

**Richmond Sanitary Landfill Site
OS-08-570-13-OS
Monitoring Report No. 23
Part of Lots 1, 2, and 3, Concession IV
Township of Richmond
County of Lennox and Addington**

**Prepared for:
Waste Management of Canada Corporation
1271 Beechwood Road
NAPANEE, ON K7R 3L1**

**Prepared by:
GENIVAR Consultants LP
945 Third Avenue East, Suite 212
Owen Sound, Ontario N4K 2K8**

Project No. OS-08-570-13-OS



OS-08-570-13-OS

March 30, 2010

Mr. Randy Harris, Landfill Manager,
Waste Management of Canada Corporation
1271 Beechwood Road
RR#6
Napanee, ON K7R 3L1

Re: Richmond Landfill Site
Annual Monitoring Report #23 - Final

Dear Randy:

We are pleased to provide Monitoring Report #23 in accordance with the conditions of the Provisional Certificate of Approval.

Please find enclosed **nineteen (19) copies** for your distribution as you see fit. **Two (2) copies** should be provided to the Ministry of the Environment, **one (1) copy** to Remi Godin, P.Eng., **one (1) copy** to Wayne Jenken, P.Eng., retain **one (1) copy** for your records, and the remainder can be distributed as needed at the landfill. If you require additional copies, please let us know.

I trust the enclosed is satisfactory. However, if you have any additional questions, please do not hesitate to contact me.

Very truly yours,

GENIVAR Consultants LP

Jeff E. Armstrong, P.Eng.
Designated Consulting Engineer
Director, Solid Waste Management
JEA/bdt
Encl.

cc: Mr. Remi Godin, P.Eng., District Engineer Waste Management of Canada Corporation
Mr. Wayne Jenken, P.Eng., Waste Management of Canada Corporation

TABLE OF CONTENTS

LETTER OF TRANSMITTAL

TABLE OF CONTENTS	
1.0 INTRODUCTION	1-1
2.0 PREVIOUSLY SUBMITTED REPORTS	2-1
3.0 CONDITION 9(B).....	3-1
3.1 Summary of Waste	3-1
4.0 CONDITION 9(C).....	4-1
5.0 CONDITION 9(E).....	5-1
5.1 Operations and Site Development.....	5-1
5.2 Equipment.....	5-3
5.3 Scheduled Equipment.....	5-4
5.4 Small Vehicle Transfer Area	5-4
5.5 Staff.....	5-4
5.6 Pest Control	5-5
5.7 Tonnage Control	5-5
5.8 Site Volumes.....	5-5
5.9 Site Facilities	5-6
5.10 Soil Recycling Pad	5-6
5.11 Air Quality.....	5-6
6.0 SURFACE WATER MANAGEMENT.....	6-1
7.0 LEACHATE MANAGEMENT.....	7-1
8.0 ORGANIC WASTE COMPOST FACILITY OPERATION.....	8-1
9.0 GENERAL.....	9-1

List of Figures

Figure 1.1 Site Location

List of Tables

Table 3.1	Municipalities Presently Serviced
Table 3.2	2009 Monthly Tonnage Totals
Table 5.1	Landfill Quantities
Table 6.1	Leachate Quantities 2009
Table 7.1	Compost Quantities 2009
Table E.1	Surface Water Quality

Appendices

- Appendix A Certificates of Approval
- A.1 Provisional Certificate of Approval No. A371203
 - A.1.1 Amendment to Certificate of Approval No. A371203 dated September 4, 1991, Replacing Condition 2(a) and Imposed Conditions 29 and 30
 - A.1.2 Amendment to Certificate of Approval No. A371203 dated September 2, 1994, Adding Condition 31
 - A.1.3 Amendment to Certificate of Approval No. A371203 dated August 1, 1995, Approving Phases 4 and 5 and Imposed Conditions 32 and 33
 - A.1.4 Amendment to Certificate of Approval No. A371203 dated August 29, 2000, Approving the Construction of the Phase 1 Leachate Collector
 - A.1.5 Amendment to Certificate of Approval No. A371203 dated March 21, 2007, Replacing Condition 34
 - A.2 Certificate of Approval (Sewage) No. 3-1720-90-916 (Leachate Treatment and Disposal by Spray Irrigation)
 - A.3 Certificate of Approval (Air) No. 8-4028-92-006 (Spray Irrigation System)
 - A.4 Certificate of Approval for Industrial Sewage Works No. 5268-7E8LJW
 - A.5 Certificate of Approval No. A710003 (Soil Recycling)
 - A.6 Certificate of Approval (Air) No. 8-4078-99-006 (Flare System)
- Appendix B Commercial and Industrial Accounts
- Appendix C Drawing 8570-2009 – June and August 2009 Existing Conditions
- Appendix D Letters of Approval for Alternate Leachate Treatment Sites
- Appendix E 2009 Surface Water Quality Samples – WESA Data
- Appendix F 2009 Leachate Analytical Results – WESA Data

1.0 INTRODUCTION

This monitoring report for the Waste Management of Canada Corporation (WM) Richmond landfill site is prepared to comply with part of the Conditions of Provisional Certificate of Approval (C of A) No. A371203 dated March 30, 1988 and Certificate of Approval of Industrial Sewage Works Number 5268-7E8LJW dated August 19, 2008. This report was prepared following an aerial survey on June 27, 2009, site inspections and discussions with management.

Specifically, the items covered in this report pertain to Conditions 9(b), 9(c), 9(e) and 9(f) of C of A No. A371203. A separate monitoring report prepared by Water and Earth Science Associates Ltd. addresses the items covered by 9(a) and 9(d) of the Certificate. This report also pertains to Condition 10(4) b, c, d, e, f, g, and h.

The Provisional Certificate of Approval No. A 371203 dated March 30, 1988 is contained in **Appendix A.1** of this monitoring report. Several amendments have been issued to the original certificate and are as follows:

- September 4, 1991 Amendment (Appendix A.1.1)

Replaced Condition 2(a) and imposed Conditions 29 and 30. This amendment required submission of a report-assessing adequacy of the 1988 Design and Operation Report concerning impoundment of contaminated surface water at the site. Another report was required to explain the reasons for this occurrence, assess the adequacy of the contingency plan and suitability of the site for continued operation. In addition, it stipulated that the leachate spray irrigation system should not be constructed until the appropriate Certificates of Approval are issued.

- September 2, 1994 and September 11, 1996 Amendment (Appendix A.1.2)

Added Condition 31 allowed for construction and operation of a composting facility and was amended in 1996 giving approval for expansion of the existing leaf and yard waste compost facility, to an organic waste composting facility.

- August 1, 1995 Amendment (Appendix A.1.3)

Imposed Conditions 32 and 33. This amendment stipulates the requirement for submission of an updated site monitoring plan and prohibits leachate recirculation into Phases 1, 2 and 3 of the landfill area.

- August 29, 2000 Amendment (Appendix A.1.4)

Required Canadian Waste Services Inc. to submit a Contingency Plan for leachate management in the event the Napanee sewage treatment plant is incapable of treating leachate.

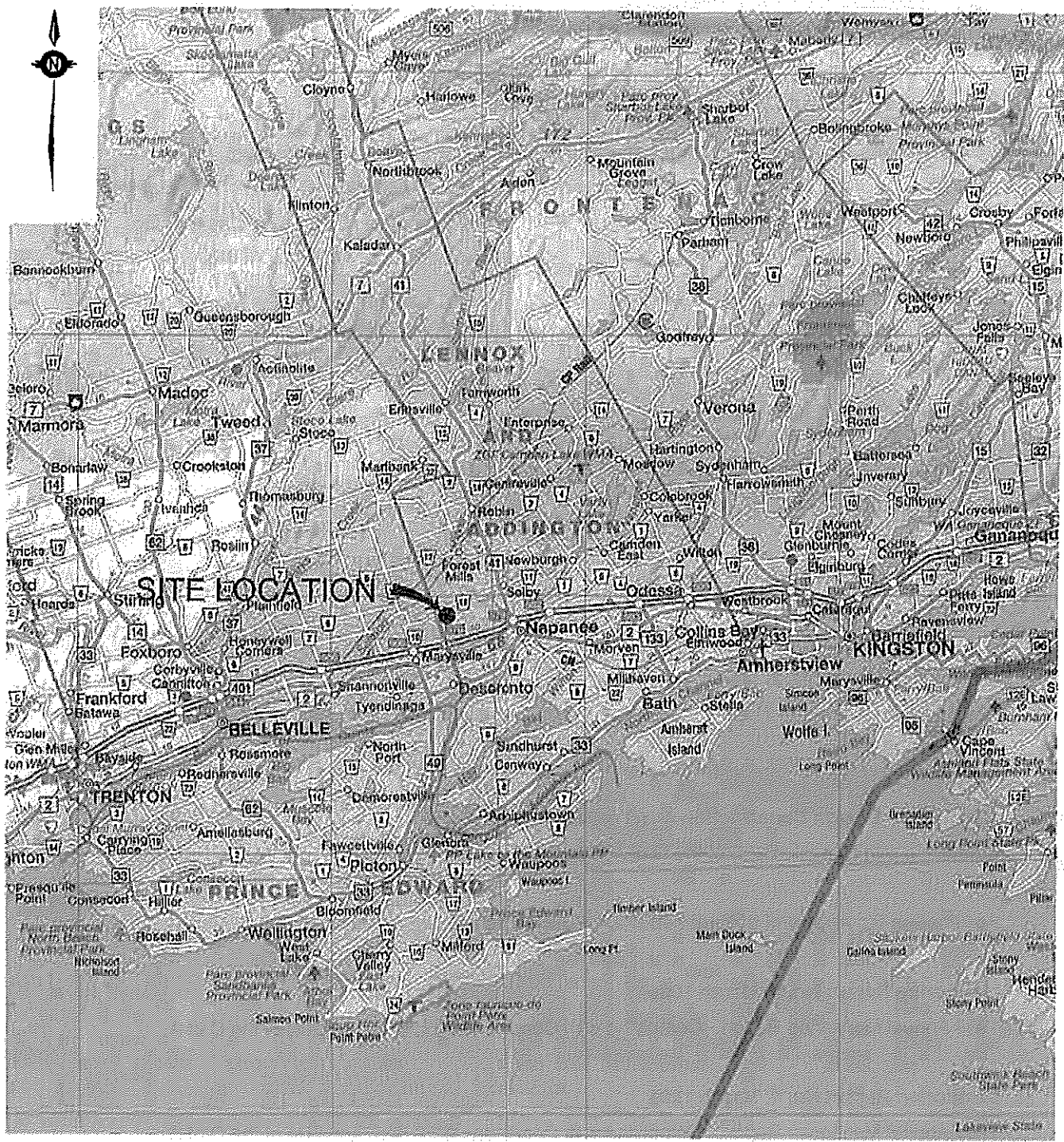
- March 21, 2007 Amendment (Appendix A.1.5)

Required Waste Management to submit a Final Closure Plan pertaining to the termination of the landfill site, post closure inspection, maintenance and monitoring, and end use.

The following other Certificates of Approval concerning the site are included in **Appendix A**:

- Certificate of Approval (Sewage) No. 3-1720-90-916 (Leachate Treatment and Disposal by Spray Irrigation) dated September 4, 1991 (**Appendix A.2**)
- Certificate of Approval (Air) No. 8-4028-92-006 (Spray Irrigation System) dated March 11, 1992 (**Appendix A.3**)
- The new Certificate of Approval Number 5268-7E8LJW dated August 19, 2008 is found in **Appendix A.4**, outlining the requirements for the operation of the leachate and stormwater management systems.
- Certificate of Approval for a Waste Disposal Site No. A 710003 (Soil Recycling) dated December 20, 1993 (**Appendix A.5**).
- Certificate of Approval (Air) No. 8-4078-99-06 (Gas Flare System) dated December 21, 1999 (**Appendix A.6**).

The site location can be seen in the following **Figure 1.1**.



C:\1850\1850\DRAWINGS\2008\1850-F1-GENVAR.dwg PLOTTED Wednesday, March 24, 2010 1:05:24 PM

SHEET 1.1	DWG BY: J.C.G. DATE: MAR 2004 CHK BY: J.E.A. SCALE: 1/4" = 1' SEE BAR SCALE
	WASTE MANAGEMENT OF CANADA CORP.
	DRAWING NO. 0857013 - F1.1

SITE LOCATION PLAN RICHMOND LANDFILL



 GENIVAR
945 Third Ave E, Suite 212, Owen Sound, ON, N4K 2K8 Telephone: (519) 376-7612 / Fax: (519) 376-8008 Toll Free: 1-855-376-7612

2.0 PREVIOUSLY SUBMITTED REPORTS

Several reports have been completed and filed with the Ministry of the Environment in compliance with requirements of the Conditions of the Provisional Certificate of Approval (C of A). Those prepared by GENIVAR Consultants LP (formerly Henderson Paddon and Associates Limited.) are as follows:

Monitoring Report No. 1, March 1988

1987 Annual Monitoring - Complying with Conditions 10(b), 10(c), and 10(e) of the C of A dated August 11, 1987.

Final Design Report, September 1988

Complying with Conditions 2(a) and 11(a) of the C of A dated August 11, 1987, (Condition 2(a) and 10(a) of the C of A dated March 30, 1988).

Application for the Approval of Sewage Works for the Leachate Collection and Treatment Facilities, October 1988

Monitoring Report No. 2, March 1989

1988 Annual Monitoring Report - Complying with Conditions 9(b), 9(c), and 9(e) of the C of A dated March 30, 1988.

Clay Liner – Design Construction and Testing, October 1989

Complying with Condition 2(b) of the C of A dated March 30, 1988.

Application for Approval of Sedimentation Ponds and Ditching, March 20, 1990

Monitoring Report No. 3, March 1990

1989 Annual Monitoring Report - Complying with Conditions 9(b), 9(c), and 9(e) of the C of A.

Monitoring Report No. 4, March 1991

1990 Annual Monitoring Report - Complying with Conditions 9(b), 9(c), and 9(e) of the C of A.

Condition No. 7 Report, December 1991

This report was prepared and filed on December 31, 1991 by Laidlaw in connection with requirements of Certificate of Approval (Sewage) No. 31720-90-916.

Condition No. 29 Report, December 1991

This report was prepared and filed on December 31, 1991 by Laidlaw in connection with requirements of Certificate of Approval No. 19-371203 dated September 4, 1991.

Monitoring Report No. 5

1991 Annual Monitoring Report dated March 1992, to comply with Condition 9(b), 9(c) and 9(e) of the C of A.

Monitoring Report No. 6

1992 Annual Monitoring Report dated March 1993, to comply with Condition 9(b), 9(c) and 9(e) of the C of A.

Monitoring Report No. 7

1993 Annual Monitoring Report dated March 1994, to comply with Condition 9(b), 9(c) and 9(e) of the C of A.

Monitoring Report No. 8

1994 Annual Monitoring Report dated March 1995, to comply with Condition 9(b), 9(c) and 9(e) of the C of A.

Monitoring Report No. 9

1995 Annual Monitoring Report dated March 1996, to comply with Condition 9(b), 9(c) and 9(e) of the C of A.

Development & Operations Report

Report dated March 1996, to comply with Condition 2(a) of the C of A and as requested in the Amendment to the C of A on August 1, 1995. No comments have been received to date.

Monitoring Report No. 10

1996 Annual Monitoring Report dated March 1997, to comply with Condition 9(b), 9(c), 9(e), and 9(f) of the C of A.

Monitoring Report No. 11

1997 Annual Monitoring Report dated March 1998, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 12

1998 Annual Monitoring Report dated March 1999, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 13

1999 Annual Monitoring Report dated March 2000, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A

Monitoring Report No. 14

2000 Annual Monitoring Report dated March 2001, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 15

2001 Annual Monitoring Report dated March 2002, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 16

2002 Annual Monitoring Report dated March 2003, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 17

2003 Annual Monitoring Report dated March 2004, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 18

2004 Annual Monitoring Report dated March 2005, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 19

2005 Annual Monitoring Report dated March 2006, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 20

2006 Annual Monitoring Report dated March 2007, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Final Closure Plan

Final Closure Plan dated June 2007, was submitted to satisfy Condition 34 of the C of A that required a detailed closure plan pertaining to the termination of the landfill site, post closure inspection, maintenance and monitoring, and end use.

Monitoring Report No. 21

2007 Annual Monitoring Report dated March 2008, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

Monitoring Report No. 22

2008 Annual Monitoring Report dated March 2009, to comply with Condition 9(b), 9(c), 9(e) and (f) of the C of A.

3.0 **CONDITION 9(B)**

This condition requires all waste received at the site be summarized in terms of volume or weight and a list provided of all current commercial/industrial users.

3.1 **Summary of Waste**

Table 3.1 is an updated list of municipalities serviced by this landfill, as follows:

TABLE 3.1
Municipalities Presently Serviced

Lennox & Addington County
Town of Greater Napanee
Village of Newburgh

The Corporation of the County of Prince Edward
(which used to include)

- Town of Picton
- Town of Sophiasburgh
- Village of Bloomfield
- Township of Athol
- Township of Hallowell
- Village of Wellington
- Township of North Marysburgh

Hastings County
City of Belleville
City of Quinte West

Table 3.2 summarizes monthly volumes in metric tonnes for the calendar year 2009. Weigh scale operators recorded daily tonnages, as follows:

TABLE 3.2
2009 Monthly Tonnage Totals

MONTH	COMPOST DIVERTED FROM LANDFILL SITE (TONNES)	TOTAL WASTE TONNAGE LANDFILLED (TONNES)
January	31.5	513.65
February	13.16	605.43
March	17.93	867.14
April	121.57	648.69
May	81.61	806.04
June	36.78	682.33
July	23.9	960.4
August	25.88	611.26
September	17.05	618.14
October	71.71	625.92
November	101.01	599.23
December	2.74	462.5
TOTAL	544.84	8,000.73

NOTE: The site is licensed for 125,000 tonnes/year.
Total tonnage shown does not include recyclable material or hydrocarbon contaminated soils used for daily cover material.

The 2009 waste tonnage landfilled outlined in **Table 3.2** was 8,000.73 tonnes, which was compiled from the monthly summary of wastes received. The licensed tonnage is 125,000 tonnes/year.

In addition, this year, WM diverted compostable material to the on-site composting program, and electronic waste (e-waste) to off-site recycling centers. Approximately 544.84 tonnes of compostable material was diverted from the landfill site, and 11.95 tonnes of e-waste was diverted. This is not included in the total tonnage received at the landfill site. Additional material was directed through on-site recycling programs at the mini transfer area but the tonnages are not available for plastics, glass and fibres.

Commercial/Industrial Waste

The list of commercial/industrial waste users provided from the present landfill records is contained in **Appendix B**.

4.0 CONDITION 9(C)

This Condition requires a map of surface contours in the active landfill area to be provided.

An aerial survey of the landfill site was carried out on June 27, 2009, for volume calculations. GENIVAR completed a GPS survey in August 2009 to located the new gas wells, and has been included on the existing condition drawing **8570-2009**, which is contained in **Appendix C** of this report.

In 2009, landfilling operations were contained to the upper east end of the landfill mass, and on the south slope at the location of the former haul road. The landfilling operations are progressing continually higher to achieve the final approved contours for the landfill site. Landfilling operations will continue until the final contour elevations are reached.

Landfilling tonnage were less than the approved annual limit again last year due to the decreasing air space remaining at the landfill site, and the need for WM to service the local customers. Hydrocarbon-impacted soil received at the landfill site was temporarily stockpiled on the contaminated soil pad to the south of the landfill site. The material was used as daily cover in landfilling operations as required.

5.0 CONDITION 9(E)

Condition 9(E) of Certificate of Approval Number A371203 requires a summary of any changes in operations, equipment and procedures made or proposed at the site and any operating difficulties encountered.

5.1 Operations and Site Development

In 2009, landfill operations continued in the upper portions of the landfill site, with waste being placed in the upper east end of the landfill mass, and in the location of the former haul road located on the south central face. Prior to landfilling in the area of the old access road, the gravel subgrade was removed to prevent any leachate flow paths in the granular material. The landfill mass is nearing final contours and will progress to final elevations. Final grades are regularly set to control landfilling activities and to ensure that landfilling operations do not proceed above final contours. The progressive capping of completed landfill slopes minimizes precipitation infiltration and visual impacts. Landfill capacity is determined by the final contours, and the landfill will remain operational until these contours are reached.

Since access to the active landfill face is restricted by removing the old access road, waste is hauled to the active area by an off road haul truck. Waste is dumped in a receiving area at the toe of the landfill, within the footprint, and then loaded into the off road truck to be deposited at the active face.

No borrow pit operations for cover material were undertaken in 2009 as a sufficient quantity of hydrocarbon-impacted soil or other soil material for daily cover requirements was stockpiled at the landfill site and/or received at the landfill gate. Material was removed from the southwest borrow area for the reconstruction of the south berm of the south westerly sedimentation pond.

Regular operation and maintenance of the landfill gas/flare system was completed in 2009. Seven (7) new gas wells were installed across the crest of the landfill, and 12 gas wells were redrilled on the upper sections of the north, south, and east slopes, to increase the well size to improve gas collection. A total of 20 electrical pumps were installed in wells to lower the leachate level within the granular around the well to improve gas collection. The leachate is then pumped to the leachate collection system. The present system collects gas from five (5) leachate clean-outs, three (3) leachate collection manholes and 55 vertical gas wells.

The gas collection system operated well in 2009. The landfill gas flare has been effective at reducing the odour around the landfill site. In the rare occurrence of flare shutdown, operators, who are automatically

notified by a paging system, attend the site to restart the flare or correct any alarm situations. The flare has operated successfully to date. The C of A for the flare system is included in **Appendix A**.

In 2009, leachate continued to be hauled to Napanee for treatment. Loads are collected from the site, manifested and then discharged at the dumping facility located at Enviro Park Lane and West Street on the edge of the Town of Napanee. Leachate continues to be extracted at the landfill site at the lowest portions on Phases 2 and 4 and hauled as required for treatment off-site. **Appendix F** provides the leachate quality analysis that was completed in 2009 from Phase 2 (North chamber) and Phase 4 (South chamber). In 2009, there were no issues relating to leachate treatment problems.

In the event that leachate cannot be hauled from the site due to conditions at the receiving plant, etc., leachate or leachate-impacted water will be stored in the leachate-holding lagoon located to the north of the site to contain leachate and to prevent spills. Once leachate treatment resumes at the receiving plant, this liquid is then hauled to the sewage treatment plant for treatment and disposal. This is a temporary measure and is outlined in the leachate management plan submitted to the MOE. The water stored in this lagoon is generally only slightly impacted by leachate and is not odorous. To date, this has worked well and has caused no operational issues, such as odour, and this storage was not used in 2009.

WM inspects the site each day for leachate seeps and problem areas in the final cap. If leachate seeps are encountered, they are promptly repaired to avoid any surface water contamination. Generally, leachate seeps are excavated and granular material and dry clay are replaced and packed. When cracks develop in other areas of the final cap and the potential for gas migration is present, the final cap is scarified or re-compacted and additional clay may be placed in the area to prevent gas migration. Through the continuous removal of leachate to the leachate treatment facilities and the extraction of landfill gas through the landfill gas collection and disposal system, the potential for leachate seeps and gas outbreaks are minimized and the potential for any off-site impact is reduced.

In 2008, WMCC applied to the MOE for approval to upgrade the south sedimentation pond, to create a wetland area, and to improve the aesthetics of the front entrance. Approval was received from the MOE, and the comprehensive C of A which includes all stormwater ponds and the leachate collection system is included in **Appendix A.4**. Construction was completed on the south sedimentation pond in March 2009. On April 27, 2009, the southerly berm of the sedimentation pond failed, due to frozen material becoming weak after thawing. The pond was sampled and dewatered, and the material in the berm was removed and replaced with dry clay till material from the onsite borrow area. Work began in mid-July 2009 and was completed in late September 2009. Seeding will be completed in 2010 once conditions permit.

Signs are erected along the access road near Beechwood Road identify the landfill site. The main sign supplies the following information:



Additional signs on the site direct traffic to working faces and vehicles to the storage area for white goods. The signs are considered satisfactory and informative to the landfill users.

In 2009, the gravel from the former haul road on the south slope was also removed so landfilling could commence in this location. A waste tipping area was also constructed on the southwest footprint, to discharge waste loads. Waste brought to the site by the garbage trucks is offloaded in the tipping area, and is then re-loaded into WM's haul truck and carried to the working face.

White goods, including scrap metal, are presently separated from the waste stream and temporarily stored on the site. A scrap dealer removes these materials regularly for recycling and it is anticipated this practice will continue.

Site hours for the general public have been changed as of December 1, 2006 to Monday to Friday from 9am to 3pm, and closed Saturdays. The site is open the regular hours for commercial haulers.

5.2 Equipment

During 2009, a D7R Caterpillar dozer was used to spread and compact waste material, and to spread daily cover. Other equipment on the site included:

- a Cat 235 High-Hoe;
- a CAT D250 articulated dump truck;
- a CAT 966 rubber-tire loader;
- a Case International farm tractor with a compost windrow turner and rotary mower; and,
- a 1989 Pelican sweeper.

If additional equipment was required for construction or other auxiliary uses, they were acquired from local contractors.

5.3 Scheduled Equipment

No additional equipment is required at the landfill site.

5.4 Small Vehicle Transfer Area

The mini-transfer area continued to be used successfully last year. This area is used for small vehicles off loading waste, recyclables and compostable materials. This practice keeps small vehicles away from the working face and facilitates the transfer of material from the smaller vehicles into the roll-off bins.

In 2009, WM constructed a reuse centre where residents can donate and exchange reusable goods. This building is located in the public drop off area. WM also entered the Ontario Electronic Stewardship program and the Ontario Tire Stewardship program, and collect electronics and tires for recycling offsite.

5.5 Staff

WM staff manages and operates the site. Mr. Randy Harris is the Landfill Manager. The site was managed by the Eastern Canada Market Area office with Mr. Dave White being the Director of Disposal Operations - Ontario.

Other landfill staff presently consists of one (1) full-time equipment operator, a mechanic, office clerk/bookkeepers, a weigh scale gate attendant to oversee incoming waste traffic and volumes, a labourer/litter picker and part-time staff, as required.

Other equipment operators are brought on the site for additional excavating, stockpiling of cover materials and for contract work as required for ongoing site development.

The on-site mechanic handles equipment preventive maintenance programs.

5.6 Pest Control

Anchor Pest Control Services Limited continues to inspect, monitor, bait and poison the site monthly.

5.7 Tonnage Control

A truck weigh scale records net tonnages received at the site on a day-by-day basis.

In 1998, an 80' Active Mod-U-Dec pitless truck scale with a Toledo digital weight display and printer was connected to a computer for data management. Truck traffic is controlled from the office by traffic light signals and by an air phone intercom system as trucks approach the scale.

In 2004, electrical work was completed to allow the scale facility to be run by a generator in the event of power failure to the site. Standby power can be easily connected to the scale house facility to operate the necessities for the acceptance of waste vehicles.

5.8 Site Volumes

Using the survey of June 27, 2009, site volumes were calculated. The remaining air space and expected site life can be found in the following **Table 5.1**. The site life is determined once final contours have been reached, and the estimated site life of 1 year remains, and the site will close in June 2011. During the last year, the settlement of the landfill was less than the airspace consumed, which resulted in a decrease in the remaining airspace.

TABLE 5.1
Landfill Quantities
WM - Richmond Sanitary Landfill Site

Description	Quantity (m ³)
Gross remaining air space (including final cap)	85,500
Remaining quantity of final cap to be placed ⁽¹⁾	36,000
Remaining air space for waste and daily cover	49,500
Estimated daily cover volume remaining assuming 4:1 waste/cover ratio	9,900
Air space for waste	39,600
Estimated annual air space required for waste ⁽²⁾	39,400
Estimated remaining site life (years)	1

NOTES:

- (1) Final landfill cap is constructed of 0.85 m of clayey material, and 0.15 m of topsoil.
- (2) Assuming 33,500 ± t/yr incoming waste at 850 kg/m³.
- (3) Values as of June 27, 2009.

5.9 Site Facilities

The landfill site office is located to the south of the landfill site on the main access road. The building houses management staff, secretarial and record services, communications equipment, weigh scale recording devices and operating staff facilities.

Landfill equipment is serviced in the existing maintenance building. Fuel storage is located in this area and a staff room for the landfill equipment operators is attached.

5.10 Soil Recycling Pad

A soil recycling pad is located to the east of the existing maintenance building and is used for temporary storage of hydrocarbon-impacted soil. This pad is used sporadically and allows incoming soil vehicles to avoid conflict with the waste vehicles. The soil is moved to other stockpiles on top of the landfill or to the active face for daily cover, as required.

Surface runoff from this pad is collected at an oil/sediment separator located at the south of the pad. The oil and sediment captured by the separator is pumped out as required and trucked off the site by a licensed hauler.

5.11 Air Quality

At present, air quality at the site is not monitored. Over the years, a few immediate neighbours have occasionally contacted WM regarding odours from the landfill site. The normal decomposition of waste causes odours from the site. WM implemented the operation of a landfill gas recovery system in 2001 to eliminate the odour source. Perimeter gas wells were drilled in the waste mound, and collection piping withdraws landfill gas from the wells and all leachate manholes to reduce the odour emitted from the landfill site. Landfill gas is flared off in a totally enclosed flare to the south of the landfill footprint. The landfill flare was commissioned in April 2001 and successfully reduces landfill gas odours.

The weather station is located south of the office area. The station monitors wind speed, wind direction, temperature, rainfall, solar radiation and relative humidity. Recorded local weather patterns help in addressing odour complaints.

WM staff also tour the surrounding area and concession roads regularly to monitor for odour, litter and illegally dumped waste. Observations are recorded and corrective measures taken as required. In

addition, when odour complaints are received at the landfill site, WM staff are dispatched to investigate the source of the odour and record the conditions that may have influenced the odour. WM is able to complete this response plan if complaints are received directly by WM. If complaints are delayed or not directed towards WM, the potential odour source cannot be investigated nor can corrective action be taken if the odour was potentially landfill related. In 2009, there were 17 odour complaints received by WM, for which the above procedure was used to address the complaints.

In 2009, the MOE conducted a 3 week odour survey in June and July, and found no negative impacts on the local air quality. In addition, the MOE used their TAGA (Trace Atmospheric Gas Analyzer) unit to evaluate the local air quality, and concluded that the air quality was similar to any rural air quality in Ontario.

Waste Management also continued with the surface emission survey study, where a consultant measured surface emissions to identify areas of weak cap. This year, a surface emission survey was performed on June 3, 2009. There were no areas identified above 500ppmv, however, WM redrilled wells and installed pumps in wells which had exceedances close to the 500ppmv threshold as a precautionary measure.

6.0 SURFACE WATER MANAGEMENT

Surface water quality management is operated under Industrial Sewage Works Certificate of Approval No. 5268-7E8LJW, which outlines the operation of three (3) sedimentation ponds located on the landfill site property, and the leachate collection system. This section is intended to satisfy the requirements outlined in Section 10(4) of the C of A.

The two (2) northerly sedimentation ponds operated in 2009 without any maintenance required on the ponds. The ponds are regularly inspected to ensure their operation meets the C of A and no remedial work was required in 2009. The total quantity released from the northwest pond between November 30th and December 4th, 2009 was 2,102 m³, while the northeast pond did not require any release.

The south sedimentation pond located along Beechwood Road is monitored due to the concentration of the landfill operations on the south side of the landfill site. In 2009, stormwater was contained within the pond, and tested prior to discharge. The pond was discharged by pumping from December 4th to December 24th, with some days off due to weekends and retesting requirements. The total volume pumped from the south pond during this time period was 14,707 m³.

For completeness, **Appendix E** contains the surface water quality sampling results, which are also contained in the Water & Earth Science Associates (WESA) Annual Monitoring Report. For a detailed evaluation of surface water quality, the reader is directed to read the Annual Report prepared by WESA.

In 2008, WMCC applied to the MOE for approval to upgrade the south sedimentation pond, to create a wetland area, and to improve the aesthetics of the front entrance. Approval was received from the MOE, and the Industrial Sewage Works C of A for stormwater management and leachate collection is included in **Appendix A.4**.

Construction of the south pond was completed in March 2009. On April 27, 2009, the southerly berm of the sedimentation pond failed, due to frozen material becoming weak after thawing. The pond was sampled and dewatered, and the material in the berm was removed and replaced with dry clay till material from the onsite borrow area. Work began in mid-July 2009 and was completed in late September 2009. Seeding will be completed in 2010 once conditions permit.

Also during this construction in the summer, the perimeter ditches along the toe of the south slope were cleaned and graded, to ensure there are no surface water drainage issues. Additional grading around the maintenance area was completed, to reduce localized ponding in the area.

7.0 LEACHATE MANAGEMENT

Condition 9(F) of C of A A371203 requires a report of the amount of leachate collected, stored and sprayed. Condition 10(4) b, c, d, e, and g of C of A Number 5268-7E8LJW require additional reporting on leachate management activities. This section is intended to satisfy these requirements.

Leachate haulage from the site to the Napanee (now part of the Town of Greater Napanee) sewage system began in 1996. Leachate is regularly hauled from the landfill by Sutcliffe Sanitation Services Ltd. and discharged directly to the sewage system. Close communication between the town, WM and Sutcliffe Sanitation is maintained to determine if leachate may be accepted for treatment. Sutcliffe Sanitation is the common hauler of sludge from the sewage treatment plant and leachate from the landfill site. Before picking up a load of leachate, Sutcliffe Sanitation confirms with the town that leachate can be hauled on that particular day.

During the winter of 2003/2004, WM constructed a leachate/septage dumping facility within the Town of Napanee. The dumping facility is located at Enviro Park Lane and West Street within the Town of Napanee on municipally owned property. The dumping facility was commissioned in April 2004, after which time all leachate was deposited at the dumping station. Station users are recorded by PIN numbers that uniquely identify each station user and log the quantity of material discharged to the dumping facility. Users are then billed on a user pay basis by the Napanee Utilities. Ownership, operation and maintenance of the facility is the responsibility of the Greater Napanee Utilities. WM has a usage contract, which allows WM to use the facility for a specified period of time as long as Napanee Utilities does not have a restriction on dumping due to treatment characteristics at the sewage treatment plant. The dumping facility contains dumped loads and slowly discharges wastewater into the Napanee sewage system. Napanee Utilities has a C of A for this site.

It is a requirement of the landfill site's C of A that alternative leachate treatment options are available should Napanee be unable to treat leachate. Approval has been given to discharge leachate at Cobourg, however, leachate was not hauled to Cobourg for treatment in 2009.

Table 6.1 indicates the leachate quantities trucked from the site to the Napanee sewage treatment plant in 2009. The average rate of removal for treatment was 51.87 m³/day.

TABLE 6.1
Leachate Quantities - 2009

Month	Napanee (m³)
January	1,050.02
February	1,265.12
March	2,236.17
April	2,286.76
May	2,686.27
June	2,742.10
July	1,274.31
August	752.64
September	916.39
October	1,051.74
November	1,189.34
December	1,481.29
Total	18,932.15

To date, no issues from the treatment of the leachate at the sewage treatment plants have arisen.

In 2009, there were no operating problems encountered or corrective actions taken for the leachate management system.

In 2009, no maintenance was required on the leachate collection system, nor was any calibration and maintenance required on leachate monitoring equipment.

There were no by-passes, spills, or abnormal discharge events dealing with the leachate management system.

8.0 ORGANIC WASTE COMPOST FACILITY OPERATION

WM operates the organic waste compost facility as part of its waste diversion initiative. Leaf and yard waste, wood, paper sludge from local paper mills, manure and biosolids are presently composted at this facility, although other wastes can be accepted under the organic waste composting approval. No paper sludge or biosolids was used in 2009. In 2009, some compost material was processed in windrows, but the completed compost was used on site in construction activities as topsoil amendment.

Raw material is separated into piles. Brush and large wood pieces are stockpiled for tub grinding. If incoming material is contaminated (plastic bags, etc.), the load is set aside and labourers will separate the load. **Table 7.1** shows the amount of material received during 2009.

TABLE 7.1
Compost Quantities - 2009
WM - Richmond Sanitary Landfill Site

Incoming Materials by Type	
Type	Quantity (tonnes)
Leaf and yard waste	544.84
Sludge	0
TOTAL	544.84

When material arrives on site, the components of the windrow recipe are placed in a windrow by the bucket of a farm tractor. A Sittler windrow turner pulled by a farm tractor turns new windrows two to three times per week. Pertinent information about each windrow is recorded in a daily record book. Operations of the compost pad follow the operation manual written for the compost facility, which is updated regularly.

A monitoring program was established to ensure safety and quality standards are maintained throughout the composting process. The program includes daily (five days per week) monitoring of temperature and moisture. Approximately three to five temperatures are taken along a windrow. All temperatures are recorded in a daily logbook. Ontario Ministry of the Environment Guidelines require that a minimum temperature of 55°C be achieved for fifteen days to achieve pathogen reduction.

Compost windrows are turned following the guidelines outlined in the operations manual. Once the temperature reaches 55°C, the windrow is turned at least five (5) times and must reach 55°C after the fifth turning. Once ambient temperature is reached, compost is moved from the originating location to the curing location. After curing, the compost is screened to remove all oversized material from the finished product. The oversized material is recycled back into a new windrow. If a windrow does not reach 55°C for the required time, the windrow will be recycled into a new windrow.

9.0 GENERAL

In 2009, WM completed ongoing maintenance and operation of the landfill site, with additional work completed on the south sedimentation pond. Landfill operations progressed smoothly throughout the year and there were no operational impacts on the surrounding area. Active litter control, gas management, leachate treatment and active monitoring of the landfill site resulted in no operational impacts on the surrounding area. Litter control is well managed, and the continued use of the landfill gas collection and flaring system and system maintenance and upgrades has reduced any potential landfill gas odours. WM has been very active in monitoring all aspects of the site, both on and off site, ensuring that no impacts were caused on the surrounding areas.

The tonnage of waste received at the landfill site over the past year was reduced from the annual approved tonnage to allow WM to continue to service their local customers and commitments. Landfill operations have been contained to the upper extents, and south face of the landfill site and within the final contours approved for the landfill site. Grades are controlled to ensure compliance with the final contours. The landfill site life will continue until the final contours are reached, and can be extended due to settlement, or a further reduction in the tonnage received at the landfill.

Leachate extraction and treatment continues at the landfill site, and 18,932.15 m³ of leachate has been removed during the past year, or approximately 51.87 m³/day. It is recommended that leachate removal off site continue.

The landfill gas extraction and flaring system successfully collected and flared the landfill gas generated from the landfill site. Continued operation and expansion of this system will be completed in the coming years to ensure that odours are minimized around the landfill site. Additional wells may be installed as landfilling progresses and final cap is constructed at higher elevations.

Neighbours with concerns are always invited to visit the landfill with their concerns, which are addressed by the site manager.

Site operations are progressing smoothly. We conclude the landfill operation complies with the various Certificate of Approvals. It is also concluded that the landfill site is operating in an environmentally sound and orderly manner.

Respectfully submitted:

GENIVAR Consultants LP

Jeff E. Armstrong, P.Eng.
Designated Consulting Engineer
Director, Solid Waste Management
JEA/bdl

Appendix A

Certificates of Approval

Appendix A.1

Provisional Certificate of Approval No.
A371203



Ontario

Ministry of the Environment
Ministère de l'Environnement

Provisional Certificate of Approval for a Waste Disposal Site

Certificat provisoire d'autorisation du lieu d'élimination des déchets

Provisional Certificate of Approval No. A 371203
Certificat provisoire d'autorisation no

Page 1 of 7
page de

Under the Environmental Protection Act and the regulations and subject to the limitations thereof, this Provisional Certificate of Approval is issued to:

Aux termes de la Loi sur la protection de l'environnement et des règlements y afférents et sous réserve des restrictions qui s'y appliquent, ce Certificat provisoire d'autorisation est délivré à:

Tricil Limited
89 Queensway West, Suite 800
Mississauga, Ontario L5B 2V2

for the use and operation of a 16.2 hectare waste disposal (landfilling) site within a total site area of 138 hectares

all in accordance with the following plans and specifications:

As per the attached Schedule "A"

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

which includes the use of the site only for the disposal of the following categories of waste (NOTE: Use of the site for additional categories of wastes requires a new application and amendments to the provisional Certificate of Approval) domestic, commercial, non-hazardous solid industrial and institutional waste

and subject to the following conditions:

1. By March 31, 1988, Tricil Limited ("the Company") shall complete all hydrogeological works and evaluations necessary to establish the groundwater flow regime in order to finalize the design of the clay liner and submit the report outlining the hydrogeological findings to the Director of the Environmental Approvals and Land Use Planning Branch of the Ministry of the Environment ("the Director").
2. (a) By October 31, 1988, the Company shall prepare a design report with final plans and specifications detailing the site development and operation program. The requirements of the final design report are to be implemented once written approval is given by the Director. In the interim, the site shall be developed in accordance with Section 4.3 of the report entitled, "Sutcliffe Sanitation Services Limited Landfill Site Expansion, Development and Operations Report" prepared by Henderson, Paddon and Associates Limited, dated September, 1985.
(b) By October 31, 1989, the Company shall prepare a design, construction and testing protocol for the placement of the clay liner and submit it for approval of the Director. No liner construction shall take place without prior approval of the Director and as directed by the Director.
3. Only domestic, commercial, non-hazardous solid industrial waste and institutional waste limited to a reasonable number of uninfected animal carcasses from the Township of Richmond's animal shelter may be disposed of at the site. No hazardous waste or liquid industrial waste from off-site sources as currently defined or as may be defined by the Ministry of the Environment in the future shall be disposed of on the site.

30th

March

88

Dated this _____ day of _____ 19 _____



Ontario

Ministry
of the
Environment

PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

The following conditions are additional to the conditions shown on Provisional Certificate

of Approval Number A 371203 dated March 30, 1988

4. Brush and wood waste only may be burned at the site in accordance with the Ministry of the Environment "Guidelines for Burning in Landfill Sites in Ontario" dated November, 1981.
5. At the end of each working day a cover of at least 15 cm of fill shall be placed on all exposed refuse at the working face.
6. In those areas where landfilling has been completed to final grade, a compacted cap of at least 75 cm thickness and with at least 15 cm of topsoil shall be placed in accordance with the methods described in Section 4.5 and Section 4.6 of the Henderson, Paddon and Associates Limited report dated September, 1985, (item 2 of Schedule "A"). Final slopes shall have a vegetative cover.
7. No landfilling shall take place in areas of liner construction until a report of a geotechnical engineer or other professional acceptable to the Director certifying that the base has been prepared and the liner applied according to the methods approved by the Director in the final report, has been received by the Director and approval to proceed has been given.
8. (a) The Company shall carry out the monitoring program outlined in item 5 of Schedule "A" once written approval is given by the Director for the program and with any amendments as required or permitted from time to time by the Director. Any such amendments or requirements by the Director may be appealed to the Environmental Appeal Board.
(b) The results of all analyses shall be submitted to the Director of the Southeastern Regional Office of the Ministry of the Environment ("the Regional Director") within one month of each analysis being completed.
9. The Company shall submit an annual report to the Regional Director by March 31, 1988 and by March 31st of each year thereafter. The reports shall cover the year ending the preceding December 31st and shall include the following information:
 - (a) The results of an interpretive analysis of all monitoring data.
 - (b) A summary of all waste received at the site in terms of volume or weight, and a list of all current commercial/industrial users.
 - (c) A map of surface contours in the active landfill area.
 - (d) Site-related meteorological data.
 - (e) A summary of changes in operations, equipment or procedures made or proposed at the site and of any operating difficulties encountered.
 - (f) In the event that leachate collection facilities are constructed, a report in the amount of leachate collected, stored and spray irrigated.



Ministry
of the
Environment
Ontario

PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

The following conditions are additional to the conditions shown on Provisional Certificate
of Approval Number A 371203 dated March 30, 1988

10. (a) By October 31, 1988, the Company shall submit for the approval of the Director final plans and specifications for the leachate collection and treatment facilities necessary for Phases I, II, and III of the site.
- (b) If the results of any sampling at Marysville Creek indicate that the requirements of Table 1 below have not been met in the Creek or in the opinion of the Regional Director any parameter not defined in Table 1 has increased significantly and if it is the opinion of the Regional Director that the increase is attributable to leachate contamination from the landfill, then additional samples shall be collected and analyzed weekly for 4 consecutive weeks, and the analyses results provided to the Regional Director as soon as available.

Table 1

Ammonia	.02 mg/l as un-ionized ammonia to be determined from temperature and pH table on page 32 of the "Water Management Goals, Policies, Objectives and Implementation Procedures of the Ministry of the Environment; revised May 1984" "Blue Book"		
Aluminium	not to exceed	0.1	mg/l
Arsenic	not to exceed	0.1	mg/l
Cadmium	not to exceed	.0002	mg/l
Chromium	not to exceed	.1	mg/l
Copper	not to exceed	.005	mg/l
Cyanide	not to exceed	.005	mg/l
Dissolved Oxygen	minimum of	4.0	mg/l at all times
Iron	not to exceed	.3	mg/l
Lead	not to exceed	the following based on alkalinity	
	.005 mg/l	0-20	mg/l as CaCO ₃
	.010 mg/l	20-40	mg/l as CaCO ₃
	.020 mg/l	40-80	mg/l as CaCO ₃
	.025 mg/l	G 80	mg/l as CaCO ₃
Mercury	not to exceed	.0002	mg/l
Nickel	not to exceed	.025	mg/l
pH	6.5 - 8.5		
Phenols	not to exceed	.001	mg/l
Phosphorus (total)	not to exceed	.03	mg/l
Selenium	not to exceed	.1	mg/l
Silver	not to exceed	.0001	mg/l
Zinc	not to exceed	.03	mg/l



Ontario

Ministry
of the
Environment

PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

The following conditions are additional to the conditions shown on Provisional Certificate
of Approval Number A 371203 dated March 30, 1988

- (c) The leachate collection and treatment facilities approved by the Director shall be constructed if the arithmetic mean of the 5 analyses for any parameter exceeds the requirement set out in Table 1 or if in the opinion of the Regional Director the arithmetic mean of the 5 analyses for any parameter not defined in Table 1 has increased significantly and if the increase in contamination is due, in the opinion of the Regional Director, to the impact of leachate migration from the landfill site.
11. This certificate of approval shall be registered on the title to the lands comprising the waste disposal site. No operation shall be carried out at the site after sixty days from this condition becoming enforceable unless this Certificate including the reasons for this condition has been registered by the applicant as an instrument in the appropriate Land Registry Office against title to the site and a duplicate registered copy thereof returned by the applicant to the Director.
 12. No portion of the site including any part of the buffer area, shall be transferred or encumbered prior to or after closing of the site unless the Director is notified in advance and is satisfied with the arrangements made to ensure the carrying out of all conditions of this Certificate of Approval and sufficient additional security is deposited with the Ministry of the Environment if requested to ensure the carrying out of these conditions.
 13. Within 60 days of the issuance of this Provisional Certificate of Approval the Company shall file with the Director a legal opinion indicating that the Company is the registered owner of the landfill site or has an unencumbered right to use the site except where any encumbrance is acceptable to the Director.
 14. (a) Within 30 days of the issuance of this Provisional Certificate of Approval the Company shall provide to the Director an irrevocable letter of credit in a form satisfactory to the Director in the amount of \$50,000.

(b) The letter of credit provided pursuant to condition 14(a) shall be maintained until such time as the amount in the Special Account referred to in condition 15 exceeds \$50,000.
 15. The Company shall establish a Special Account at a chartered bank or trust company satisfactory to the Director in a form satisfactory to the Director, which has agreed in writing to hold funds deposited in a trust account subject to the provisions of condition 16 or by making payments to the Treasurer of Ontario for deposit in the Consolidated Revenue Fund.



Ontario

Ministry
of the
Environment

PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

The following conditions are additional to the conditions shown on Provisional Certificate

of Approval Number A 371203 dated March 30, 1988

16. Payment out of the Special Account established by condition 15 may only be made by authorization of the Director, his designate or such other person as may be authorized by Order-in-Council. Funds in the Special Account if it is not established in the Consolidated Revenue Fund may be invested in deposits or Certificates of Deposit coming due in not more than 3 years, of a chartered bank or trust company in Ontario or such other securities as the Director approves of in writing. When any deposit or investment is not withdrawable or payable in cash at its face value within 60 days, then for purposes of determining compliance with condition 17, it shall be valued at the lesser of its face value and its market value.
17. The Company shall make annual contributions to the Special Account in amounts at least equal to \$0.50 for each cubic metre or \$0.7143 for each tonne of waste landfilled in the proceeding year. In any event, the amount in the Special Account at the completion of Phase III of the landfill shall be at least \$500,000. and at the time of final close-out shall be \$750,000. Both of the above amounts are expressed as 1987 dollars and may be adjusted by the Director at any time based on actual inflation rates not higher than changes in the Consumer Price Index issued by Statistics Canada for Ontario.
18. In the event that the amount in the Special Account reaches \$750,000. (as adjusted for inflation) prior to final close-out, the contributions required pursuant to condition 17 may be reduced or eliminated as appropriate and the Director may authorize payments out of the Special Account of any excess.
19. In the event that the leachate handling and disposal contingency system is required to be installed prior to the final close-out and the operator requests that part of the Special Account be released for the purpose, the amount in the Special Account shall not be less than \$435,000. (as adjusted for inflation) at the time of final close-out.
20. Following final close-out, the Special Account must be maintained for a period of 25 years, at which time it shall be released by the Director. The operator may request the Director to authorize the release, on an annual basis, of funds necessary to pay for annual post-closure maintenance and monitoring of the site.
21. The Company may, at any time, and shall, at the request of the Director submit a report updating the cost estimates on which the amounts referred to in condition 17 are based, taking into consideration actual amounts of waste landfilled, projected rate of fill and any changes proposed in the contingency works or annual maintenance and monitoring costs and, in the event any contingency works have been carried out, the contingency works remaining to be carried out. In any event, such a report shall be submitted on or before December 31, 1992 and at intervals of not more than five years thereafter. The amounts stated in condition 17 may be adjusted in accordance with a report.



Ontario

Ministry
of the
Environment

PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

The following conditions are additional to the conditions shown on Provisional Certificate
of Approval Number 371203 dated March 30, 1988

22. The company shall have the right from time to time to have paid out to the Company any amount in the Special Account which is in excess of the amount required to comply with the conditions of approval above and the Director shall review such application and, to the extent that the Director, acting reasonably, is of the opinion that such excess funds are held in the Special Account, the Director shall order that the amount of such excess funds shall be paid out to the Company. In the event that the Director fails to act on such application within a reasonable time or issues an order not satisfactory to the Company, the Company shall have the right to appeal such refusal to act or such order in accordance with the provisions of the Environmental Protection Act and any successor legislation. The Director shall have the right to require such supporting information in connection with such application as the Director, acting reasonably, may deem appropriate including, but without restricting the generality of the foregoing, a report from a qualified professional engineer certifying as to work that has been done and materials that have been supplied by the Company where such work and materials relate to the purpose for which the Special Account was established, the fair value thereof, and the balance required to be retained in the Special Account in order to satisfy the balance of the conditions in connection with which the Special Account was established.
23. In lieu of making payments into a Special Account as provided by conditions 14(b), 15, 17 and 21 the company may provide the Director with one or more irrevocable letters of credit in an amount totalling at least the amount that would have been on deposit in the Special Account if payments had been made pursuant to the conditions and interest had accumulated on them at a rate of not less than 9% compounded annually.
24. For the purposes of these conditions the annual payment into the Special Account shall be made not later than January 31st in the year following the year with respect to which the payment is made, provided the first such payment is made not later than 30 days after this condition is issued.
25. In the event notice is received that an irrevocable Letter of Credit received for purposes of this approval will not be renewed (other than at the end of 25 years following final close-out) or any further Letter of Credit required at any time is not received, the amount that would be the balance in the Special Account if letters of credit had not been used shall be immediately paid to the Treasurer of Ontario for deposit in a special account in the Consolidated Revenue Fund, following the failure of the company to provide the required letter of credit within 5 days of receiving notice thereof from the Director.



Ministry
of the
Environment

PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE

The following conditions are additional to the conditions shown on Provisional Certificate
of Approval Number 371203 dated March 30, 1988

26. Any letter of credit provided hereunder shall be issued by a chartered bank doing business in Toronto on such terms and conditions as the Director approves and shall include provision for automatic renewal without further documentation unless the issuing bank has given 60 days notice that it will not be renewed.
27. Whenever the total amount of letters of credit held hereunder is greater than the stated amount which would be held in the Consolidated Revenue Fund required at the time of final close-out as adjusted under these or subsequent conditions, the Director may release such letters of credit or portions thereof as would bring the amount of the letters of credit down to the amount which would be held in the Consolidated Revenue Fund.
28. By December 31, 1988 the Company shall install and use weigh scales to calculate all incoming wastes delivered in a vehicle approved as part of a waste management system.

SCHEDULE "A"

This Schedule "A" forms part of Provisional Certificate of Approval No. A 371203 dated March 30, 1988.

1. Application for a Certificate of Approval for a Waste Disposal Site (Landfill), dated January 11, 1988.
2. Report entitled "Sutcliffe Sanitation Services Ltd., Landfill Site Expansion Development and Operations Report", prepared by Henderson, Paddon & Associates Limited, dated September, 1985.
3. Report entitled, "Addendum No. 1 Sutcliffe Sanitation Services Limited Landfill Site Expansion Development and Operations Report" prepared by Henderson, Paddon & Associates Limited, dated December, 1986.
4. Report entitled, "Hydrogeologic Study Proposed Landfill Expansion, Township of Richmond" prepared by Morrison Beatty Limited, and dated September 30, 1985.
5. Report entitled, "Proposed Groundwater and Surface Water Monitoring Program, Sutcliffe Sanitation Services Limited Landfill, Township of Richmond" prepared by Morrison Beatty Limited, and dated August, 1987.

NOTICE

TO: Tricil Limited
89 Queensway West, Suite 800
Mississauga, Ontario
L5B 2V2

You are hereby notified that Provisional Certificate of Approval No. A 371203 has been issued to you subject to the conditions outlined therein.

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

1. Conditions 1 through 22 and condition 28 are reiterations of conditions 1 through 7 and conditions 9 through 24 of Provisional Certificate of Approval No. A 371203 dated August 31, 1987 with minor alterations to reflect those conditions on the former Provisional Certificate of Approval No. A 371203 whose requirements have already been met.
2. The reason for conditions 23 through 27 is to ensure that sufficient funds are available to carry out any closure, maintenance, contingency and monitoring or remedial works which may be required in connection with the site and its operation. Accordingly adjustment for inflation is provided for in condition 18 and periodic reports are reviewed under condition 22 to assist the Director in determining whether the form or amounts of assurance held under condition 18 should be changed. Conditions 23 through 26 provide an alternate mechanism for the provision of the necessary financial assurances. Any changes or disbursement of funds or refusal to release any financial assurance held would in the absence of agreement be implemented by the Director amending conditions or issuing orders so that the Company would have a right of appeal under the Act in the event it disagreed with a proposed course of action by the Director.

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 122a of the Environmental Protection Act, as amended in 1983, 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.

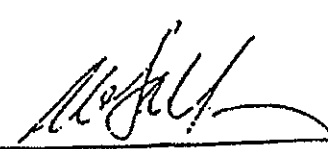
This Notice should be served upon:

The Secretary
Environmental Appeal Board
40 St. Clair Ave. West
6th Floor
Toronto, Ontario M4V 1M2

AND

The Director
Section 38, E.P.A.
Ministry of the Environment
135 St. Clair Ave. W.,
Toronto, Ontario M4V 1P5

Dated at Toronto this 30th day of March, 1988.



Director,
Section 38, E.P.A.,
Ministry of the Environment.

Appendix A.1.1

Amendment to Certificate of Approval No.
A371203 dated September 4, 1991,
Replacing Condition 2(a) and Imposed
Conditions 29 and 30



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 System (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
Provisional Certificate of Approval No. A 371203

Enclosed is a Notice of Amendment of Provisional Certificate of Approval No. A 371203. Please take note of the amended and additional requirements of your certificate as outlined in the notice and of the reasons for the changes.

It is my understanding that a need has developed to deal with impounded surface water, collected along the northern perimeter of Phase 1 of the Richmond Township waste disposal site. The impoundment area, which was referenced in the site's Final Design Report (1988), was constructed to eliminate previous discharge swalls which allowed flow to Marysville Creek. It is proposed that the contaminated surface water from these ponds be disposed of by implementing measures originally proposed as a contingency plan.

As the situation at your site represents a failure of the conceptual site design recommended for approval following a hearing of the Environmental Assessment Board in 1987, a condition has been imposed upon your certificate requiring that an assessment be done of the causes of the failure of the site, the suitability of the site for continued operation, and the suitability of the contingency spray irrigation system for long term leachate management.

Since circumstances now require that the contingency plan be implemented to mitigate actual environmental concerns, it is necessary that a new contingency plan be developed. This should be done in association with an overall review of the site design which takes into account the changed environmental circumstances of the waste disposal site.

.../2

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

Take Notice that Provisional Certificate of Approval No. A 371203 dated March 30, 1988 is hereby amended as follows:

- a) Condition 2(a) is hereby revoked and is replaced by the following condition 2(a):
 - 2(a) Within 6 months of the date issuance of this Notice, Laidlaw Waste Systems (Richmond) Ltd. shall submit to the Director, Approvals Branch, a design and operations report for the site which takes into account the current environmental circumstances at the site. In the interim the site shall be developed and operated in accordance with report entitled "Final Design Report" prepared by Henderson Paddon & Associates Ltd., dated September, 1988.
- b) The following conditions 29 and 30 are imposed:
 29. Within 120 days of the date of issuance of this Notice, Laidlaw Waste Systems (Richmond) Ltd. shall submit to the Director, Approvals Branch, with a copy to the Director, Southeastern Region, a report assessing the following:
 - a) the reasons for the recent requirement to dispose of impounded surface water and for the resultant need to implement the contingency plan;
 - b) the adequacy of the contingency plan for continued implementation as an active mitigative measure at the site; and
 - c) the environmental suitability of the site for continued operation.
 30. The leachate spray irrigation system shall not be constructed or operated until, and then only in accordance with, the terms and conditions of a certificate of approval for a sewage works issued under Section 24, Ontario Water Resources Act and a certificate of approval for a discharge to the air issued under Section 8, Environmental Protection Act.

The reason for the alteration of condition 2(a) and imposition of condition 29 is to ensure that the causes of the recent environmental problems of the site are properly assessed and the site is operated in accordance with a design and operations report that takes into account the changed environmental circumstances at the site. Failure to assess the causes of the environmental problems or operation of the site under a design and operations plan which does not account for the changed environmental circumstances of the site would not be in the public interest and might create a threat to the environment. The interim operation of the site in accordance with the existing design and operation plan is in the public interest in order to ensure that interim mitigative measures are taken.

.../2

Appendix A.1.2

Amendment to Certificate of Approval
No. A371203 dated September 2, 1994,
Adding Condition 31 and September 11,
1996 Amendment



TO: NAPANEE
Ontario

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

220 Davenport Avenue
Toronto ON M4B 1K9

250, avenue Davenport
Toronto ON M4B 1K9

RECEIVED SEP 12 1994

APPROVALS BRANCH
3rd Floor
Tel. (416) 440-3544
Fax (416) 440-6973

September 2, 1994

Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road
Burlington, Ontario
L7R 3X8

ATTENTION: Mr. Michael J. Pullen
Regional Manager, Engineering & Compliance

Dear Sir:

Re: Provisional Certificate of Approval No. A 371203

Enclosed is a Notice of amendment of the certificate for the Richmond Township landfill. The certificate has been amended to recognize the operation of a leaf and yard waste composting site within the landfill buffer area.

Operation of the composting site must not interfere with the landfill site operations, monitoring, or capacity to implement contingency plans.

The operation of the composting site must be done in accordance with Ontario Regulation 101/94.

Should you have questions concerning the requirements of the landfill certificate, please call Mr. J. Connelly of this office at (416) 440-3567.

Yours truly,

A. Dominicki, P.Eng., Acting Supervisor
Waste Sites & Systems Approvals Unit
Industrial Approvals Section

Encl.
cc: J. Bishop - Kingston District Office



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 1 of 2

TO: Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road
P. O. Box 8057
Burlington, Ontario
L7R 3Y8

You are hereby notified that the Provisional Certificate of Approval No. A 371203 dated March 30, 1988 is hereby amended by the addition of the following condition No. 31:

31. The buffer zone for the landfill site may be used for the operation of a leaf and yard waste composting site, as defined in Section 30 of Ontario Regulation 101/94, provided that:
- (a) the operation of the leaf and yard waste composting site does not interfere with the operation and monitoring of, and ability to implement contingency plans at, the landfill site; and
 - (b) the compost pad is sited as described in the document "Undertaking to: Establish a Leaf and Yard Waste Composting Facility at the Laidlaw Waste Systems (Richmond) Ltd. Landfill Site" prepared by Laidlaw Waste Systems Ltd., dated July, 1994.

The reason condition 31 is to ensure that the activities occurring within the landfill site boundaries do not create a nuisance or a threat to the health and safety of any person.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990 c. E-19, 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 142 of the Environmental Protection Act, as amended provides that the Notice requiring a 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.



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

P. 3

NOTICE
Page 2 of 2

In addition to these legal requirements, 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 waste management system/waste disposal site is located;*

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

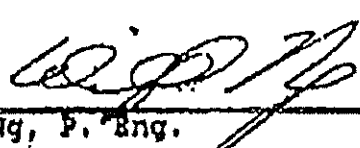
This Notice must be served upon:

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

AND

The Director,
Section 39, Environmental Protection Act,
Ministry of the Environment and Energy,
250 Davisville Avenue, 3rd Floor,
Toronto, Ontario,
M4S 1H2

DATED AT TORONTO this 2nd day of September, 1994.


W. Ng, P. Eng.
Director
Section 39
Environmental Protection Act



Dave
Faoro

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

250 Davisville Avenue
Toronto ON M4S 1H2

250, avenue Davisville
Toronto, ON M4S 1H2

APPROVALS BRANCH
3rd Floor
Tel. (416) 440-3544
Fax (416) 440-6973

September 11, 1996

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

RECEIVED SEP 20 1996

Attention: Mr. M.J. Pullen, P. Eng.
Director, Environmental Management

Dear Mr. Pullen:

Re: Provisional Certificate of Approval
No. A 371203

Attached is a Notice of Amendment of the above-noted certificate.

The amendment provides approval for the expansion of the existing leaf and yard waste compost facility and its conversion to an organic waste composting facility. Please ensure that this facility is constructed and operated in accordance with the approved documents.

As a point of clarification, please note that your existing leaf and yard waste composting operation would have been exempt under Ontario Regulation 101/94 from any certificate of approval requirements except for the fact that it is situated within a landfill site. General organic waste composting operations are not subject to this exemption. Thus the organic waste composting facility now approved at the site would have been subject to certificate of approval requirements even if it was not situated within the landfill site.

Should you have any questions concerning the requirements of your certificate, please call Mr. J. Connelly of this office at (416) 440-3567.

Yours truly,

A. Dominski, P. Eng., Supervisor
Waste Unit

Encl.
JC/es
cc: J. Bishop - Kingston



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 1 of 2

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

You are hereby notified that Condition No. 31 of Provisional Certificate of Approval No. A 371203 dated March 30, 1988 is hereby amended as follows;

31. The existing leaf and yard waste composting facility in the buffer zone of the landfill site may be expanded and converted to an organic waste composting facility in accordance with the following documents:
 - a. "Application for Approval of a Waste Disposal Site", dated July 25, 1996, signed by Mr. Michael J. Pullen, Director, Environmental Management;
 - b. Report entitled "Undertaking to Establish an Organic Waste Composting Facility at the Laidlaw Waste Systems (Richmond) Ltd. Landfill Site", dated July 1996, prepared by Laidlaw Waste Systems (Richmond) Ltd; and
 - c. Plan entitled "Richmond Township Landfill Proposed Compost Pad Expansion", revised April 12, 1996, prepared by Henderson, Paddon & Associates Limited.

The reason for Condition 31 is to ensure that compost operations at the site do not create a nuisance or a hazard to the health and safety of any person.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, you may by written notice served upon me, the Environmental Appeal Board and the Environmental Commissioner, Environmental Bill of Rights, S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Board. Section 142 of the Environmental Protection Act, as amended provides that the Notice requiring a 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.*



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 2 of 2

In addition to these legal requirements, 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 waste disposal site is located;*

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

This Notice must be served upon:

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

The Environmental Commissioner,
1075 Bay Street,
Suite 605
6th Floor
Toronto, Ontario
M5S 2W5

The Director,
Section 39, Environmental Protection Act,
Ministry of the Environment and Energy,
250 Davisville Avenue, 3rd Floor,
Toronto, Ontario.
M4S 1H2

This instrument is subject to Section 38 of the Environmental Bill of Rights, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.

DATED AT TORONTO this 11th day of September, 1996.

A. Dominski, P. Eng.
Director
Section 39
Environmental Protection Act

Appendix A.1.3

Amendment to Certificate of Approval
No. A371203 dated August 1, 1995,
Approving Phases 4 and 5 and Imposed
Conditions 32 and 33



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

250 Davison Avenue
Toronto ON M4S 1H2

250, avenue Davison
Toronto ON M4S 1H2

APPROVALS BRANCH

3rd Floor

Tel. (416) 440-3544

Fax (416) 440-6973

August 1, 1995

Mr. Jack Varrette
General Landfill Manager
Laidlaw Waste Systems (Richmond) Ltd.
3410 South Service Road
P.O. Box 5057
Burlington, Ontario
L7R 3Y8

Dear Mr. Varrette:

RE: Provisional Certificate of Approval A371203
Redesign of Phases IV and V

Enclosed is a Notice which approves the revised grades and liner system for Phases IV and V.

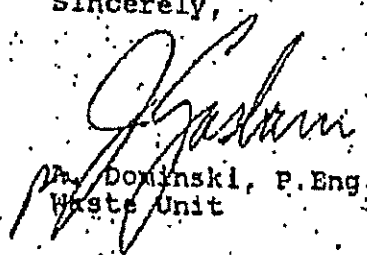
Please note that the Ministry is not satisfied that the recirculation of leachate back into Phases 2 and 3 is an acceptable method of leachate disposal. Therefore, a condition has been imposed which prohibits this and requires Laidlaw to pursue alternative methods of short term leachate management. Please be advised that whatever method is selected must be accompanied by the appropriate technical documents which support it and must be approved by the Director.

The Ministry has included a condition which requires an updated monitoring program to be submitted to and approved by the Regional Director.

In addition, Laidlaw is still required to comply with Condition 2(a). This requires the submission of an updated Design and Operations Report which takes into account the comments provided to you by the Ministry on March 7, 1994. Please note that the revised Design and Operations Report must include details on long term leachate management, contingency measures and trigger mechanisms.

I believe that a complete set of comments regarding the Design and Operations Report and the monitoring program have been provided to you. Should have any questions regarding them or the conditions imposed by this Notice, please do not hesitate to contact Ian Parrott at (416) 440-6083 or Alida Mitton at (613) 549-4000.

Sincerely,



A. Dominski, P. Eng., Supervisor,
Waste Unit

IP/es

- cc: B. Ward - Director, Southeastern Region
- J. Bishop - District Manager, Kingston
- A. Mitton - Planner, Southeastern Region



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 1 of 3

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

You are hereby notified that the terms and conditions of Provisional Certificate of Approval No. A371203, dated March 30, 1988 are amended as follows:

Condition 32 is hereby added:

- (32) By October 31, 1995, an updated site monitoring plan shall be submitted to the Regional Director, for approval, which includes, but is not limited to:
- (a) an assessment of the full extent of leachate contamination from the site;
 - (b) a listing of sampling locations, frequencies and parameter lists; and
 - (c) an assessment of the site's compliance with Ministry Guideline B-7 (Reasonable Use Policy).

Condition 33 is hereby added:

- 33) Leachate may not be recirculated into Phases 1, 2 or 3 of the site. By October 31, 1995, an interim plan for treatment and disposal of leachate must be submitted to the Director, for approval. Leachate shall not be collected or discharged until this interim plan has been approved by the Director.

The reason for the addition of these conditions is to ensure that the site is monitored and operated in a manner which assesses compliance with Ministry Guidelines and that the environment is protected.

The following documents are hereby added to Schedule "A":

- 7. Application for Approval of a Waste Disposal Site, dated May 24, 1995 and signed by Michael Pullen, Director, Environmental Management, Laidlaw Waste Systems (Richmond) Ltd.
- 8. Letter from Jeff Armstrong, Henderson, Paddon & Associates Limited to I. Parrott, MOEE dated May 30, 1995 re: Development of Landfill Base of Phases IV and V (including attached drawings 8570D-400 to 406, inclusive and 8570D-94-Site).



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 2 of 3

9. Letter from Jeff Armstrong, Henderson, Paddon & Associates Limited to I. Parrott, MOEE dated June 23, 1995 re: Additional Information to Support Application for Provisional Certificate of Approval for a Waste Disposal Site A371203.
10. Letter from Jeff Armstrong, Henderson, Paddon & Associates Limited to I. Parrott, MOEE dated July 21, 1995 re: Public Consultation on the Redesign of the Landfill Base for Phases IV and V.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990 c. E-19, 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 142 of the Environmental Protection Act, as amended provides that the Notice requiring a 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.*

In addition to these legal requirements the Notice should also include:

4. *The name of the appellant;*
5. *The address of the appellant;*
6. *The Certificate of Approval number;*
7. *The date of the Certificate of Approval;*
7. *The name of the Director;*
8. *The municipality within which the waste disposal site is located;*

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

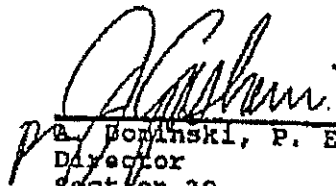
This Notice must be served upon:

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

AND

The Director,
Section 39, Environmental Protection Act,
Ministry of Environment and Energy,
250 Davisville Avenue, 3rd Floor,
Toronto, Ontario,
M4S 1H2

DATED AT TORONTO this 1st day of August, 1995.



A. Borinski, P. Eng.
Director
Section 39
Environmental Protection Act

IP/es

Appendix A.1.4

Amendment to Certificate of Approval
No. A371203 dated August 29, 2000,
Approving the Construction of the Phase
1 Leachate Collector



Ministry of the Environment
Ministère de l'Environnement

AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A 371203
Notice No. 1

Canadian Waste Services Inc.
R.R. 36 (Beachwood Road)
Greater Napanee, Ontario
K7R 3L1

Site Location: Richmond Landfill
Richmond Township
Greater Napanee Town, County Of Lennox & Addington

You are hereby notified that I have amended Provisional Certificate of Approval No. A 371203 issued on March 30, 1988 for the Richmond Landfill Site, as follows:

you are hereby granted approval to install the leachate collector at the Phase 1 portion of the landfill site in order to control leachate mounding within the landfill site;

All in accordance with the application for approval dated June 22, 2000, and supporting information and documentation prepared by Henderson Paddon & Associates Limited, and subject to the following condition:

Canadian Waste Services Inc. Shall submit to the Ministry of Environment a Contingency Plan for the management of leachate collected, by no later than October 30, 2000, to be used in the event that the Napanee Sewage Treatment Plant is not capable of treating the additional leachate collected from Phase 1 portion of the landfill as a result of this approval.

The following documents are added to Schedule "A" of the existing Certificate of Approval:

1. Drawing 8570G-L1 dated May 2000- Phase I Proposed Leachate Collector, Napanee Landfill, Napanee, Ontario
2. A letter dated July 31, 2000, regarding concerns raised during review of application, to Tes Gebrezghi, MOE, from Jeff Armstrong, Henderson Paddon & Associates Limited
3. A report titled "Assessment of Napanee Water Pollution Control Plant To Treat Leachate from the Laidlaw Landfill, Richmond, Ontario, dated May 1996 and prepared by Henderson, Paddon & Associates Limited
4. A report titled "CWS Response to the Town of Greater Napanee Audit of the Richmond Landfill Operation, dated May 12, 2000, and prepared by Canadian Waste Services Inc.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No.A 371203 dated March 30, 1988.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as ended, you may by written Notice served upon me, the Environmental Appeal Board and in accordance with section 47 of the Environmental Bill of Rights, S.O. 1993, Chapter 28, the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Board. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act, 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 waste disposal site is located;

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

This Notice must be served upon:

The Secretary*
Environmental Appeal Board
2300 Yonge St., 12th Floor
Box 2382
Toronto, Ontario
M5S 1E4

AND

The Environmental Commissioner
1075 Bay Street, 6th Floor
Suite 605
Toronto, Ontario
M5S 2B1

AND


The Director
Section 39, Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

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

This instrument is subject to Section 38 of the Environmental Bill of Rights, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ene.gov.on.ca, you can determine when the leave to appeal period ends.

The above noted waste disposal site is approved under Section 39 of the Environmental Protection Act.

DATED AT TORONTO this 29th day of August, 2000



Andrzej Dominski, P.Eng.
Director
Section 39, Environmental Protection Act

TG/

c: District Manager, MOE Kingston District
Michael Pullen, Canadian Waste Services Inc.

Appendix A.1.5

Amendment to Certificate of Approval No.
A371203 dated March 21, 2007,
Replacing Condition 34

CONTENT COPY OF ORIGINAL



Ontario

Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A371203
Notice No. 4
Issue Date: March 21, 2007

Waste Management of Canada Corporation
2301 Carp Rd
Rural Route, No. 3
Carp, Ontario
K0A 1L0

Site Location: Richmond Landfill Site
Lot Pt 1, 2, 3, Concession 4
Greater Napanee Town, County of Lennox and Addington
K7R 3L1

You are hereby notified that I have amended Provisional Certificate of Approval No. A371203 issued on March 20, 1988 and subsequently amended for the use and operation of a 16.2 hectare waste disposal (landfilling) site within a total site area of 138 hectares, as follows:

Condition 34 created on June 27, 2002 is hereby revoked and replaced with the following condition:

34. Within ninety (90) days of issuance of this amendment, the Owner shall submit to the Director for approval, with copies to the District Manager, a detailed site Closure Plan pertaining to the termination of landfilling at this Site, post-closure inspection, maintenance and monitoring, and end use. The plan shall include, but not limited to, the following:

- a. a plan showing Site appearance after closure including side slopes and final contours of the Site;
- b. a description of the proposed end use of the Site;
- c. a descriptions of the procedures for closure of the Site, including:
 - advance notification of the public of the landfill closure;
 - posting of a sign at the Site entrance indicating the landfill is closed and identifying any alternative waste disposal arrangements;
 - completion, inspection and maintenance of the final cover and landscaping;
 - site security;
 - removal of unnecessary landfill-related structures, buildings and facilities; and
 - final construction of any control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
- d. a schedule indicating the time-period for implementing sub-conditions listed above;
- e. descriptions of the procedures for post-closure care of the Site, including:
 - operation, inspection and maintenance of the control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
 - record keeping and reporting; and
 - complaint contact and response procedures;
- f. an assessment of the adequacy of and need to implement the contingency plans for leachate and methane gas;
- g. an updated estimate of the contaminating life span of the Site, based on the results of the monitoring programs to date; and,
- h. an update of the cost estimates for financial assurance and the amount which has been provided to the Director to date.

The reasons for this amendment to the Certificate of Approval are as follows:

1. *The reasons for Condition 34 are to ensure that final closure of the Site is completed in an aesthetically pleasing manner and to ensure the long-term protection of the natural environment.*

CONTENT COPY OF ORIGINAL

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. A371203 dated March 20, 1988 as amended.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, 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 142 of the Environmental Protection Act, 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 waste disposal site is 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., Suite 1700
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 39, *Environmental Protection 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 waste disposal site is approved under Section 39 of the *Environmental Protection Act*.

DATED AT TORONTO this 21st day of March, 2007

Tesfaye Gebrezghi, P.Eng.
Director
Section 39, *Environmental Protection Act*

GW/

c: District Manager, MOE Kingston - District
Michael Pullen, Waste Management of Canada Corporation
Michael Walters, Waste Management of Canada Corporation

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



Ministry
of the
Environment

Ministère
de
l'Environnement

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

Number / Numéro 3-1720-90-916

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
DATE À TORONTO ce


4th

day of
jour d

September, 1991

JC/ec

0731 02/90


.....
Director / Directeur



Province
of
Ontario

Ministry
of
Environment

- 2 -

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

Number Numero 3-1720-90-916
(Continued)

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.

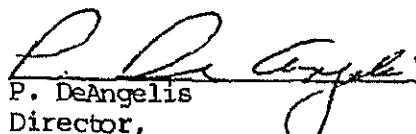
This Notice should be served upon:

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.).



ntario

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

NOTICE
Page 1 of 2

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 appellant.

This Notice must be served upon:

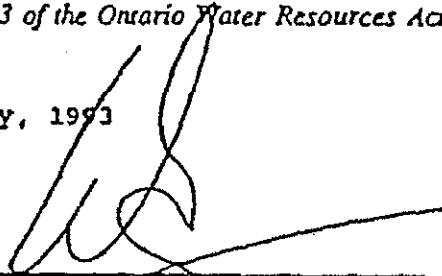
The Secretary,
Environmental Appeal Board,
12 St. Clair Avenue West,
Suite 502,
Toronto, Ontario.
M4V 1N3

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.

SIGNED AT TORONTO this 23rd day of July, 1993



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

cc: -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)



of the de
Environment. l'Environnement

Ontario

RECEIVED MAR 16 1992

JUL 31 1992

APPROVALS BRANCH

Tel. (416) 440-3573

Fax. (416) 440-6973

250 Davisville Avenue
Toronto, Ontario
M4S 1H2

250, Avenue Davisville
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. B-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.



of the de
Environment l'Environnement

Ontario

CERTIFICATE OF APPROVAL
A I R
NUMBER 8-4028-92-006

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 Mahalingam, 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 - Daphnia magna	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

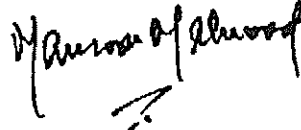
The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* 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 ✓

Appendix A.5

Certificate of Approval No. A710003 (Soil
Recycling)



Ministry of the Environment
Ministère de l'Environnement

**PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE**

**CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE**

Provisional Certificate Number A710003
Certificat provisoire no.

Page 1 of 13
de

Under the Environmental Protection Act and Regulations, and subject to the limitations thereof, this Provisional Certificate of Approval is issued to:

Aux termes de la Loi sur la protection de l'environnement et des règlements et sous réserve des restrictions qui y sont stipulées, le présent certificat provisoire d'autorisation est délivré à:

Laidlaw Waste Systems (Canada) Ltd.
3410 South Service Road
BURLINGTON, Ontario
L7R 3Y8

the use and operation of a waste processing facility

..ll in accordance with the plans and specifications:

1. Application for a Certificate of Approval for a Waste Disposal Site (Processing) dated August 30, 1993.
2. Letter from Laidlaw Waste Systems Ltd. to the Ministry of Environment and Energy, dated July 12, 1993, briefly describing the proposal for recycling petroleum contaminated soils and listing supporting documentation.
3. Letter from Laidlaw Waste Systems Ltd. to the Ministry of Environment and Energy, dated July 12, 1993, explaining the soil recycling process. Supporting information includes District Office Notification Form - Mobile Soil Reclamation, Certificate of Insurance, letter of credit, site plan and layout drawings, and detail drawings of sediment/oil interceptor system for quality control of leachate run-off.
4. Letter and supporting documentation from Laidlaw Waste Systems Ltd. to the Ministry of Environment and Energy dated November 5, 1993 providing additional information on emergencies and contingencies, public information (including public notice and newspaper advertisement), hours of operation, and a monitoring plan for the soil storage pad at the Laidlaw landfill site in Richmond Township.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 2 of 13
de

5. Memo to the Ministry of Environment and Energy from Laidlaw Waste Systems Ltd. dated November 9, 1993, providing list of property owners which received a hand delivered public notice explaining the proposal.
6. Letter from the Richmond-Tyendinaga Environmental Association to the Ministry of Environment and Energy dated September 23, 1993 providing support for the soil recycling proposal.
7. Letter from the Township of Richmond to the Ministry of Environment and Energy dated October 8, 1993 and Resolution No. 316/93, dated October 4, 1993, providing Council's support for the proposal.

Ontario Ministry of Environment and Energy Provisional Certificate of Approval for a Waste Disposal Site A210222 dated September 18, 1992, or as amended.

1. Ontario Ministry of Environment and Energy Provisional Certificate of Approval for a Waste Management System A840681 dated March 18, 1992, or as amended.
10. Ontario Ministry of Environment and Energy Certificate of Approval (Air) Number 8-3212-88-919 dated April 23, 1992, or as amended.

located in: Township of Richmond
Part of Lot 2, Concession IV
(Beechwood Road)

and is subject to the following definitions and conditions:

Definitions:

"Certificate" means the entire certificate of approval including its schedules, if any, issued in accordance with Section 27, Part V of the Environmental Protection Act;

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 3 of 13
de

"Director" means Director of the Southeastern Region of the Ministry or his appointee;

"District Manager" means the District Manager of Kingston District Office, Southeastern Region of the Ministry;

"Ministry" means the Ontario Ministry of Environment and Energy;

"Owner" means Laidlaw Waste Systems (Richmond) Ltd.;

"Operator" means Laidlaw Waste Systems (Canada) Ltd.; its officers, employees, agents or contractors;

"Site" means the area(s) on landfill site, Certificate of Approval No. .371203, to be used by the processing facility described in this Certificate.

General Conditions

1. The requirements of this Certificate are imposed pursuant to Part V of the Environmental Protection Act. The issuance of this Certificate in no way abrogates the operator's legal obligations to take all reasonable steps to avoid violating other applicable provisions of this legislation and other legislation and regulations.
2. (1) 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, the application of such requirement to other circumstances and the remainder of this Certificate shall not be affected thereby.

(2) In all matters requiring the interpretation and implementation of this Certificate, the conditions of the certificate shall take precedence, followed in descending order by the application and the documentation, referred to in this Certificate, which is submitted in support of the application.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 4 of 13
de

3. The operator must ensure compliance with all the terms and conditions of this Certificate. Non-compliance constitutes a violation of the Environmental Protection Act and is grounds for enforcement.
4. (1) The operator shall, forthwith upon the request of the Director or District Manager, furnish any information requested concerning compliance with this Certificate including any records required to be kept by this Certificate.

(2) In the event the operator provides to the Ministry information, records, documentation of notification in accordance with this Certificate,
 - (a) the receipt of said information by the Ministry;
 - (b) the acceptance by the Ministry of the information's completeness or accuracy; or,
 - (c) the failure of the Ministry to prosecute the operator, or to require the operator to take any action, under this Certificate of any statute or regulation in relation to said information;

shall not be construed as the approving, excusing or justifying by the Ministry of any act or omission of the operator relating to said information, amounting to non-compliance with this Certificate or any statute or regulation.
- (3) All records referred to in this Certificate shall be retained on file in a secure manner for a period not less than two years.
5. The owner/operator shall allow Ministry personnel, or a Ministry authorized representative(s) to:
 - (1) carry out any and all inspections authorized by Section 156, 157 or 158 of the Environmental Protection Act, as amended from time to time, of any place to which this Certificate relates; and, without restricting the generality of the foregoing, to:

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 5 of 13
de

- (a) enter at reasonable times upon the premises, or the location where the records required by the conditions of this Certificate are kept;
 - (b) have access to and copy, at reasonable times, any records required by the conditions of this Certificate;
 - (c) inspect at reasonable times any facilities, equipment, practices, or operations required by the conditions of this Certificate; and
 - (d) sample and monitor at reasonable times for the purpose of assuring compliance with the conditions of this Certificate.
6. (1) The owner/operator shall notify the District Manager in writing of any change in ownership, name of corporation, the operator, or termination of the facility within 30 days of the change occurring.
- (2) In the event the facility is permanently closed a Provincial Officer shall inspect the site and the site shall not be used for any other purpose prior to the inspection and written clearance by the District Manager.
- (3) The operator shall ensure that all communications made pursuant to this condition will refer to this Certificate's number.
7. (1) In accordance with Section 19(4) of the Environmental Protection Act this Certificate, the application filed to obtain and documentation referred to in the certificate which may be reasonably necessary for a proper reading and understanding of it, with the exclusion of those documents marked "confidential" by the operator shall be made available for public inspection at the request of any person.
- (2) Additional information to that set out in subcondition (1) relating to this Certificate and contained in Ministry files may be made available to the public in accordance with the provisions of the Freedom of Information and Protection of Privacy Act.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 6 of 13
de

8. Except as specified in this Certificate the site shall be operated in accordance with the application for this Provincial Certificate of Approval dated August 30, 1993 and its supporting information described in items 1 to 10 on pages 1 and 2 of this Certificate.
9. (1) The operation of this site is limited to the storage and processing of non hazardous waste soils contaminated with petroleum hydrocarbons, liquid waste classes 211, 212, 213; 221, 222, 251, 252, 253 and 254 as defined in the Ministry of the Environment "New Ontario Waste Classes" document, dated January, 1986 from the Province of Ontario.
- (2) No wastes other than those listed in subcondition (1) shall be collected and stored at this site without amendment to this Certificate.
- (3) No wastes contaminated with halogenated organics, including PCBs, with concentrations greater than two (2) micrograms per grams shall be accepted at this site.
- (4) No waste mixing or diluting with uncontaminated soil shall occur at the site. No waste mixed or diluted with uncontaminated soil shall be accepted at the site.
- (5) No users outside the areas listed in subcondition (1) shall use this site without amendment to this Certificate.
10. (1) The operator shall ensure that site personnel, trained in contingency measures are on duty at all times during normal operating hours or during any additional hours the facility may be open. Public access to the site shall be restricted.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 7 of 13
de

(2) All site personnel shall have practical knowledge of the waste material to be handled under this Certificate and shall be fully trained and knowledgeable about all aspects of the site operation including the requirements of this Certificate which relate to the work they are doing and their safety on the site.

(3) Prior to operating the site the operator shall prepare an operation manual for use by site personnel which shall contain, but not necessarily be limited to the following:

- (a) an outline of the responsibilities of site personnel;
- (b) operation and receiving procedures;
- (c) storage, handling, sorting and shipping procedures;
- (d) contingency procedures to be followed by personnel in the event of fire and other emergencies.

(4) A copy of the manual shall be placed in a central location on the site and this manual shall be accessible to all site personnel during operating hours.

(5) Within 30 days of the issuance date of this Certificate a copy of the operation manual shall be submitted to the District Manager.

11. (1) The operator shall establish a record system for all waste received at the site which shall include, but not necessarily be limited to, the documentation of quantities received and processed at the site each month; source of generation; receiving and shipping dates and volumes of wastes or processed soils shipped to approved markets, transfer/processing facilities and waste landfill sites; and documentation of environmental and other problems experienced in operating this site.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 8 of 13
de

- (2) The information collected under subcondition (1) shall be submitted in a report to the District Manager on or before the first day of December during each year of operation or until the Director or the District Manager has given notice in writing that these submissions are no longer required.
12. (1) The operator shall ensure that the site is operated in a safe and secure manner; that the operation of this site does not impede or is impeded by the landfilling operation on which this site is located; and that the wastes are properly handled, contained, stored, tested and processed at the site; so as not to pose a threat to the general public, site personnel and the environment.
- (2) The operator shall ensure that wastes received at the facility are processed and moved from the site to approved markets, processing facilities and landfill sites on a regular basis; and that waste processing does not exceed 5,000 tonnes per day and waste storage on site does not exceed 40,000 tonnes.
- (3) Notwithstanding Condition 1 the operator shall ensure that the processing operation is in compliance with noise, hours of operation, fire regulations and any other applicable by-laws of the local municipality/regional governments; and the requirements of Ontario Provisional Certificate of Approval for a Waste Disposal Site-A210222; and Ontario Provisional Certificate of Approval for a Waste Management System A840681 described in items 8 and 9 on page 2 of this Certificate.
- (4) The operator shall take all necessary measures possible to contain and minimize all emissions, including air emissions caused by the operation of the processing equipment, waste storage and the processed soil storage; and shall comply with Ontario Certificate of Approval (Air) 8-3212-88-919 described in item 10 on page 2 of this Certificate; and all other applicable legislation governing emissions.
- (5) Any waste water collected in the catchment basin for the soil storage pad described in item 3 on page 1 of this Certificate shall be disposed of in a proper manner under Section 53 of the Ontario Water Resources.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 9 of 13
de

(6) Only waste processing equipment as approved under Certificates of Approval A210222 and 8-3212-88-919 described in items 8 and 10 on page 2 of this Certificate shall be used at this site.

13. The local fire department shall be informed of the processing facility and this Certificate.
14. (1) Processed waste which contains Total Volatile Hydrocarbons above (100) micrograms per gram which are not reprocessed or soil waste which is not processed shall be taken from the site for disposal to approved landfill sites or to approved transfer or processing sites for further processing shall be transported under a approved waste management system.

(2) Testing of waste soils and processed soils on this site shall be carried out as specified in Certificates of Approval A210222 and 8-3212-88-919 described in items 8 and 10 on page 2 of this Certificate.
15. This Certificate expires with the termination of the site; when all the wastes have been removed from the site; and the restoration of the site has been approved, in writing, by the District Manager.
16. (1) Within 90 days of the date of this Certificate the operator shall provide financial security for the closure of the site in an amount acceptable to the Director. The security can be in the form of a fund, bond, an irrevocable letter of credit or any other form as may be acceptable to the Director. The amount of financial assurance shall be established based on current costs for cleaning up the site and the assessed value of the fund, bond, or letter of credit shall be approved by the Director, in writing, before being submitted to the Ministry. The assessed value submitted to the Director for approval shall be an independent estimate which shall include, but not necessarily be limited to:

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 10 of 13
de

- i) trucking, disposal and labour costs for removal of all waste from the site;
- ii) costs of equipment dismantling and cleaning on the site.
- iii) any legal and contractual costs associated with the closure of the site.

(2) In the event the financial assurance is scheduled to expire or notice is received that it will not be renewed and a replacement in a form satisfactory to the Director is not received at least 60 days before the expiry or renewal date, the operator shall forthwith replace it with a cash deposit.

(3) The operator shall review the closure costs as specified in subcondition (1) on a yearly basis and shall increase, or may decrease the financial assurance when instructed, in writing, by the Director. A copy of the review assessment shall be provided in the report specified in Condition 11(2).

(4) The operator shall at all times while the site is operating maintain the ten million dollars (\$10,000,000) third party liability insurance described in item 3 on page 1 of this Certificate and a copy of the policy shall be submitted to the Director within 30 days of the date of this Certificate.

17. The obligations imposed by the terms and conditions of this Certificate of Approval are obligations of due diligence.

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

1. Conditions 1, 2, 3, 4 and 7 are to clarify the legal rights and obligations of this Provisional Certificate of Approval.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 11 of 13
de

2. Condition 5 is to ensure that the appropriate Ministry staff have ready access to the waste disposal site to inspect the operations that are approved under this Provisional Certificate of Approval. The condition is supplementary to the powers of entry afforded a Provincial Manager pursuant the Environmental Protection Act, as amended.
3. Conditions 6, 8 and 15 are to ensure that the waste disposal site is operated in accordance with the application for this Certificate and supporting information and not under any name or in any way which the Director has not been asked to consider; and to ensure the property is cleaned up and restored to the satisfaction of the Ministry prior to closure.
4. Condition 9 is to ensure that this site is used only to collect, handle and transport waste within the limitations approved under this Provisional Certificate of Approval.
5. Conditions 10 and 12 are to ensure that the waste recycling site is properly managed in an organized manner by adequately trained persons, in order to prevent environmental detriment; and to ensure the safety of the general public and site personnel.
6. Condition 11 is to provide both the operator and the Ministry of Environment and Energy with an assessment of the waste recycling site.
7. Condition 13 is to ensure fire personnel are informed of the this waste processing site and the type of waste which is stored on this site.
8. Condition 14 is to ensure that the collection, handling, and transportation of all waste materials are conducted in an environmentally acceptable manner in accordance with provincial regulations.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 12 of 13
de

9. Condition 16 is to ensure funds are available from the operator for site closure in the event the site needs to be closed and the operator is not able to do the work; and to clean up any environmental impairment should the operator be unable or refuse to do so. The use and operation of the site without this condition would not be in the public interest.
10. Condition 17 is required to clarify that the terms and conditions of this Certificate of Approval impose a standard of due diligence and not absolute liability.

You may, by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Certificate, require a hearing by the Board. Section 142 of the Environmental Protection Act, R.S.O. 1990 c. E-19, as amended, provides that the notice requiring the hearing shall state:

1. The portion 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.

In addition to these legal requirements, the notice should 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.

PROVISIONAL CERTIFICATE OF APPROVAL
FOR A WASTE DISPOSAL SITE

CERTIFICAT D'AUTORISATION PROVISOIRE
DE DÉCHARGE

Provisional Certificate Number A710003
Certificat provisoire no.

Page 13 of 13
de


This notice should be served upon:

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

AND

The Director
Section 39, E.P.A.
Ministry of Environment and Energy
133 Dalton Avenue, Box 820
KINGSTON, Ontario
K7L 4X6

ated at Kingston this 20th day of December, 1993.



Director
Section 39, E.P.A.
Ministry of Environment and Energy

(Pour obtenir une copie du present document certificat en francais,
communiquer le Ministère de l'Environnement et de l'Énergie 613
549-4000.)

Appendix A.6

Certificate of Approval (Air) No. 8-4078-
99-006 (Flare System)



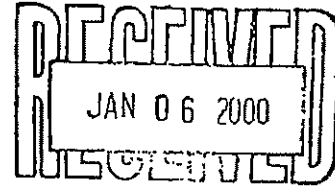
Ministry
of the
Environment

Ministère
de
l'Environnement

*Jack Verrillie
Landfill Operating Record.*

CERTIFICATE OF APPROVAL
AIR
NUMBER 8-4078-99-006
Page 1 of 5

Canadian Waste Services Inc.
R.R. #6 Beechwood Road
Napanee, Ontario
L5C 1T7



Located at: Part of Lots 1,2 and 3, Concession 1V
Town of Greater Napanee (formerly the Township of Richmond)
County of Lennox and Addington, Ontario

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

one (1) enclosed flare system, used to incinerate the landfill gases from a landfill gas collection system at a maximum volumetric gas flow rate of 0.28 standard cubic metre per second with the combustible gas levels ranging from 30 to 55 percent by volume. The flare has a maximum heat input of 19 gigajoules per hour, exhausting into the atmosphere through a stack, having an exit diameter of 2.1 metres, extending 12.2 metres above grade;

all in accordance with the Application for Certificate of Approval, submitted by Canadian Waste Services Inc., signed by Michael Walters, dated June 11, 1999; an acoustical report prepared by Hugh Williamson, dated November 26, 1999. and the other supporting information prepared by Comcor Environmental.

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

TERMS AND CONDITIONS

DEFINITIONS

1. For the purpose of this Certificate of Approval:
 - (1) "Act" means the Environmental Protection Act;
 - (2) "Certificate" means this Certificate of Approval, including Schedule "A", issued in accordance with Section 9 of the Act;
 - (3) "Company" means Canadian Waste Services Inc.;
 - (4) "CEM System" means the continuous monitoring and recording system used to optimize the operation of flare, as described in the



Company's application, this Certificate, including Schedule "A", and in the supporting documentation referred to herein, to the extent approved by this Certificate;

- (5) "Equipment" means the flare system, described in the Company's application, this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate;
 - (6) "Ministry" means the Ontario Ministry of the Environment; and
 - (7) "Publication NPC-232" means Publication NPC-232, Sound Level Limits for Stationary Sources in Class 3 Areas (Rural), October 1995.
2. The Company shall ensure that the noise emissions from the Equipment comply with the limits set in Publication NPC-232.
 3. The Company shall operate the Equipment in such a manner that a minimum temperature, as recorded by CEM, shall be 900 degrees Celsius at a point representing a minimum retention time of 0.75 second, at all times the landfill gases are flowing to the flare system.

The Company shall ensure that the Equipment, including CEM, is properly operated and maintained at all times. The Company shall, as a minimum:

- (1) prepare, not later than three (3) months after the issuance of the Certificate and update, as necessary, a manual outlining the operating procedures and a maintenance program for the Equipment, including:
 - (a) the routine and emergency operating and maintenance procedures recommended by the Equipment and CEM System suppliers;
 - (b) the calibration procedures of the CEM System;
 - (c) the operator training which is to be provided by an individual experienced with the Equipment;
 - (d) the procedures for optimizing the operation of the Equipment to minimize the emissions from the Equipment;
 - (e) the periodic inspection of the Equipment which is to be conducted by individuals experienced with the Equipment; and
 - (f) the procedures for recording and responding to complaints regarding the operation of the Equipment; and



- (2) implement the recommendations of the operating and maintenance manual.

RECORD RETENTION

5. The Company shall retain for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the operation of the Equipment, and monitoring and recording activities required by this Certificate. These records shall be made available the Ministry upon request. The Company shall retain:

- (1) all records on maintenance, repair and inspection of the Equipment and the CEM System;
- (2) all records produced by the CEM System;
- (3) all records on operator training;
- (4) all records on the environmental complaints, including:
 - (a) a description, time and date of the incident;
 - (b) wind direction at the time of the incident;
 - (c) a description of the measures taken to address the cause of the incident and to prevent a similar occurrence in the future; and
 - (d) description of all upset conditions associated with the operation of the Equipment and remedial action taken.

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

1. Condition No. 1 is included to define the special terms that are used throughout the Certificate.
2. Condition No. 2 is included to provide the minimum performance requirement considered necessary to prevent an adverse effect resulting from the operation of the Equipment.
3. Condition Nos. 3 and 4 are included on the Certificate to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Certificate.



4. Condition No. 5 is included to require the Company to retain records and provide information to the Ministry so that the environmental impact and subsequent compliance with the Act, the regulations and this Certificate can be verified.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written Notice served upon me, the Environmental Appeal Board and in accordance with Section 47 of the Environmental Bill of Rights, S.O. 1993, Chapter 28, the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Board. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act, 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 Appeal Board,
2300 Yonge St., 12th Floor,
P.O. Box 2382,
Toronto, Ontario.
M4P 1E4

The Environmental Commissioner,
1075 Bay Street,
Suite 605,
6th Floor,
Toronto, Ontario.
M5S 2B1

The Director,
Section 9, *Environmental Protection Act*,
Ministry of the Environment,
2 St. Clair Avenue West, 12A Floor,
Toronto, Ontario.
M4V 1L5

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




Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL
AIR
NUMBER 8-4078-99-006
Page 5 of 5

This instrument is subject to Section 38 of the Environmental Bill of Rights, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.

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

DATED AT TORONTO this 21st day of December, 1999.



S. Klose, P.Eng.,
Director,
Section 9,
Environmental Protection Act.

AK/an

c:-District Manager, MOE Kingston District Office

SCHEDULE "A"

This Schedule "A" forms part of
Certificate of Approval (Air) No. 8-4078-99-006

PARAMETER: TEMPERATURE

LOCATION:

The sample point for the Continuous Temperature Monitor shall be located in the combustion chamber where the minimum retention time of the combustion gases at a minimum temperature of 900 degrees Celsius for at least 0.75 second is achieved.

PERFORMANCE:

The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
1. Type:	shielded "K" type thermocouple, or equivalent
2. Accuracy:	± 1.5 percent of the minimum gas temperature

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minute or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

Appendix B

Commercial and Industrial Accounts

COMMERCIAL AND INDUSTRIAL ACCOUNTS - 2009

Waste Management of Canada Corporation	Napanee
Kimco Steel	Kingston
Leelan Holdings	Trenton
Sonoco Limited	Napanee
Scaletta Sand and Gravel	Trenton
Zebedee	Belleville
Mulrooney Disposal	Kingston
LaDana Insulation	Belleville
Newcastle Salvage	Newcastle
John Westendorp Ent.	Yarker
Strathcona	Newburgh
Autosystems	Belleville
Sears Canada	Belleville
Procter & Gamble	Belleville
Belleville Park & Recreation	Belleville
Peters Carpet Care	Napanee
Window Doorman	Napanee
Roantree Building	Napanee

Appendix C

Drawing 8570 – 2009
June and August 2009 – Existing
Conditions

Appendix D

Letters of Approval for Alternate
Leachate Treatment Sites



THE CORPORATION OF THE TOWN OF COBOURG

MAILING ADDRESS:
VICTORIA HALL
55 KING STREET WEST
COBOURG, ONTARIO
K9A 2M2

WATER POLLUTION CONTROL:
PLANT #1
Tel: (905) 372-7332
Fax: (905) 372-4439
E-mail: wpep1@eagle.ca

January 10 2002

Henderson, Paddon
945 Third Avenue East, Suite 212
Owen Sound ON N4K 2K8

Attention : Jeff Armstrong

Upon reviewing the analytical results from the Richmond Landfill Site in Napanee Ontario, The Town of Cobourg will accept leachate on a contingency basis. Prior to bringing leachate into The Lucas Point Water Pollution Control Plant a phone call authorizing disposal is required. Robert Landry is the only person that can authorize such disposal, he can be reached by cell phone at 905-376-2584, do not leave a message, verbal confirmation is required.

It is understood by all parties that there are no guarantees that The Town of Cobourg can unconditionally accept this leachate. We have our own landfill leachate to treat and the sequencing batch reactor has a maximum design capacity that must be adhered too.

The address of the Lucas Point Water Pollution Control Plant is;
95 Normar Road
Cobourg ON K9A 2M2
(located in the east end of town).

The disposal rate for landfill leachate is \$45.00 per 1000 gallons. Any extra costs for operator overtime, spot check sampling and analysis etc. will also be invoiced. Could you please provide me a contact list.

Do not hesitate to call if you have any questions or concerns.

Sincerely,

Robert Landry

- Cc Ian Roger P.eng Director of Operations
- Ted MacDonald P.eng Manager of Engineering & Environmental Services
- Ray Davis Environmental Technician
- Plant File

TELEPHONE 613-968-6481
FAX 613-967-3262



PUBLIC WORKS DEPARTMENT
CITY HALL
169 FRONT STREET
BELLEVILLE, ONTARIO
K8N 2Y8

FILE NO.

City of Belleville

December 19, 2000

Henderson, Paddon & Associates Limited
Civil Engineering Consultants & Planners
Attn: Mr. Frank C. Ford, M.A.Sc., P.Eng.
Owen Sound Professional Centre
945 Third Avenue East, Suite 212
OWEN SOUND, Ontario
N4K 2K8

Dear Mr. Ford:

**Re: Possibility of Accepting Leachate from
CWS Richmond Landfill Site for Treatment
at the Belleville Sewage Treatment Plant**

Reference is made to your letter dated December 11, 2000. I wish to confirm that the City of Belleville is willing to consider acceptance of leachate from the Richmond Landfill Site, which is owned by Canadian Waste Services Inc. at its Wastewater Treatment Facility on St. Paul Street, on a contingency basis only. It is understood that leachate from the Richmond Landfill Site normally be disposed of at the Wastewater Treatment Facility located in Napanee.

This approval is given on the understanding that the quality of the leachate being received at the Belleville facility will be in compliance with the City's Sewer Use By-Law, and will not pose any problem for the operation of our Wastewater Treatment Facility and its compliance with the City's Certificate of Approval issued by the Ministry of Environment.

... 2

RECEIVED
DEC 21 2000
CITY OF BELLEVILLE
PUBLIC WORKS DEPARTMENT

- 2 -

It is further understood that prior to knowledge of any leachate to the Belleville facility, the Belleville Plant Manager will be contacted in advance advising of the intent by Canadian Waste Services Inc.

Canadian Waste Services Inc. will be invoiced by the City of Belleville for disposal of such waste at the Belleville facility.

Yours truly,



J. Angelo, P. Eng.
City Engineer

JA:dh

cc Mr. Jeff DeMarsh

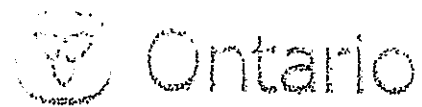
85706

Ministry of the Environment

Ministère de l'Environnement

Bay View Mall
470 Dundas St E
Belleville ON K8N 1G1
Telephone: (613) 962-9208
Fax: (613) 962-6809

Centre commercial Bay View
470 rue Dundas est
Belleville ON K8N 1G1
Téléphone: (613) 962-9208
Télécopieur: (613) 962-6809



JUN 13 2002

June 10, 2002

Henderson, Paddon & Associates Limited
Owen Sound Professional Centre
945 Third Avenue East, Suite 212
Owen Sound
ON N4K 2K8

Attention: Jeff Armstrong, Environmental Engineer

Re: Canadian Waste Services Inc. - Richmond Landfill - Acceptance of Leachate at the City of Belleville Water Pollution Control Plant

Please accept my apologies for not responding earlier to your letter concerning the acceptance on a contingency basis, of leachate from the above noted landfill, by the Belleville Water Pollution Control Plant.

Mr. Joe Angelo's December 19, 2000 letter to your office appears to satisfactorily respond to your proposal to haul leachate to the Belleville Water Pollution Control Plant.

Provided there are no conditions in the Certificate(s) of Approval restricting the service area for the Belleville plant, the City is responsible for approving whether or not the leachate can be received at the plant.

Since the time of Mr. Angelo's letter, the City of Belleville has revised their Sewer Use By-law (January 28, 2002). I would therefore advise you to read the revised document.

If there are any questions please do not hesitate to contact the writer.

Yours truly,

D.E. Graham
Senior Environmental Officer
Abatement Section
Eastern Region



Appendix E

2009 Surface Water Quality Samples
Water & Earth Science Associates
(WESA)

Appendix F

2009 Leachate Quality Analytical Results
Water & Earth Science Associates
(WESA) Data

WMA-Richmond, 2009 Annual Monitoring Report
 Appendix F: North Chamber Leadhate Results 2009

Parameter	Units	Sampling Date										
		1/2/2009	2/10/2009	3/9/2009	4/16/2009	6/2/2009	7/15/2009	8/24/2009	9/15/2009	10/14/2009	11/24/2009	12/10/2009
Ammonia	mg/L	756	950	856	432	250	887	969	954	628	444	372
Anthracene	mg/L	0.00016	0.0002	0.00025	0.00008	< 0.0001	0.00013	0.00015	0.00013	0.00011	< 0.0005	0.00011
Aroclor 1016	mg/L					< 0.0001					< 0.0005	
Aroclor 1221	mg/L					< 0.0002					< 0.001	
Aroclor 1232	mg/L					< 0.0001					< 0.0005	
Aroclor 1242	mg/L					< 0.0001					< 0.0005	
Aroclor 1248	mg/L					< 0.0001					< 0.0005	
Aroclor 1254	mg/L					< 0.0001					< 0.0005	
Aroclor 1260	mg/L					< 0.0001					< 0.0005	
Arsenic	mg/L	0.013	0.016	0.015	0.007	0.005	0.01	0.016	0.016	0.011	0.007	0.008
Atrazine	mg/L					< 0.0005					< 0.0005	
Atrazine + Desethyl-atrazine	mg/L					< 0.001					< 0.001	
Barium	mg/L					0.22					0.26	
Bendocarb	mg/L					< 0.002					< 0.002	
Benzene	mg/L	< 0.002	0.006	0.005	0.008	< 0.002	0.001	< 0.003	0.001	< 0.002	0.004	< 0.001
Benzo(a)anthracene	mg/L	0.00049	0.00016	0.00028	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00058	0.00022	< 0.00005	< 0.00005
Benzo(a)pyrene	mg/L	0.00002	0.00002	0.00005	0.00001	< 0.000009	< 0.00001	< 0.00001	< 0.00001	0.00002	0.00002	0.00002
Benzo(b)fluoranthene	mg/L	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Benzo(g,h,i)perylene	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Beryllium	mg/L					< 0.0006					< 0.0006	
Biochemical Oxygen Demand	mg/L					38					33	
Boron	mg/L					2.6					4.1	
Bromodichloromethane	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	(2v)(2q) 0.0015	< 0.001
Bromoform	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	(2v)(2q) 0.003	< 0.002
Bromomethane	mg/L	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.005	< 0.01	< 0.005	< 0.01	< 0.01	< 0.005
Bromoxynil	mg/L					< 0.0005					< 0.0005	
Cadmium	mg/L	< 0.001	< 0.0005	0.0002	0.0001	< 0.0001	0.0002	0.0008	< 0.0005	0.0001	0.0001	0.0002
Calcium	mg/L					150					170	
Carbaryl	mg/L					< 0.005					< 0.010	
Carbofuran	mg/L					< 0.005					< 0.005	
Carbon Tetrachloride	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
Chlordane	mg/L	1500	1800	1800	930	640	1600	1800	1700	890	830	580
Chlorobenzene	mg/L	0.003	0.003	0.004	0.005	< 0.003	0.002	< 0.003	0.002	< 0.002	0.003	< 0.001
Chlorodibromomethane	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	(2v)(2q) 0.003	< 0.002
Chloroethane	mg/L	0.004	< 0.005	0.003	< 0.005	< 0.005	0.004	< 0.005	0.003	< 0.004	< 0.004	0.002
Chloroform	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	(2v)(2q) 0.0015	< 0.001
Chloromethane	mg/L	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.005	< 0.01	< 0.005	< 0.01	< 0.01	< 0.005
Chlorpyrifos	mg/L					< 0.001					< 0.001	
Chromium (total)	mg/L	0.12	0.14	0.13	0.05	0.034	0.11	0.13	0.11	0.086	0.051	0.052
Chrysene	mg/L	< 0.00005	< 0.00005	0.00009	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00005	< 0.00005
Cis-1,2-Dichloroethylene	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
Cis-1,3-Dichloropropylene	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
Cobalt	mg/L	0.035	0.041	0.041	0.016	0.012	0.038	0.043	0.039	0.029	0.019	0.017
Conductivity	µS/cm					5850					8500	
Copper	mg/L	< 0.02	< 0.01	0.006	0.008	0.003	0.004	< 0.01	< 0.01	0.004	0.002	0.008

Appendix F: North Chamber Leachate Results 2009

Parameter	Units	Sampling Date										
		1/12/2009	2/10/2009	3/9/2009	4/16/2009	5/2/2009	7/15/2009	8/24/2009	9/15/2009	10/14/2009	11/24/2009	12/10/2009
(DDT) + Metabolites	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.0005	< 0.001	< 0.003	< 0.001	< 0.002	< 0.0003	< 0.001
1,1,1,2-Tetrachloroethane	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
1,1,1-Trichloroethane	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.001	< 0.004	< 0.004	< 0.001
1,1,2,2-Tetrachloroethane	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
1,1,2-Trichloroethane	mg/L	< 0.002	< 0.003	0.002	< 0.003	< 0.003	0.002	< 0.003	0.002	0.003	< 0.002	0.002
1,1-Dichloroethane	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
1,1-Dichloroethylene	mg/L					0.0000732					0.0000741	
1,2,3,4,6,7,8-Hepta CDD	mg/L					0.0000106					< 0.000012	
1,2,3,4,5,7,8-Hepta CDF	mg/L					0.0000157					< 0.00000917	
1,2,3,4,7,8,9-Hepta CDF	mg/L					< 0.00000101					< 0.00000544	
1,2,3,4,7,8-Hexa CDD	mg/L					0.0000205					< 0.00000524	
1,2,3,4,7,8-Hexa CDF	mg/L					0.0000268					0.0000018	
1,2,3,6,7,8-Hexa CDD	mg/L					< 0.00000404					< 0.00000502	
1,2,3,7,8,9-Hexa CDD	mg/L					0.0000012					0.0000018	
1,2,3,7,8,9-Hexa CDF	mg/L					< 0.00000119					< 0.00000615	
1,2,3,7,8-Penta CDD	mg/L					< 0.00000959					< 0.00000523	
1,2,3,7,8-Penta CDF	mg/L					< 0.00000346					0.000000719	
1,2-Dibromoethane	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
1,2-Dichlorobenzene (o)	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
1,2-Dichloroethane	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
1,2-Dichloropropane	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
1,3,5-Trimethylbenzene	mg/L			0.011	0.009	< 0.005	0.011	0.011	0.007	0.007	0.005	0.007
1,3-Dichlorobenzene (m)	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
1,4-Dichlorobenzene (p)	mg/L	0.013	0.008	0.012	0.012	0.008	0.014	0.015	0.01	0.011	0.009	0.008
1-Methylphtalene	mg/L	0.0005	0.00045	0.00052	0.00045	0.00037	0.0005	0.00089	0.00031	0.00033	0.00037	0.00054
2,3,4,6,7,8-Hexa CDF	mg/L					< 0.00000113					< 0.00000574	
2,3,4,6-Tetrachlorophenol	mg/L					< 0.0005					< 0.0005	
2,3,4,7,8-Penta CDF	mg/L					< 0.0000033					0.00000101	
2,3,7,8-Tetra CDD	mg/L					< 0.0000146					< 0.00000541	
2,4,5-trichlorophenoxyacetic acid	mg/L					< 0.00000444					< 0.00000238	
2,4,6-Trichlorophenol	mg/L					< 0.001					< 0.005	
2,4-Dichlorophenol	mg/L					< 0.0005					< 0.0005	
2,4-Dichlorophenoxy Acetic Acid	mg/L					< 0.0005					< 0.0005	
2-Methylnaphthalene	mg/L	0.00061	0.00063	0.00066	0.00062	0.00049	0.00058	0.00061	0.00045	0.00019	0.0004	0.00073
4,4-DDD	mg/L					< 0.00001					< 0.00001	
4,4-DDT	mg/L					< 0.00001					< 0.00001	
Acenaphthene	mg/L	0.00058	0.00057	0.00061	0.0004	0.0003	0.00059	0.00057	0.00048	0.00053	0.00049	0.00066
Acenaphthylene	mg/L	< 0.00005	0.00094	0.00043	< 0.00005	0.00005	0.00047	< 0.00005	< 0.00005	0.00037	0.00009	0.00011
α-Chlordane	mg/L					< 0.00001					< 0.00001	
Alchlor	mg/L					< 0.0005					< 0.0005	
Alclcarb	mg/L					< 0.0001					< 0.0001	
Aldrin	mg/L					< 0.00001					< 0.00001	
Aldrin + Dieldrin	mg/L					< 0.00002					< 0.00002	
Alkalinity	mg/L	5300	5800	5700	3080	2150	5500	6080	5700	4310	3260	2740
Aluminum	mg/L					0.13					0.15	

WM-Richmond, 2009 Annual Monitoring Report
 Appendix F: North Chamber Leadhate Results 2009

Parameter	Units	Sampling Date										
		1/21/2009	2/19/2009	3/19/2009	4/16/2009	6/2/2009	7/15/2009	8/24/2009	9/15/2009	10/14/2009	11/24/2009	12/10/2009
Phenols	mg/L	0.042	0.09	0.051	0.04	0.019	0.05	0.05	0.04	0.082	0.015	0.032
Phorate	mg/L					< 0.0005					< 0.0005	
Phosphorus (total)	mg/L					1.6					2.6	
Picloram	mg/L					< 0.0003					< 0.0005	
Prometryn	mg/L					0.0005					< 0.00025	
Pyrene	mg/L	0.00017	0.0002	0.00032	0.00008	0.00005	0.00013	0.00016	0.00012	0.00014	0.00011	0.00011
Selenium	mg/L	< 0.05	< 0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.03	< 0.03	< 0.03	< 0.005	< 0.005
Silver	mg/L					0.0002					< 0.0001	
Simazine	mg/L					< 0.001					< 0.001	
Sodium	mg/L					580					780	
Styrene	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
Sulphate	mg/L					< 20					< 20	
Sulphide	mg/L					0.35					0.25	
Temphos	mg/L					< 0.01					< 0.01	
Terbufos	mg/L					< 0.0005					< 0.0005	
Tetrachloroethylene	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
Toluene	mg/L	< 0.004	0.023	0.013	0.035	< 0.005	0.004	0.006	< 0.002	< 0.004	< 0.004	< 0.002
Total Dissolved Solids	mg/L	8500	10300	9600	5200	3700	9030	9800	9450	7010	5370	4600
Total Hepta CDD	mg/L					0.000166					0.000158	
Total Hepta CDF	mg/L					0.0000344					< 0.000022	
Total Hexa CDD	mg/L					0.0000214					0.0000117	
Total Hexa CDF	mg/L					0.0000105					0.00000872	
Total Kjeldahl Nitrogen	mg/L	750	1000	810	380	270	910	1000	900	680	520	370
Total PCB	mg/L					< 0.0002					< 0.0005	
Total Penta CDD	mg/L					< 0.00000959					< 0.0000112	
Total Penta CDF	mg/L					< 0.0000137					0.00000315	
Total Tetra CDD	mg/L					< 0.00000146					< 0.00000061	
Total Tetra CDF	mg/L					0.0000569					0.00000238	
Total Trihalomethanes	mg/L					< 0.001					< 0.002	
Total Xylenes	mg/L	0.24	0.14	0.2	0.19	0.099	0.18	0.17	0.087	0.15	0.13	0.11
Trans-1,2-dichloroethylene	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
Trans-1,3-dichloropropene	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
Triallate	mg/L					< 0.001					< 0.001	
Trichloroethylene	mg/L	< 0.002	< 0.003	< 0.001	< 0.003	< 0.003	< 0.001	< 0.003	< 0.001	< 0.002	< 0.002	< 0.001
Trichlorofluoromethane	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
Trifluralin	mg/L					< 0.001					< 0.001	
Vinyl Chloride	mg/L	< 0.004	< 0.005	< 0.002	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.004	< 0.004	< 0.002
Zinc	mg/L	0.1	0.037	0.089	0.12	0.044	0.057	0.16	0.064	0.066	0.042	0.048

Appendix F: South Chamber Leachate Results 2009

Parameter	Units	Sampling Date	
		6/2/2009	11/24/2009
1,1,1-Trichloroethane	mg/L	< 0.001	< 0.001
1,1-Dichloroethane	mg/L	0.002	< 0.001
1,1-Dichloroethylene	mg/L	< 0.001	< 0.001
1,4-Dichlorobenzene (p)	mg/L	0.007	0.009
1-Methylnaphthalene	mg/L	< 0.002	0.00063
2-Methylnaphthalene	mg/L	0.00064	0.00059
Acenaphthene	mg/L	0.00029	0.00031
Acenaphthylene	mg/L	< 0.00005	< 0.00005
Alkalinity	mg/L	6100	4780
Aluminum	mg/L	0.15	0.19
Ammonia	mg/L	1060	909
Anthracene	mg/L	0.0001	0.00012
Benzene	mg/L	0.004	0.008
Benzo(a)anthracene	mg/L	< 0.00005	0.00007
Benzo(a)pyrene	mg/L	0.00002	0.00003
Benzo(b)fluoranthene	mg/L	< 0.00005	< 0.00005
Benzo(g,h,i)perylene	mg/L	< 0.0001	< 0.0001
Benzo(k)fluoranthene	mg/L	< 0.00005	< 0.00005
Biochemical Oxygen Demand	mg/L	85	150
Cadmium	mg/L	< 0.0005	< 0.0005
Calcium	mg/L	88	110
Chemical Oxygen Demand	mg/L	1300	1300
Chloride	mg/L	2000	1400
Chromium	mg/L	0.18	0.16
Chrysene	mg/L	< 0.00005	0.00006
Conductivity	µS/cm	16600	13700
Dibenzo(a,h)anthracene	mg/L	< 0.0001	< 0.0001
Dissolved Organic Carbon	mg/L	483	428
Ethylbenzene	mg/L	< 0.001	0.067
Fluoranthene	mg/L	0.00014	0.00021
Fluorene	mg/L	0.00048	0.00029
Hardness	mg/L	840	770
Indeno(1,2,3-cd)pyrene	mg/L	< 0.0001	< 0.0001
Iron	mg/L	1.8	0.93
m+p-Xylene	mg/L	0.024	0.087
Magnesium	mg/L	150	130
Mercury	mg/L	< 0.0002	< 0.0002
Naphthalene	mg/L	0.0044	0.0043
Nitrate	mg/L	< 1	< 0.1
Nitrite	mg/L	< 0.1	0.05
o-Xylene	mg/L	0.028	0.039
pH (Lab)	unitless	7.7	7.7
Phenanthrene	mg/L	0.00042	0.00052
Phenols	mg/L	< 0.004	0.07
Potassium	mg/L	530	410
Pyrene	mg/L	0.00011	0.00016
Silver	mg/L	< 0.002	< 0.002
Sodium	mg/L	1900	1500
Sulphate	mg/L	< 100	98
Tetrachloroethylene	mg/L	< 0.001	< 0.001
Toluene	mg/L	0.006	0.033
Total Kjeldahl Nitrogen	mg/L	1200	1000
Total Organic Carbon	mg/L	506	464
Total Xylenes	mg/L	0.052	0.13

