeal Board,
112 St. Clair Ave. West,
5th Floor,
Toronto, Ontario
M4V 1N3

AND

The Director,
Section 24, O.W.R. Act,
Ministry of the Environment,
250 Davisville Avenue
Toronto, Ontario
M4S 1H2

DATED at Toronto this 4th day of September, 1991.


P. DeAngelis
Director,
Section 24, O.W.R. Act,
Ministry of the Environment

SCHEDULE "A"

This Schedule "A" forms part of Certificate of Approval (Sewage) No. 3-1720-90-916 dated September 4, 1991.

1. Report entitled "Final Design Report" prepared by Henderson, Paddon and Associates Ltd., dated September 1988 and accompanying drawings.
2. Application for the approval of a sewage works dated August 30, 1991 signed by Mr. R.J. Poland.
3. Letter dated September 12, 1990 from Mr. J.R. Bray, P.Eng. to Tricil Limited (c/o Laidlaw Waste Systems Ltd.).



NOTICE OF AMENDMENT

the Applicant: Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road
P.O. Box 5057, Station A
Burlington, Ontario
L7R 3Y8

The Applicant is hereby notified that the approval issued under Certificate of Approval No. 3-1720-90-916, dated September 4, 1991, for the construction of a landfill leachate collection, treatment and disposal system at the Laidlaw Landfill located in part of Lots 1, 2, and 3, Concession 4 in the Township of Richmond is hereby amended to indicate compliance with Condition No. 7 of the Certificate as specified below.

In accordance with the requirements of said Condition, you have submitted the following documents:

- A report entitled "LAIDLAW WASTE SYSTEM (RICHMOND) LTD. RICHMOND LANDFILL. Certificate of Approval (Sewage) No. 31720-90-916. Condition No. 7. December 1991." prepared by Henderson, Paddon & Associates Limited.
- Letter to the Approvals Branch of the Ministry from Laidlaw Waste Systems Ltd., dated July 19, 1993.

The proposed program for monitoring of the effects of leachate application, as outlined in the above documents, has now been reviewed and found acceptable.

Therefore, this notice will serve to indicate that Condition No. 7 of the Certificate has now been complied with.

This Notice shall constitute part of the approval issued under Certificate of Approval No. 3-1720-90-916 dated September 4, 1991.

The Applicant may by written notice served upon me and the Environmental Appeal Board within 5 days after receipt of this Notice, require a hearing by the Board. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter O.40, provides that the Notice requiring the hearing shall state:

The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;

The grounds on which the Applicant intends to rely at the hearing in relation to each portion appealed.



ntario

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 2 of 2

The Notice should also include:

- . The name of the appellant;
- . The address of the appellant;
- . The Certificate of Approval number;
- . The date of the Certificate of Approval;
- . The name of the Director;
- . The municipality within which the sewage works are located;

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

This Notice must be served upon:

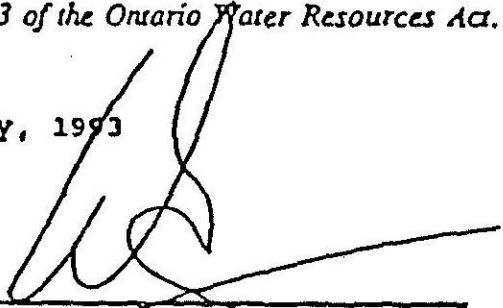
The Secretary,
Environmental Appeal Board,
12 St. Clair Avenue West,
Suite 502,
Toronto, Ontario.
M4V 1N3

AND

The Director,
Section 53, Ontario Water Resources Act,
Ministry of Environment and Energy,
250 Davisville Avenue, 3rd Floor,
Toronto, Ontario.
M4S 1H2

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

Done AT TORONTO this 23rd day of July, 1993



W. Gregson, P. Eng.
Director
Section 53
Ontario Water Resources Act

tn: -M. Walters, General Manager, Ontario Landfill Division
: -Mr. J. Bishop, MOEE, Kingston District Officer

/fn

Appendix A.3

Certificate of Approval (Air) No. 8-4028-
92-006 (Spray Irrigation System)

RECEIVED MAR 16 1992

APPROVALS BRANCH

Tel. (416) 440-3573
Fax. (416) 440-6973

250 Daviville Avenue
Toronto, Ontario
M4S 1H2

250, avenue Daviville
Toronto (Ontario)
M4S 1H2

March 11, 1992

Mr. J.R. Marsh
Regional Landfill Manager
Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road, Box 5057, Station A
Burlington, Ontario
L7R 3Y8

Dear Mr. Marsh:

RE: Certificate of Approval (Air) No. 8-4028-92-006
Leachate Spray Irrigation System

Please find enclosed the above noted Certificate of Approval.

This certificate is issued in keeping with the Provisional Certificate of Approval, Waste Disposal Site A371203 dated March 31, 1988 based on recommendations listed in the report of the Environmental Assessment Board dated February 20, 1986 identifying spray irrigation as the contingency for treating leachate from this site.

Based on our technical evaluation and the information submitted with your application, the spray irrigation system is capable of operating within the limits of Regulation 308 under the Environmental Protection Act.

However, while implementation of the spray irrigation contingency plan is necessary at this time, leachate treatment or other disposal options may be environmentally more desirable. Therefore, suitability of the spray irrigation system as a long term leachate management option must be carefully examined as required by Notice to Amend Provisional Certificate of Approval A 371203 issued on September 4, 1991. I expect that any future proposals for leachate treatment at the site will include consideration of the impact on air emissions.

.../2



J.R. Marsh
March 11, 1992
Page 2

We emphasize that if, at any time, emissions from the spray irrigation system contravene any part of the Environmental Protection Act, Regulation 308 or any conditions stipulated by the above noted Certificate, such contravention may become the subject of enforcement in accordance with Section 186 of the Act. In addition, the Director may issue an Order or amend or revoke the above noted Certificate in accordance with his powers under the Act.

If you have any questions regarding the above, please do not hesitate to contact Neil Parrish, Senior Engineer, Industrial Approvals (Air) at (416) 440-6983.

Yours truly,



A. M. Pennanen, P. Eng.
Acting Supervisor
Industrial Approvals (Air)

Encl.

c.c: D. Andrijiw, MOE, Approvals Branch
Mr. B. Ward, MOE SE, Reg. Dir.
M. Pullen, Laidlaw Waste Systems Ltd.



Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road, Box 5057, Station A
Burlington, Ontario
L7R 3Y8

Located at: Part of Lots 1, 2 and 3
Concession 4
Township of Richmond
Lennox and Addington County, Ontario

has applied in accordance with Section 9 of the Environmental Protection Act for approval of:

- one (1) spray irrigation system, with a maximum capacity of 505 litres per minute of landfill leachate, all in accordance with the documents listed in Schedule "A".

The above noted works are approved under Section 9 of the Environmental Protection Act.

SIGNED AT TORONTO this 11th day of March, 1992

THIS IS A TRUE COPY OF
THE ORIGINAL CERTIFICATE
SIGNED BY
P. DEANGELIS, P. ENG.

MAILED ON MAR 12 1992
BY [Signature]

NP/fs

cc: -Mr. B. Ward, MOE SE, Reg. Dir.

SCHEDULE "A"

This Schedule "A" forms part of Certificate of Approval (Air)
Number 8-4028-92-006

The following documents were submitted as part of the application:

1. Application for Certificate of Approval (Air) submitted by Laidlaw Waste Systems (Richmond) Ltd. dated January 21, 1992.
2. Report prepared for Laidlaw Waste Systems (Richmond) Ltd., titled "Application for Certificate of Approval (Air) -Leachate Control System Pumping Stations and Evapotranspiration System".
3. Drawing No. 8570-6 prepared by Henderson, Paddon, & Associates labelled "Contingency Plan" and dated August 12, 1988.

Drawing No. 8570-6 prepared by Henderson, Paddon, & Associates labelled "Leachate Treatment Lagoons" and dated September 1, 1988.

Appendix A.4

Certificate of Approval for Industrial
Sewage Works No. 5268-7E8LJW

RECEIVED

AUG 22 2008

55706



Ministry of the Environment
Ministère de l'Environnement

**CERTIFICATE OF APPROVAL
INDUSTRIAL SEWAGE WORKS**

NUMBER 5268-7E8LJW

Issue Date: August 19, 2008

Waste Management of Canada Corporation
117 Wentworth Crt
Brampton, Ontario
L6X 5L4

Site Location: Richmond Landfill Site
1271 Beechwood Road Parts of Lots 1, 2 & 3, Concession 4, Richmond
Greater Napanee Town, County of Lennox and Addington

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

leachate collection and disposal facility and stormwater management facility to service the Richmond Landfill Site located on Parts of Lots 1, 2 and 3, Concession 4, in the Town of Greater Napanee as follows:

PROPOSED STORMWATER MANAGEMENT FACILITY:

Stormwater Management Pond - SWM Pond No. 3

replacing the existing Stormwater Detention Pond No. 3 with a new stormwater management facility located south of the approved landfill footprint and north of Beechwood Road to service 20 ha drainage area of the Richmond Landfill Site, designed to provide quantity and quality control of stormwater runoff from storm events up to 1:100 return frequency consisting of the following:

- two (2) extended wet detention ponds interconnected by two (2) 750 mm diameter culverts providing a permanent pool storage capacity (including sediment storage) of 19,642 m³ between the elevations of 122.4 m ASL and 124.4 m ASL and active storage capacity of 7,620 m³ between the elevations of 124.4 m ASL and 124.73 m ASL (overall total storage capacity of 27,262 m³);
- each detention pond equipped with a rip rap lined inlet structure, a forebay, and cattails planted in the shallow areas surrounding the permanent pool;

- an outlet structure consisting of one (1) 600 mm x 600 mm precast concrete catch basin equipped with a 100 mm diameter inlet orifice, one (1) 300 mm diameter PVC discharge pipe equipped with one (1) 300 mm diameter gate valve, discharging through a drainage ditch to the Beechwood Road side ditch eventually flowing to Marysville Creek;
- one (1) 3.0 m wide rip rap lined emergency spillway with an invert elevation of 124.73 m ASL, discharging through a drainage ditch to the Beechwood Road side ditch; and
- including all controls and associated appurtenances.

all in accordance with the Application for Approval of Industrial Sewage Works submitted by Waste Management of Canada Corporation dated April 11, 2008, drawings and design specification prepared by Henderson Paddon & Associates Limited, Owen Sound, Ontario and the following documents:

1. "Final Report - 2007 Annual Monitoring Report, Waste Management of Canada Richmond Landfill, Town of Napanee, Ontario" dated March 2008, prepared by Water and Earth Science Associates Ltd. (WESA), Kingston, Ontario.

EXISTING LEACHATE MANAGEMENT FACILITY:

- one (1) approximately 504 m long 200 mm diameter perforated PVC or HDPE perimeter leachate collector pipe, installed in a 50 mm clear stone bedding wrapped in geotextile, extending through seven (7) 1200 mm diameter pre-cast concrete service manholes (MH12, MH11, MH10, MH9, MH8, MH7 and MH1) along the west side and north side of landfill footprint discharging to a 22.3 m³ capacity North Concrete Pumping Chamber which is not equipped with pumps;
- one (1) approximately 429 m long 150 mm diameter perforated PVC perimeter leachate collector pipe, installed in a 50 mm clear stone bedding wrapped in geotextile, extending through six (6) 1200 mm diameter pre-cast concrete service manholes (MH6, MH5, MH4, MH3, MH2 and MH1) along the east side and north side of landfill footprint discharging to a 22.3 m³ capacity North Concrete Pumping Chamber which is not equipped with pumps;
- one (1) approximately 393 m long 200 mm diameter perforated PVC perimeter leachate collector pipe, installed in a 50 mm clear stone bedding wrapped in geotextile, extending along the west side and south side of landfill footprint discharging to a leachate pumping station described below;
- one (1) approximately 296 m long 200 mm diameter perforated PVC perimeter leachate collector pipe, installed in a 50 mm clear stone bedding wrapped in geotextile, extending along the east side and south side of landfill footprint discharging to a leachate pumping station described below;

- one (1) side slope riser leachate pumping station equipped with two (2) 80 USGPM capacity submersible pumps and a sump with bottom dimension of 2 m x 2 m filled with 50 mm gravel, discharging to a leachate lagoon described below;
- one (1) 16,245 m³ storage capacity leachate lagoon, lined with clay and HDPE synthetic liner, located north of the landfill footprint used for temporary storage of leachate or leachate contaminated stormwater until dispose off site to a pre-approved sewage treatment plant;
- one (1) leachate storage lagoon located west of the landfill footprint used for collecting leachate and stormwater runoff from a composting facility until it is used for composting operations or disposed off-site to a pre-approved sewage treatment plant;
- including all controls and associated appurtenances.

SEWAGE WORKS APPROVED ON OCTOBER 21, 1991:

Stormwater Management Pond - SWM Pond No. 1

A stormwater management pond constructed on a site approximately 750 m north of Beechwood Road and north of the fill area for a 25 year design storm having a minimum storage volume of 228 m³ to retain surface runoff from an area of 3.38 ha (consisting of fill area) and to discharge at a rate of 70 L/s via a 375 mm diameter outlet pipe (fitted to a drop inlet pipe structure) to a Headwater Tributary of Marysville Creek (Intermittent), together with a drawdown structure, a 1200 mm diameter drop inlet pipe, a 3.5 m wide emergency spill-way channel, rock baffle, erosion and silt control protection;

Stormwater Management Pond - SWM Pond No. 2

A stormwater management pond constructed on a site approximately 750 m north of Beechwood Road and northwest of the fill area for a 25 year design storm having a minimum storage volume of 332 m³ to retain surface runoff from an area of 4.94 ha (consisting of fill area) and to discharge at a rate of 103 L/s via a 375 mm diameter outlet pipe (fitted to a drop inlet pipe structure) to a Headwater Tributary of Marysville Creek (Intermittent), together with a drawdown structure, a 1200 mm diameter drop inlet pipe, a 3.5 m wide emergency spill-way channel, rock baffle, erosion and silt control protection;

all in accordance with the information submitted by Henderson Paddon and Associates Limited Consulting Engineers and the following list of documents containing the information relied upon in the issuance of the Certificate of Approval No. 3-0915-90-916.

1. Application for the sewage works dated March 20, 1990, signed by 171496 Canada Inc., F.C. Ford, P. Eng., Henderson, Paddon and Associates and Township of Richmond.
2. Report entitled "Tricil Limited Landfill site parts of Lots 1, 2 and 3, Concession IV,

Township of Richmond, County of Lennox and Addington" dated September 1988, prepared by Henderson Paddon and Associates Limited.

3. Letter dated July 19, 1990, signed by Dick Van Wyck, Legal Counsel, Laidlav Waste System, addressed to Ranee Mahalingam, Review Engineer, Ministry of the Environment.
4. Letter dated September 6, 1990, signed by J. M. Tomlinson. P.Eng., Henderson Paddon and Associates Limited, addressed to Ranee Mahalingam, Approvals Branch, Ministry of the Environment, together with revised section entitled "Stormwater management facilities" of the report entitled "Tricil Limited Landfill Site Parts of Lots 1, 2 and 3, Concession IV, Township of Richmond, County of Lennox and Addington" dated September 1988, prepared by Henderson Paddon and Associates Limited.
5. Letter dated September 6, 1990, signed by Jay Clark, P.Eng., Henderson Paddon and Associates Limited, addressed to Ranee Mahalingam, P. Eng., Review Engineer, Approvals Branch, Ministry of the Environment.
6. Letter dated April 29, 1991, signed by Ranee Mahalingam. P.Eng., Review Engineer, Approvals Branch, Ministry of the Environment, addressed to J. K. Tomlinson. P.Eng., Henderson Paddon and Associates Limited.
7. Letter dated May 23, 1991, signed by Jay Clark, P.Eng., Henderson Paddon and Associates Limited, addressed to Ranee Mahalingam, P.Eng., Review Engineer, Approvals Branch, Ministry of the Environment.
8. Minutes of the meeting held at Ministry of the Environment, 250 Davisville Avenue, Toronto, on June 25, 1991.
9. Letter dated July 24, 1991, signed by J. M. Tomlinson, P.Eng., Henderson Paddon and Associates Limited, addressed to Bruce W. Metcalfe, Surface Water Technologist, Southeastern Region, Ministry of the Environment.
10. Letter dated July 25, 1991, signed by Bruce W. Metcalfe, Surface Water Technologist, Southeastern Region, Ministry of the Environment, addressed to J. M. Tomlinson, P.Eng., Henderson Paddon and Associates Limited.
11. Letter dated July 29, 1991, signed by J. M. Tomlinson, P. Eng., Henderson Paddon and Associates Limited, addressed to Ranee Mahalingan, Approvals Branch, Ministry of the Environment, enclosing a copy of the revised application and revised drawings No. 8570A (1, 2, 3, 4) and 8570 -7.

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;

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

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

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

"District Manager" means the District Manager of the Kingston District Office of the Ministry;

"Ministry" means the Ontario Ministry of the Environment;

"Owner" means Waste Management of Canada Corporation and includes its successors and assignees;

"Previous Works" means those portions of the sewage works previously constructed and approved under a certificate of approval;

"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* ;

"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

I - GENERAL

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 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 Information 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) 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* or at operational office of the *Owner* 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
- (2) 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.

II - LEACHATE COLLECTION AND DISPOSAL SYSTEM

6. LEACHATE 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 leachate stream over the time period being monitored.
- (2) For the purposes of this condition, the following definitions apply:
- (a) Monthly means once every month;
 - (b) Quarterly means once every three months;
 - (c) Semi-annually means once every six months; and
 - (d) Annually means once every twelve months;
- (3) **Leachate grab samples** shall be collected from a designated sampling location at the indicated monitoring frequency and analyzed for each parameter listed in Table 1 and all results recorded:

Table 1 - Leachate Monitoring
Sampling Location: North Pumping Chamber

Sampling Frequency: Quarterly		Sampling Frequency: Annually
Parameter	Parameter	Parameter
Alkalinity	Arsenic	Silver
Dissolved Organic Carbon (DOC)	Cadmium	Aluminum
Hardness	Chromium	Boron
pH	Cobalt	Barium
Total Ammonia Nitrogen	Copper	Beryllium
Nitrate Nitrogen	Mercury	Calcium
Nitrite Nitrogen	Molybdenum	Sodium
Total Kjeldahl Nitrogen	Nickel	Magnesium
Phenols	Lead	Manganese
PAHs	Selenium	Iron
BTEX	Zinc	Total Phosphorus
USEPA 624		Conductivity
		Hydrogen Sulphide
		Sulphate
		BOD5
		Total Trihalomethanes (THM)

- (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;
 - (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; and
 - (d) the Environment Canada publications "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" (July 1990) and "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna" (July 1990), as amended from time to time by more recently published editions.

- (5) 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* .

7. 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 training, including training in all procedures and other requirements of this *Certificate* and the *Act* and regulations, process controls and alarms.
- (2) The *Owner* shall prepare an operations manual within six (6) months of the issuance date 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 *Works* or *Owner* 's Head Office for the operational life of the *Works* . Upon request, the *Owner* shall make the manual available to *Ministry* staff.
- (4) The *Owner* shall maintain a logbook to record and report the volume of leachate disposed off-site, the date, and the name of the receiving sewage treatment plant;

III - STORMWATER MANAGEMENT FACILITY

8. MONITORING AND RECORDING

The *Owner* shall 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) The *Owner* shall collect stormwater grab samples from the following designated sampling location **prior to each planned discharge event** and analyse for the parameters listed in Table 2;
- (3) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in Condition 6 (4);
- (4) The measurement frequencies specified in subsection (2) in respect to any parameter are minimum requirements which may, after two (2) years of monitoring in accordance with this Condition, be modified by the *District Manager* in writing from time to time.
- (5) 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* at the *Works* or *Owner*'s Head Office.

Table 2 - Stormwater and Surface Water Monitoring Sampling Location: SWM Ponds No. 1, No. 2, and No. 3		
Parameter	Parameter	Field Parameter
pH	Aluminum	pH
Alkalinity	Arsenic	Temperature
Hardness	Barium	Conductivity
Biological Oxygen Demand (CBOD5)	Boron	
Un-ionized Ammonia	Cobalt	
Total Ammonia Nitrogen	Beryllium	
Total Kjeldahl Nitrogen	Cadmium	
Nitrate Nitrogen	Chromium	
Total Phosphorus	Copper	
Total Suspended Solids	Iron	
Total Dissolved Solids	Mercury	
Total Organic Carbon	Nickel	
Chloride	Potassium	
Chemical Oxygen Demand (COD)	Sodium	
Phenols	Selenium	
BTEX	Silver	
Acute Lethality - <i>Daphnia magna</i>	Zinc	
Acute Lethality - Rainbow Trout		

9. OPERATION AND MAINTENANCE

- (1) The *Owner* shall prepare an operations manual prior to the commencement of operation 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
- (2) The *Owner* shall maintain the operations manual current and retain a copy at the *Works*

or *Owner*'s Head Office for the operational life of the *Works*. Upon request, the *Owner* shall make the manual available to *Ministry* staff.

- (3) The *Owner* shall keep the outlet gate valves of **SWM Pond No. 1**, **SWM Pond No. 2**, and **SWM Pond No. 3** in **closed position** during normal operation periods.
- (4) Prior to any planned discharge of stormwater from any of the **SWM Ponds** to the natural environment, the *Owner* shall collect stormwater grab sample from a designated sampling location at the **SWM Pond** and conduct acute lethality testing for *Daphnia magna* and Rainbow Trout. The *Owner* shall ensure that the stormwater runoff collected in the **SWM Pond** is not acutely lethal to *Daphnia magna* and Rainbow Trout before allowing any discharge of stormwater from the **SWM Pond**.
- (5) In the event that toxicity monitoring results obtained under Condition 9 (4) show that the contents of the **SWM Pond** are acutely lethal either to *Daphnia magna* or Rainbow Trout, or both, the *Owner* shall ensure that the contents of the affected **SWM Pond** deemed to be leachate contaminated is disposed in a preapproved manner;
- (6) The *Owner* shall maintain a record of the date and the estimated volume of leachate contaminated stormwater disposed off site under Condition 9 (5);
- (7) Discharge of leachate contaminated stormwater to the receiving surface water from the *Works* is prohibited, except where it is necessary to avoid loss of life, personal injury, danger to public health or severe property damage;
- (8) The *Owner* shall notify the *District Manager* orally, as soon as possible, and in writing within seven days of any discharge of leachate contaminated stormwater to receiving surface water including an assessment of the relative extent of leachate contamination, estimated volume of stormwater discharged, and proposed or completed remedial actions.
- (9) The *Owner* shall maintain the water level in all the **SWM Ponds** at a level that ensures adequate storage is available for stormwater runoff associated with major storm events by ensuring that detained stormwater is disposed of in a timely manner to minimize the occurrence of emergency overflow during major storm events.
- (10) The *Owner* shall inspect the *Works* (**SWM Ponds**) at least once a year and, if necessary, clean and maintain the *Works* to prevent the excessive build-up of sediments and/or vegetation.
- (11) The *Owner* shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the site and/or *Owner's* operational headquarter for inspection by the *Ministry*. The logbook shall include the following:
 - (a) the name of the *Works* ;

- (b) the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed; and
- (c) the volume of contaminated stormwater disposed off-site, the date, and the name of the receiving sewage treatment plant;

IV - GENERAL

10. REPORTING

- (1) 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*.
- (2) In addition to the obligations under Part X of the Environmental Protection Act, the *Owner* shall, within 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.
- (3) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.
- (4) The *Owner* shall prepare on an annual basis, and submit upon request, a performance report within ninety (90) days following the end of the calendar year being reported upon. The first such report shall cover the period following the commencement of operation of the *Works* and subsequent reports shall be prepared to cover successive calendar years following thereafter. The reports shall contain, but shall not be limited to, the following information:
 - (a) a summary and interpretation of all stormwater monitoring data and a comparison to the Provincial Water Quality Objectives (PWQO), including an overview of the success and adequacy of the *Works* ;
 - (b) a summary of the monthly quantity of leachate disposed off site and corresponding average leachate quality;
 - (c) a description of any operating problems encountered and corrective actions taken;
 - (d) a summary of all maintenance carried out on any major structure, equipment,

- apparatus, mechanism or thing forming part of the *Works* ;
- (e) a summary of the calibration and maintenance carried out on all leachate monitoring equipment; and
 - (f) a summary of any complaints received during the reporting period and any steps taken to address the complaints;
 - (g) a summary of all *By-pass* , spill or abnormal discharge events; and
 - (h) 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 leachate 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. Conditions 6 and 8 are 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 specified in the *Certificate* and that the *Works* does not cause any impairment to the receiving watercourse.

7. Conditions 7 and 9 are included to require that the *Works* be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, damage to any property or injury to any person 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*.
8. 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. 3-0975-90-916 issued on October 21, 1991.

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

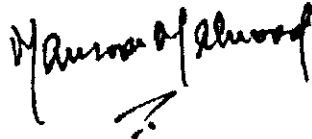
The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* 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 19th day of August, 2008

THIS CERTIFICATE WAS MAILED
ON <u>Aug. 19, 2008</u>
<u>N.P.</u>
(Signed)



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

SHV

c: District Manager, MOE Kingston - District
Jeff Armstrong, P.Eng., Henderson Paddon & Associates Limited ✓