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Appendix A.2.11

Amendment to Certificate of Approval  
No. A371203 dated March 31, 2010,  
Imposing Condition 35, Revoking and  
Replacing Conditions 6, 8, 9, and 14  
through 28, Revoking Condition 30, and  
Adding Conditions 36 through 140

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APR 13 2010 JEA

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April 1, 2010

Mr. Randy Harris, Site Manager  
Waste Management of Canada Corporation  
1271 Beechwood Road, RR #6  
Napane, Ontario  
K7R 3L1

Dear Mr. Harris:

**Re: Application for Approval of Closure plan  
Richmond Landfill, Certificate of Approval A371203  
Town of Greater Napane, County of Lennox and Addington  
MOE Reference Number 7421-74DHGZ**

Please find attached an amendment to the Certificate of Approval for Waste Management of Canada Corporation's (WMCC'S) Richmond Landfill Site dated March 31, 2010. The amendment approves the closure plan for the site. The site will not be allowed to receive waste for disposal after June 30, 2011. Conditions have been added to define site inspection frequencies, leachate collection system cleaning frequency and other measures to occur after site closure. In addition, conditions for the site that define the site capacity, operating hours, yearly waste limit, service area, site monitoring, complaint procedures, annual reporting and record keeping during the site operating period have been incorporated into the amendment.

Also, WMCC will be required to establish and maintain a Public Liaison Committee for the site with representatives from the Town of Greater Napane, the Ministry, the Mohawks of the Bay of Quinte, Tyendinaga Township and the Quinte Conservation Authority. All monitoring results will be required to be posted on a semi-annual basis on a publicly accessible website within 30 days of receipt.

Furthermore, by June 30, 2010, WMCC will be required to provide the following:

- an estimate of the contaminating lifespan of the site;
- an updated financial assurance plan;
- an updated groundwater, odour and surface water monitoring plan;
- an updated groundwater and surface water impact plan;

- a quality assurance/quality control plan for placement of the final cover material;
- details on the proposed synthetic membrane liner for the compost pond; and
- details on the proposed reconstruction of the compost pad area

In addition, a total of \$11,542,408 in Financial Assurance is required to be provided to the Ministry within 30 days of issuance of the amendment.

If you have any questions regarding the above, please contact me at the above phone number.

Yours truly,



Greg Washuta, P.Eng., M.Eng., F.E.C.  
Senior Review Engineer-Waste

- c: Trevor Dagilis, District Manager, MOE Kingston - District  
 Craig Dobiech, MOE, Kingston District  
 Brian Kaye, Supervisor, MOE, Kingston District  
 Victor Castro, MOE, Technical Support, Eastern Region  
 Kyle Stephenson, MOE, Technical Support, Eastern Region  
 Tim Murphy, Waste Management of Canada Corporation  
 Jeff Armstrong, Henderson Paddon and Associates ✓  
 Chief Don Maracle, Mohawks of the Bay of Quinte  
 Rod Jeffries, CAO, Mohawks of the Bay of Quinte  
 Mayor Gordon Schermerhorn, Town of Greater Napanee  
 Rebecca Murphy, Clerk/Treasurer, Town of Greater Napanee  
 Terry Murphy, General Manager, Quinte Conservation Authority  
 Ian Munro  
 Reeve Margaret Walsh, The Corporation of the Township of Tyendinaga  
 Steve Mercer, The Corporation of the Township of Tyendinaga

**AMENDMENT TO PROVISIONAL CERTIFICATE OF  
APPROVAL  
WASTE DISPOSAL SITE  
NUMBER A371203  
Notice No. 5  
Issue Date: March 31, 2010**

Waste Management of Canada Corporation  
1271 Beechwood Road, RR #6  
Napanea, Ontario  
K7R 3L1

Site Location: Richmond Landfill Site  
Lot Pt 1, 2, 3, Concession 4, Former Township of Richmond  
Town of Greater Napanea, 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 on September 4, 1991, September 2, 1994, August 1, 1995, September 11, 1996, August 29, 2000, January 27, 2002, November 24, 2003 and March 21, 2007 for the use, operation, and closure of a 16.2 hectare waste disposal landfill site including a landfill gas collection system and landfill gas flare within a total site area of 138 hectares , as follows:*

**Condition 35 is hereby added to the Certificate of Approval (C of A):**

**Site Closure:**

35. The Owner shall ensure that no waste is received for disposal at the Site after June 30, 2011 and the site is capped with final cover material in accordance with the timelines presented below.
- Phase I - by September 30, 2010.
  - Phases II, III, IV & V - by August 31, 2011.

**Condition 6 created on March 30, 1988 is hereby revoked and replaced with the following:**

6a. Intermediate Cover - In areas where landfilling has been temporarily discontinued for six (6) months or more, a minimum thickness of 300 mm of soil cover or an approved thickness of alternative cover material shall be placed.

Final Cover - Final cover placed after the effective date of this C of A must meet the following specifications. In areas where landfilling has been completed to final contours, a minimum 900 mm

thick layer of native silty clay till soil shall be placed having a hydraulic conductivity of  $1 \times 10^{-8}$  m/s or less followed by 150 mm of topsoil. Fill areas shall be progressively completed as landfill development reaches final contours.

- 6b. By June 30, 2010, the Owner shall submit to the Director for approval a Quality Assurance/Quality Control Plan for placement of the final cover material.
- 6c. Placement of the final cover material shall not occur until the QA/QC plan is approved by the Director.

**Condition 8 created on March 30, 1988 is hereby revoked and replaced with the following:**

- a. Monitoring programs shall be carried out for groundwater, surface water, and landfill gas, in accordance with Schedules "B", "C" and "D" attached to this *Certificate*.
- b. The owner of the landfill must provide an Environmental Monitoring Program (EMP) to the Director for approval by June 30, 2010. Pending final approval of the EMP by the Director, the Owner shall implement the EMP upon submission to Director.
- c. The EMP must include adequate detail on groundwater and surface water monitoring locations, monitoring frequencies, parameters etc.
- d. The EMP shall also include a monitoring program to identify odour issues along with appropriate odour abatement activities and a communication plan for the public.
- e. The monitoring results from any sampling undertaken shall be submitted to the Regional Director and the District Manager within one month of each analysis being completed.
- f. Any off site exceedances of parameters for groundwater, surface water, or odour shall be reported to the District Manager within 48 hours of determination of the exceedance. In addition, a statement detailing which results are out of compliance with the Ministry's guidelines and objectives shall be provided at the same time as the results.

**Condition 9 created on March 30, 1988 is hereby revoked and replaced with the following:**

- 9a. A written report on the development, operation, closure and monitoring of the *Site*, shall be completed annually (the "Annual Report"). The Annual Report shall be submitted to the *Regional Director*, the *District Manager* and the PLC, by March 31st of each year and shall cover the year ending the preceding December 31st.
- 9b. The Annual Report shall include the following:
  - i. the results and an interpretive analysis of the results of all leachate, groundwater, surface water and landfill gas monitoring, including an assessment of the need to amend the monitoring programs;
  - ii. an assessment of the operation and performance of all engineered facilities, the need to amend the design or operation of the *Site*, and the adequacy of and need to implement the contingency plans;
  - iii. an assessment of the efficiency of the leachate collection system;
  - iv. site plans showing the existing contours of the *Site*;
  - v. areas of landfilling operation during the reporting period;

- vi. areas of intended operation during the next reporting period;
- vii. areas of excavation during the reporting period;
- viii. the progress of final cover, vegetative cover, and any intermediate cover application;
- ix. previously existing site facilities;
- x. facilities installed during the reporting period;
- xi. site preparations and facilities planned for installation during the next reporting period;
- xii. calculations of the volume of waste, daily and intermediate cover, and final cover deposited or placed at the *Site* during the reporting period and a calculation of the total volume of Site capacity used during the reporting period;
- xiii. a summary of the quantity of any leachate or pre-treated leachate removed from the *Site* during each operating week;
- xiv. a summary of the weekly, maximum daily and total annual quantity (tonnes) of waste received at the Site.
- xv. a summary of any complaints received and the responses made;
- xvi. a discussion of any operational problems encountered at the *Site* and corrective action taken;
- xvii. a summary of the amount of wastes refused for disposal at the Site, the reasons for refusal and the carrier who brought the waste to the Site;
- xviii. a summary of the leachate collection system cleaning and inspection activities;
- xix. an update summary of the amount of financial assurance which has been provided to the *Director*;
- xx. a report on the status of all monitoring wells and a statement as to compliance with Ontario Regulation 903;
- xxi. any other information with respect to the site which the *District Manager* or Regional Director may require from time to time;
- xxii. a statement of compliance with all conditions of this Certificate of Approval and other relevant Ministry groundwater and surface water requirements;
- xxiii. a confirmation that the site inspection program as required by this Certificate has been complied with by the Owner;
- xxiv. Any changes in operations, equipment or procedures employed at the site; and,
- xxv. Recommendations regarding any proposed changes in operations of the site.

9c. The Owner shall provide semi-annual monitoring results and provide such reports on a publicly accessible website within one month of receipt of the results.

**Condition 30 created on September 4, 1991 is hereby revoked.**

**Conditions 14 to 28 are hereby revoked and replaced with the following:**

#### **Financial Assurance**

14. Financial assurance shall be provided as required by the Director, in an amount that is sufficient to pay for compliance with and performance of any action specified in this Certificate, including emergency close out, monitoring and maintenance of the Site over the planning period (operational life and the contaminating lifespan) of the Site, planned close out whether or not the site reaches approved capacity, and contingency plans for the Site.

15. Financial assurance may be provided in one or more of the following forms: cash, irrevocable letter of credit, surety bond, or some other form, all satisfactory to the *Director* .
16. A written report reviewing the financial assurance required by this *Certificate* shall be submitted to the Director by November 30, 2011, and at intervals of not more than three (3) years thereafter.
17. The report shall include:
- a. updates of the discount, interest and inflation rates associated with the requirements for financial assurance in this *Certificate* including justifications and sources of the proposed rates; and
  - b. a report prepared by a qualified Professional Engineer which updates the cost estimates on which the amounts associated with the requirements for financial assurance in this *Certificate* are based. The report shall take into consideration the:
    - actual amounts of waste landfilled;
    - projected rate of fill;
    - progressive capping of completed fill areas;
    - leachate generation rates;
    - landfill gas generation rates;
    - contaminating life span of the Site with respect to groundwater, surface water and landfill gas;
    - any measures that have been carried out or need to be carried out to prevent and ameliorate any adverse effect that relates to the site; and
    - annual inspection, maintenance, and monitoring costs, including costs for leachate treatment and disposal and landfill gas use or discharge.
18. If any financial assurance is scheduled to expire or notice is received, indicating financial assurance will not be renewed, and satisfactory methods have not been made to replace the financial assurance at least 60 days before the financial assurance terminates, the financial assurance shall forthwith be replaced by cash.
19. By June 30, 2010, the Owner shall:
- determine the appropriate contaminating lifespan for the Site;
  - provide a rationale for the appropriate contaminating lifespan chosen; and
  - resubmit a revised financial assurance plan for the site considering the revised contaminating lifespan.
20. Pending resolution of the issue of the contaminating lifespan for the site, the Owner shall provide financial assurance in a form acceptable to the Director in accordance with the following schedule:

| <b>Date</b>                                  | <b>Financial Assurance Required</b> |
|--|-------------------------------------|
| Within 30 days of issuance of this amendment | \$11,542,408                        |
| January 31, 2011                             | \$11,557,385                        |
| January 31, 2012                             | \$11,577,385                        |

**The following conditions are added to the Certificate of Approval:**

**Compliance**

36. The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Site* is notified of the *Certificate* and the conditions herein and shall take all reasonable measures to ensure the person complies with the same. Any person authorized to carry out work on or operate any aspect of the *Site* shall comply with the conditions of this *Certificate* .

**In Accordance**

37. Except as otherwise provided for in this *Certificate* , the *Site* shall be designed, developed, built, operated and maintained in accordance with this *Certificate* and the supporting documentation listed in Schedule "A".

**Other Legal Obligations**

38. The issuance of, and compliance with, this *Certificate* does not:

- relieve any person of any obligation to comply with any provision of the *EPA* or any other applicable statute, regulation or other legal requirement; or
- limit in any way the authority of the *Ministry* to require certain steps be taken or to request that any further information related to compliance with this *Certificate* be provided to the *Ministry* ;

unless a provision of this *Certificate* specifically refers to the other requirement or authority and clearly states that the other requirement or authority is to be replaced or limited by this *Certificate* .

**Adverse Effect**

39. The *Owner* and *Operator* shall take all reasonable steps to minimize and ameliorate any adverse effect or impairment of water and air quality resulting from the operation of the *Site* , including such accelerated or additional monitoring as may be necessary to determine the nature of the effect or impairment.

40. The *Owner* or *Operator* shall remain responsible for any contravention of any other condition of this *Certificate* or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused the adverse effect or impairment of air and water quality.

**Furnish Information**

41. Any information requested by the *Director* or a *Provincial Officer* concerning the *Site* and its operation under this *Certificate* , including but not limited to any records required to be kept by this *Certificate* shall be provided in a timely manner.

42. The receipt of any information by the *Ministry* or the failure of the *Ministry* to prosecute any person or to require any person to take any action, under this *Certificate* or under any statute, regulation or subordinate legal instrument, in relation to the information, shall not be construed as:

- an approval, waiver, or justification by the *Ministry* of any act or omission of any person that contravenes any condition of this *Certificate* or any statute, regulation or other subordinate legal requirement; or
- acceptance by the *Ministry* of the information's completeness or accuracy.

### **Freedom of Information Act**

43. Any information related 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, RSO 1990, CF-31.

### **Interpretation**

44. Where there is a conflict between a provision of any document, including the application, referred to in this *Certificate*, and the conditions of this *Certificate*, the conditions in this *Certificate* shall take precedence.

45. Where there is a conflict between the application and a provision in any documents listed in Schedule "A", the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and that the *Ministry* approved the amendment.

46. Where there is a conflict between any two documents listed in Schedule "A", other than the application, the document bearing the most recent date shall take precedence.

47. The conditions of this *Certificate* are severable. If any condition of this *Certificate*, or the application of any condition of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this *Certificate* shall not be affected thereby.

### **Change of Owner**

48. The *Owner* shall notify the *Director*, in writing, and forward a copy of the notification to the *District Manager*, within 30 days of the occurrence of any changes in the following information:

- the ownership of the *Site* ;
- the Operator of the *Site* ;
- the address of the *Owner* or *Operator* ;
- the partners, where the *Owner* or *Operator* 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. B.17, shall be included in the notification;
- the name of the corporation where the *Owner* or *Operator* is or at any time becomes a

corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act* , R. S. O. 1990, c. C.39, shall be included in the notification.

49. In the event of any change in the 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 forward to the *Director* and *District Manager* .

### **Inspections**

50. No person shall hinder or obstruct a *Provincial Officer* from carrying out any and all inspections authorized by the *OWRA* , the *EPA* , the *Nutrient Management Act* or the *PA* , of any place to which this *Certificate* relates, and without limiting the foregoing:

- to enter upon the premises where the approved works are located, or the location where the records required by the conditions of this *Certificate* are kept;
- to have access to, inspect, and copy any records required to be kept by the conditions of this *Certificate* ;
- to inspect the *Site*, related equipment and appurtenances;
- to inspect the practices, procedures, or operations required by the conditions of this *Certificate* ; and
- to sample and monitor for the purposes of assessing compliance with the terms and conditions of this *Certificate* or the *EPA* , the *OWRA* or the *PA* .

### **Proper Operation**

51. The *Site* shall be properly operated and maintained at all times. All waste shall be managed and disposed of in accordance with the *EPA* and *Regulation 347* and the requirements of this *Certificate*. At no time shall the discharge of a contaminant that causes or is likely to cause an adverse effect be permitted.

### **Waste Inspection and Deposition**

52. All loads of waste must be properly inspected by trained site personnel prior to acceptance at the site and waste vehicles must be diverted to appropriate areas for waste disposal.

53. The *Owner* shall deposit waste in a manner that minimizes exposure area at the landfill working face and all waste shall be compacted before cover is applied.

### **Vermin, Scavenging, Dust, Litter, Odour, Noise, etc.**

54. The *Site* shall be operated and maintained such that the vermin, vectors, dust, litter, odour, noise and traffic do not create a nuisance.

55. No scavenging is to occur at the *Site*.

## **Dust**

56. The Owner shall control fugitive dust emissions from on site sources including but not limited to on-site roads, stockpiled cover material and, closed landfill area prior to seeding especially during times of dry weather conditions. If necessary, major sources of dust shall be treated with water and/or dust suppression materials to minimize the overall dust emissions from the site.

## **Noise**

57. The Owner shall comply with noise criteria in MOE Guideline entitled "Noise Guidelines for Landfill Sites."

## **Surface Water:**

58. The Owner shall take all appropriate measures to minimize surface water from coming in contact with waste. Temporary berms and ditches shall be constructed around active waste disposal areas to prevent extraneous surface water from coming in contact with the active working face.
59. The owner shall not discharge surface water to receiving water bodies without an approval under Section 53 of the OWRA.
60. If any discharge of surface water from the South-west Stormwater Pond is contemplated by the Owner, the Owner shall prior to discharge, collect samples and analyze them for acute toxicity testing in accordance with Environment Canada protocols for rainbow trout and daphnia magna.
61. No discharge of surface water from the South-west Stormwater Pond is permitted by the Owner until such time as the Owner provides the Toxicity reports to the District Manager, the Toxicity Reports indicate a passing grade and the District Manager has approved in writing the release of surface water from the South-west Stormwater Pond.

## **Litter Control:**

62. The Owner shall take all practical steps to prevent escape of litter from the site. The Owner shall inspect and collect litter from the site on a weekly basis. All loose, windblown litter shall be collected and disposed of at the landfill working face.

## **Capacity**

63. The Owner shall only accept and deposit waste at the site as long as there is available capacity as defined by the final contours for the Site approved by this Certificate . The approval permits disposal of waste at the Site to fill an air space of 2,842,700 cubic metres (including waste, daily and interim cover material).

## **Yearly Waste Limit**

64. No more than 125,000 tonnes of waste per year may be accepted at the *Site* .

### **Service Area**

65. Only waste that is generated in the Province of Ontario shall be accepted at the *Site* .

### **Operations Manual**

66. An operations and procedures manual that addresses the requirements of this *Certificate* shall be prepared and submitted to the District Manager for approval within ninety (90) days of the issuance of this amendment and shall include the following:

- Health and safety;
- Operation and maintenance of the site;
- Waste acceptance;
- Waste disposal area and development;
- Nuisance management;
- Leachate management;
- Landfill gas management;
- Surface water/Storm water management;
- Inspections and monitoring;
- Contingency plans and emergency procedures;
- Complaints; and,
- Reporting and record keeping.

67. The operations and procedures manual shall be:

- retained at the *Site*;
- reviewed on an annual basis and updated by the Owner as required; and
- be available for inspection by *Ministry* staff.

### **Hours of Operation**

68. Waste shall only be accepted at the *Site* during the following time periods:

8 am to 5 PM - Monday to Friday (except statutory holidays)

8 am to 1 PM - Saturday

69. With the prior written approval of the *District Manager* , the time periods may be extended to accommodate seasonal or unusual quantities of waste.

70. The Owner may provide limited hours of operation provided that the hours are posted at the landfill gate and that suitable notice is provided to the public of any change in operating hours.

71. Upon reasonable notice to the Director, contingency actions may take place outside normal hours of operation. Emergency response may occur at any time as required.

## Site Security

72. During non-operating hours, the *Site* entrance and exit gates shall be locked and the *Site* shall be secured against access by unauthorized persons

## Waste Inspection Procedures

73. The *Operator* shall develop and implement a program to inspect waste to ensure that the waste is of a type approved for acceptance under this *Certificate* .

## On-Site Roads

74. On-Site roads shall be provided and maintained in a manner that vehicles hauling waste to and on the site may travel readily and safely on any operating day. During winter months, when the site is in operation, roads must be maintained to ensure safe access to the landfill working face. On-Site roads must be clear of mud, ice and debris which may create hazardous conditions.

## Cleaning Leachate Collection System

75. The leachate collection system piping for each stage of the landfill shall be cleaned on an annual basis, or more frequently as circumstances require, in order that the leachate collection system operates properly. Visual inspections of the leachate collection system shall be conducted on a quarterly basis to determine the need for more frequent cleaning.

## Employees and Training

76. A training plan for all employees that operate any aspect of the site shall be developed and implemented by the *Operator*. Only trained employees shall operate any aspect of the *Site* or carry out any activity required under this *Certificate* . For the purpose of this *Certificate* "trained" means knowledgeable either through instruction or practice in:

- the relevant waste management legislation *including EPA, O. Reg. 347* , regulations and guidelines;
- major environmental *and occupational health and safety* concerns pertaining to the waste to be handled;
- the proper handling of wastes;
- the management procedures including the use and operation of equipment for the processes and wastes to be handled;
- the emergency response procedures;
- the specific written procedures for the control of nuisance conditions;
- the *terms, conditions and operating* requirements of this *Certificate* and,
- proper inspection, receiving and recording procedures and the activities to be undertaken during and after a load rejection.

## Daily Inspections and Log Book

77. An inspection of the entire *Site* and all equipment on the *Site* shall be conducted each day the *Site* is in operation to ensure that the site is being operated in compliance with this *Certificate*. Any deficiencies discovered as a result of the inspection shall be remedied immediately, including temporarily ceasing operations at the *Site* if needed.
78. A record of the inspections shall be kept in a daily log book *or a dedicated electronic file* that includes:
- the name and signature of person that conducted the inspection;
  - the date and time of the inspection;
  - the list of any deficiencies discovered;
  - the recommendations for remedial action; and
  - the date, time and description of actions taken.
79. A record shall be kept in the daily log book of all the following:
- the type, date and time of arrival, hauler, and quantity (tonnes) of all waste received at the site; and,
  - a list of the refusal of waste shipments, the reason(s) for refusal, and the origin of the waste, if known.

### **Monthly Records**

80. Monthly site inspection records in the form of a written log or a dedicated electronic file shall include the following:
- a summary of wastes received and refused for disposal at the Site;
  - the area of the Site in which waste disposal operations are taking place;
  - a calculation of the total quantity (tonnes) of waste received at the Site during each operating day and each operating week;
  - the amount of any leachate removed, or treated and discharged from the Site;
  - a record of litter collection activities and the application of any dust suppressants;
  - a record of the daily inspections;
  - a description of any out-of-service period of any control, treatment, disposal or monitoring facilities, the reasons for the loss of service, and action taken to restore and maintain service;
  - type and amount of daily, intermediate and final cover used;
  - maintenance and repairs performed on equipment employed at the site;
  - complaints received and actions taken to resolve them;
  - emergency situations and actions taken to resolve them; and
  - any other information required by the District Manager.

### **LEACHATE CONTINGENCY PLAN**

81. The Owner shall on a biannual basis confirm that there is a suitable location available for disposal of leachate and what that location is. Confirmation shall be provided to the District Manager upon receipt. If a location for disposal of leachate is not available, the Owner shall provide an action plan for approval to the District Manager.

## **SITE INSPECTIONS**

82. During site operations, the owner shall inspect the site monthly for the following items but not limited to these items:
- Erosion rills on the waste mound;
  - General settlement areas or depressions on the waste mound;
  - Shear and tension cracks on the waste mound;
  - Condition of surface water drainage works;
  - Erosion and sedimentation in surface water drainage system;
  - Presence of any ponded water on the waste mound;
  - Adequacy of cover material;
  - Evidence of vegetative stress, distressed poplars or side slope plantings on or adjacent to the waste mound;
  - Condition of groundwater monitoring wells and gas wells;
  - Presence of insects, vermin, rodents and scavenging animals on or adjacent to the waste mound;
  - Condition of fence surrounding the site; and,
  - General site appearance.
83. The owner shall inspect the waste mound and surrounding areas weekly for presence of leachate seeps. Any leachate seeps that are discovered shall be repaired within 48 hours of notice by the Owner.

### **Leachate Collection System Contingency Plan**

84. Within 90 days of issuance of this amendment, the Owner shall provide to the Director for approval a detailed contingency plan for failure of the leachate collection system at the Site.

### **Leachate Removal Rates**

85. Within 30 days of issuance of this amendment, the Owner shall provide to the Director the amount of leachate removed from the site for the last five years. The leachate volumes shall be broken down in volumes taken from the north and south pumping stations. In addition, the information shall contain what volumes and where the leachate was taken for disposal/treatment.

## **LEACHATE SUMP PITS**

86. A leachate maintenance level of no greater than 0.66 metres shall be maintained in the north pumping chamber and documented each working day.
87. Appropriate alarms shall be installed to warn site personnel of rising leachate levels within the sump pits so that the Owner can take appropriate action to prevent an overflow.

## **Landfill Gas Collection System**

88. Within 90 days of issuance of this amendment, the Owner shall provide to the Director for approval a detailed contingency plans for failure of the landfill gas collection system at the Site.

## **PUBLIC LIAISON COMMITTEE**

90. The Owner shall use its best efforts to establish and maintain a Public Liaison Committee (PLC) for the Site. The PLC shall serve as a focal point for dissemination, review and exchange of information and monitoring results relevant to the operation of the undertaking. In addition, the purpose of the PLC will be to provide community review of the development, operation (current and proposed) and ongoing monitoring, closure and post-closure care related to the landfill site. The PLC will also be provided the opportunity to review and comment on any subsequent applications for approval under the EPA and the OWRA.
91. The Owner shall invite representatives from the Town of Greater Napanee, the Ministry, the Township of Tyendinaga, the Quinte Conservation Authority and the Mohawks of the Bay of Quinte to sit on the committee.
92. The Owner shall, in consultation with the PLC, develop a terms of reference for the PLC that will describe how the PLC shall carry out business, and the terms of reference shall include a dispute resolution strategy to resolve issues and disagreements between the PLC and the Owner. The Owner shall provide the terms of reference to the Director and the Regional Director for placement on the public record.
93. The general mandate of the PLC shall include:
- a. Review operations and provide regular input to the Owner with respect to all matters pertaining to landfill site operation, including issues pertaining to ongoing operations, monitoring, the need for contingency plans or remedial measures, response to community complaints, the need for changes to the Certificate of Approval, post-closure monitoring and maintenance, and development of the proposed end use for the landfill site;
  - b. Review operational and monitoring reports;
  - c. Consider and make recommendations to the Owner regarding outside consulting advice in respect of the landfill site;
  - d. Facilitate ongoing dialogue between the Owner, and the community, including residents and businesses in the immediate vicinity of the landfill site;
  - e. Provide reports regularly to the community on the activities of the PLC, the landfill operations and landfill related issues and seek public input on these activities and issues;
  - f. Monitor the Owner's complaint response program and make recommendations to the Owner with respect to this program; and
  - g. Provide recommendations to the Owner with respect to unresolved complaints.
94. The PLC shall not exercise any supervisory, regulatory, approval, legal or other decision making role with respect to the operations at the site.

95. The Owner shall provide for the administrative costs of operating the PLC, including the cost of meeting places and clerical services.
96. The PLC shall operate under a Terms of Reference of the committee. Any changes to the Terms of Reference for the PLC shall be made by the PLC. Any changes to the Terms of Reference for the PLC shall be provided to the Ministry for information purposes.
97. Community members shall be appointed by the PLC. The community member positions are intended to be available to individuals that are not members of groups already represented on the PLC and have an interest in the operation of the landfill. The PLC shall encourage individuals who reside in close proximity to the landfill to participate. A community member is defined as a taxpayer and/or resident of the Town of Greater Napanee and/or The Township of Tyendinaga.
98. The function of the Ministry member will be to provide advice, information and input to other members as required.
99. The PLC shall determine the appropriate meeting frequency and review it on an annual basis.
100. Minutes and agendas of meetings shall be printed and distributed on a timely basis.
101. The PLC shall have reasonable access to the Site and its landfill related facilities for the purpose of carrying out its objective and mandate and the Owner's consultants' reports relating to Site operations shall be provided to the PLC.
102. The Owner shall provide the PLC with access to the Owner's consultants as required and consultants reports in accordance with protocols agreed to between the Owner and the PLC.
103. Unless disclosure would be contrary to the Freedom of Information and Protection of Privacy Act, the PLC, the Town of Greater Napanee, the Township of Tyendinaga, and the Mohawks of the Bay of Quinte are to be provided all formal submissions and correspondence related to the site operations by the Owner at the same time as these items are submitted to the Ministry.
104. The Owner shall allow access to the landfill site during normal operating hours, to enable any individual member of the PLC and member of the public recommended by local representatives on the PLC, to observe operations. An individual member of the PLC must contact the operator to arrange for a site pass, be accompanied by an operators representative at all times and follow all safety procedures.
105. All recommendations made to the Owner with respect to ongoing landfill operations, monitoring and the implementation of contingency measures shall be discussed at joint meetings between representatives of the Owner and the PLC. The purpose of these meetings will be to arrive at an agreement between the Owner and PLC with respect to implementation of the recommendations.
106. The Owner will disclose all monitoring results to the PLC, the Town of Greater Napanee, the Township of Tyendinaga and the Mohawks of the Bay of Quinte and deliver to the PLC, the Town

of Greater Napanee, the Township of Tyendinaga and the Mohawks of the Bay of Quinte all documents and information (except as may be privileged) relevant to the operation of the landfill.

107. The Owner with approval from the Director and the District Manager, may dispense with the PLC if, after a period of time and after giving sufficient notice, there is no interest from the public in continuing with it. The need for a PLC shall be reviewed by the Owner on a yearly basis.

### **Complaints Procedure**

108. If at any time, the *Owner* receives complaints regarding the operation of the *Site*, the *Owner* shall respond to these complaints according to the following procedure:

- a. The *Owner* shall record and number each complaint, either electronically or in a log book, and shall include the following information: the nature of the complaint, the name, address and the telephone number of the complainant if the complainant will provide this information and the time and date of the complaint;
- b. The Owner, upon notification of the complaint, shall initiate appropriate steps to determine all possible causes of the complaint, proceed to take the necessary actions to eliminate the cause of the complaint and forward a formal reply to the complainant; and
- c. The Owner shall complete a report written within one (1) week of the complaint date, listing the actions taken to resolve the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents. A copy of the report shall be retained on-site.

109. The Owner shall post site complaints procedure at site entrance along with the name and phone number of a suitable, local contact to receive complaints or questions related to the Site. All complaints and the Owner's actions taken to remedy the complaints must be summarized in the Annual Report.

### **Groundwater Monitors**

110. The Owner shall ensure all groundwater monitoring wells are properly capped, locked and protected from damage.
111. In areas where landfilling is to proceed around monitoring wells, suitable extensions shall be added to the wells and they shall be properly re-secured.
112. All groundwater monitoring wells whether included in the monitoring program or not shall be assessed, repaired, replaced or decommissioned as required. Any well being decommissioned shall be decommissioned in accordance with good standard practice that will prevent contamination through the abandoned well and in accordance with Ontario Regulation 903.
113. The Owner shall repair or replace any monitoring well included in the monitoring program which is destroyed or in any way made inoperable for sampling such that no more than one sampling event

is missed.

114. Any monitoring well included in the monitoring program that is no longer required as part of the groundwater monitoring program may be decommissioned provided its removal from the monitoring program has been approved by the Director. A report on the decommissioning shall be provided in the annual monitoring report for the period during which the well was decommissioned.

### **Groundwater and Surface Water Impact Contingency Plan**

115. By June 30, 2010, the Owner shall submit for approval to the Director a Groundwater and Surface Water Impact Contingency Plan. The Groundwater and Surface Water Impact Contingency Plan will include the following:

- Trigger mechanisms associated with the groundwater and surface water monitoring programs. These mechanisms, based on water quality monitoring data, will identify when additional measures are required to be implemented in order to ensure on-going compliance with water quality criteria;
- A leachate mass balance that compares collected leachate volumes and estimates of leachate production;
- Current groundwater and surface water impacts including observations of leachate seeps over the past five years;
- Quantifiable timelines for each step of the impact contingency plans;
- A plan to deal with any off site groundwater and surface impacts that can be attributed to landfill operations over the long term including during landfill operation and during post-closure;

### **Record Retention**

116. Except as authorized in writing by the Director, all records required by this Certificate shall be retained at the Site for a minimum of two (2) years from their date of creation.
117. The Owner shall retain all documentation listed in Schedule "A" for as long as this Certificate is valid.
118. All monthly summary reports are to be kept at the site until they are included in the Annual Report.
119. The Owner shall retain employee training records as long as the employee is working at the site.

120. The Owner shall make all of the above documents available for inspection upon request of Ministry staff.

### **Emergency Situations**

121. In the event of a fire or discharge of a contaminant to the environment, site staff shall contact the MOE Spills Action Centre (1-800-268-6060) and the District Office of the MOE.

122. The Owner shall submit to the District Manager a written report within 3 days of the spill or incident, outlining the nature of the incident, remedial measures taken and measures taken to prevent future occurrences at the Site.

123. The Owner shall prepare an Emergency Response Manual for the site and submit to the District Manager within 60 days of the issuance of this amendment, in consultation with local emergency response agencies. The Emergency Response Manual should indicate the responsibility of each of the stakeholders with respect to handling possible emergency situations.

124. The Emergency Response Manual shall be updated on a regular basis and be provided to the District Manager within one month of the revision date.

125. The Owner shall ensure that adequate fire fighting and contingency spill clean up equipment is available and that emergency response personnel are familiar with its use and location.

### **THE FOLLOWING CONDITIONS 126 TO 137 INCLUSIVE ARE APPLICABLE TO THE SITE UPON SITE CLOSURE:**

#### **SITE CLOSURE**

126. If final contours are reached in any part of the *Site* then that part of the Site shall be closed in accordance with the closure plan, items 15 to 26 on Schedule "A" and this amendment to the Certificate of Approval as approved by the *Director*.

127. Within sixty (60) days prior to site closure, the Owner shall notify the public via an advertisement in all local newspapers. In addition, notice shall be given to the District Office, the Town of Greater Napanee, the Mohawks of the Bay of Quinte and all residents and businesses within a 1,000 metre radius of the Site.

128. The Owner shall update the sign at the front gate of the Site shall be updated to indicate the following:

- the name of the site and Owner;
- the Certificate of Approval number;
- the name of the Operator;
- a warning against unauthorized access;
- the telephone number to which complaints or questions may be directed;
- a twenty-four (24) hour emergency telephone number;

- the site is closed;
- dumping outside of the gate is illegal; and
- alternative locations for waste disposal.

129. After site closure, on a weekly basis, the Owner shall inspect the site for leachate seeps and for signs of illegal dumping of waste. Illegal waste shall be removed and disposed of within 48 hours of detection. Leachate seeps shall be repaired within 48 hours of detection.

130. Upon closure of the site, the following features will be inspected, recorded and maintained on a quarterly (every three months) basis:

- evidence of settlement;
- landfill gas collection system, landfill gas flare and related equipment;
- cover soil integrity;
- vegetative cover;
- gates and fencing around the site;
- surface water drainage works;
- landfill gas monitoring wells;
- erosion and sediment in surface water drainage system; and
- groundwater monitoring wells.

131. Any deficiencies noted in the above items shall be repaired within one month time of notice.

132. Upon site closure, grass on the berms and the top of the landfill shall be cut a minimum of two times per year.

133. Upon closure of the site, the ditches and culverts surrounding the site shall be cleaned on an annual basis for the first five (5) years after site closure. Prior to five years after site closure, the Owner shall submit to the Director for approval a proposed maintenance schedule for the ditches and culverts for the period covering 5 years after site closure until the end of the contaminating lifespan.

134. Upon closure of the site, the leachate collection system be cleaned and camera inspected on an annual basis for the first three (3) years after site closure. Prior to three years after site closure, the Owner shall submit to the Director for approval a proposed maintenance schedule for the leachate collection system or the period covering 3 years after site closure until the end of the contaminating lifespan.

135. A vegetative cover consisting of vegetation that is suited to local conditions and that is capable with minimal care of providing vigorous, plentiful cover no later than its 3<sup>rd</sup> growing season shall be established over the entire landfill cover to control erosion and minimize evapotranspiration. Complete planting as soon as possible after reaching final contours. The vegetative cover seed shall be in accordance with Ontario Provincial Standard Specifications and good practice.

136. If weather conditions do not allow timely placement of final and vegetative cover, silt curtains shall be employed to minimize silt loadings to surface water bodies.

137. The following shall remain in place and be operational at the site until the end of the contaminating lifespan:

- Leachate extraction equipment;
- landfill gas extraction equipment; and
- sedimentation ponds

### **COMPOST PAD AREA AND COMPOST POND**

138. The Owner shall reconstruct the compost pond with a synthetic membrane liner. By June 30, 2010, the Owner shall submit to the Director for approval, details on the proposed synthetic membrane liner. This construction shall be completed by December 31, 2010, unless the approval is issued after August 31, 2010.

139. The Owner shall reconstruct the compost pad area with a low permeability surface. By June 30, 2010, the Owner shall submit to the Director for approval, details on the proposed reconstruction. This construction shall be completed by December 31, 2010, unless the approval is issued after August 31, 2010.

### **PHYTOREMEDIATION SYSTEM**

140. Prior to the start of construction of the phytoremediation system proposed for the northwest corner of the Site, the Owner shall submit for approval to the Director, details on the proposed phytoremediation system.

**Items 7 to 10 inclusive on the amendment dated August 1, 1995 are renumbered as items 6 to 9 inclusive.**

**Items 1 to 4 inclusive on the amendment dated August 29, 2000 are renumbered as items 10 to 13 inclusive.**

**Item 5 on the amendment dated June 27, 2002 is hereby renumbered as item 14.**

**The following items are added to Schedule "A":**

15. Report entitled "Richmond Sanitary Landfill Site Final Closure Plan" and appendices dated June 2007 prepared by Henderson, Paddon and Associates Limited.
16. Memorandum dated November 30, 2007 from K. Stephenson, Hydrogeologist, Eastern Region, MOE to C. Dobiech, Kingston District, MOE.
17. Memorandum dated December 5, 2007 from Victor Castro, Surface Water Scientist, Eastern Region, MOE to Craig Dobiech, Kingston District, MOE.
18. Letter dated July 11, 2008 from Greg Washuta, Senior Waste Engineer, EAAB, MOE to Mike Walters, WMCC.
19. Letter, attachments, and Appendix B dated September 26, 2008 from Randy Harris, Site Manager, WMCC to Greg Washuta, Senior Waste Engineer, EAAB, MOE.

20. Letter dated February 23, 2009 from Greg Washuta, Senior Waste Engineer, EAAB, MOE to Randy Harris, Site Manager, WMCC.
21. Drawing number 8570-2006 entitled "June 2006 Existing Conditions Richmond Landfill Napanee, Ontario" dated March 19, 2007 prepared by Henderson Paddon and Associates Limited.
22. Drawing number 8570F-104 entitled "Richmond Landfill Site Proposed Final Contours Landfill and Borrow Areas" dated March 1995 prepared by Henderson Paddon and Associates Limited.
23. Letter dated March 2009 from Randy Harris, Site Manager, Waste Management of Canada Corporation to Greg Washuta, Senior Waste Engineer, Waste Unit, EAAB, MOE.
24. Drawing number 8570F-114 entitled "Richmond Township Landfill Landfill Sections 'A-A' and 'B-B'" created by Henderson Paddon and Associates Limited, dated March 1996.
25. Drawing number 8570F-115 entitled "Richmond Township Landfill Landfill Sections 'C-C', 'D-D', and 'E-E'" created by Henderson Paddon and Associates Limited, dated March 1996.
26. Memorandum dated February 25, 2009 from K. Stephenson, Hydrogeologist, Eastern Region, MOE to C. Dobiech, Kingston District, MOE.
27. Letter dated June 1, 2009 from Mr. Randy Harris, Site Manager, Waste Management of Canada Corporation to Application Processor, Client Services Section, Environmental Assessment and Approvals Branch, Ministry of the Environment.
28. Report entitled "Site Conceptual Model Report, WM Richmond Landfill" and attached appendices A to H inclusive by Dr. B.H. Kueper and WESA Inc., dated October 2009.

#### **SCHEDULE "B" : GROUNDWATER MONITORING PROGRAM**

**The following monitoring wells shall be monitored for water levels on a semi-annual basis:**

|       |       |       |        |
|-------|-------|-------|--------|
| 2054  | M48-1 | M64-1 | M96    |
| 2055  | M48-2 | M64-2 | M97    |
| M3A-1 | M48-3 | M65-1 | M98    |
| M3A-2 | M49-1 | M65-2 | M99-1  |
| M3A-3 | M49-2 | M66-1 | M99-2  |
| M4-1  | M49-3 | M66-2 | M100   |
| M4-2  | M50-1 | M67-1 | M101   |
| M4-3  | M50-2 | M67-2 | M102   |
| M5-1  | M50-3 | M68-1 | M103   |
| M5-2  | M51-1 | M68-2 | M104   |
| M5-3  | M51-2 | M68-3 | OW1    |
| M6-1  | M51-3 | M68-4 | OW4    |
| M6-2  | M52-1 | M69-1 | OW5    |
| M6-3  | M52-2 | M69-2 | OW36   |
| M9-1  | M52-3 | M69-3 | OW37-d |
| M9-2  | M53-1 | M69-4 | OW37-s |
| M9-3  | M53-2 | M70-1 | OW54-d |
| M9R-1 | M53-3 | M70-2 | OW54-i |
| M10-1 | M53-4 | M70-3 | OW54-s |
| M10-2 | M54-1 | M71   | OW55-d |
| M10-3 | M54-2 | M72   | OW55-i |
| M12   | M54-3 | M73   | OW55-s |
| M14   | M54-4 | M74   | OW56-d |
| M15   | M55-1 | M75   | OW56-i |
| M16   | M55-2 | M76   | OW56-s |
| M18   | M55-3 | M77   | OW57   |
| M19   | M55-4 | M78   | PW1    |
| M23   | M56-1 | M79   | PW2    |
| M27   | M56-2 | M80-1 |        |
| M28   | M57   | M80-2 |        |
| M29   | M58-1 | M81   |        |
| M30   | M58-2 | M82-1 |        |
| M31   | M58-3 | M82-2 |        |
| M35   | M58-4 | M83   |        |
| M38   | M59-1 | M84   |        |
| M39   | M59-2 | M85   |        |
| M41   | M59-3 | M86   |        |
| M42-1 | M59-4 | M87-1 |        |
| M42-2 | M60-1 | M87-2 |        |
| M42-3 | M60-2 | M88-1 |        |
| M43-1 | M60-3 | M88-2 |        |
| M43-2 | M60-4 | M89-1 |        |
| M43-3 | M61-1 | M89-2 |        |
| M45-1 | M61-2 | M90-1 |        |
| M45-2 | M61-3 | M90-2 |        |
| M45-3 | M61-4 | M91-1 |        |
| M46-1 | M62-1 | M91-2 |        |
| M46-2 | M62-2 | M93   |        |
| M47-1 | M62-3 | M94-1 |        |
| M47-2 | M62-4 | M94-2 |        |
| M47-3 | M63-1 | M95-1 |        |
|       | M63-2 | M95-2 |        |

Groundwater samples shall be taken from the following wells:

| Well                       | Overburden (O), bedrock (B) or Leachate (L) | Parameters | Frequency   |
|----------------------------|---|------------|-------------|
| M35                        | O   | A          | Annual      |
| M39                        | O   | A          | Annual      |
| M5-1<br>M5-2<br>M5-3       | B   | A          | Annual      |
| M6-1, M6-3                 | B   | A          | Annual      |
| M6-2                       | B   | A, E       | Annual      |
| M45-2, M45-3               | B   | A          | Annual      |
| M46-1, M46-2               | B   | A          | Annual      |
| OW1                        | B   | A          | Semi-annual |
| OW4                        | B   | A          | Semi-annual |
| OW55-D<br>OW55-I<br>OW55-S | B   | A          | Semi-annual |
| OW56-D<br>OW56-I<br>OW56-S | B   | A          | Semi-annual |
| M19                        | O   | A          | Annual      |
| M23                        | O   | A          | Annual      |
| M47-1, M47-2, M47-3        | B   | A          | Annual      |
| M50-1, M50-2               | B   | A, B, E    | Annual      |
| M50-3                      | B   | A          | Annual      |
| M51-1, M51-2               | B   | A, B, E    | Annual      |
| M51-3                      | B   | A          | Annual      |
| M52-1, M52-2               | B   | A, B, E    | Annual      |
| M52-3                      | B   | A          | Annual      |
| M12                        | O   | A          | Annual      |
| M14                        | O   | A          | Annual      |
| M53-2, M53-3, M53-4        | B   | A          | Annual      |
| M9-2, M9-3                 | B   | A          | Annual      |
| M9R-1                      | B   | A, E       | Annual      |
| M10-1, M10-2, M10-3        | B   | A          | Annual      |
| M43-3                      | B   | A          | Annual      |
| M49-1, M49-3               | B   | A          | Annual      |
| M49-2                      | B   | A, B, E    | Annual      |
| OW54-D, OW54-I             | B   | A, B, E    | Semi-annual |
| OW54-S                     | B   | A          | Semi-annual |
| OW57                       | B   | A          | Annual      |

|   |   |         |             |
|---|---|---------|-------------|
| 2054  | B | A, B, E | Semi-annual |
| 2055  | B | A, B, E | Semi-annual |
| M28   | O | A       | Annual      |
| M29   | O | A       | Annual      |
| M58-2, M58-3, M58-4                                       | B | A       | Annual      |
| M3A-1, M3A-2, M3A-3                                       | B | A       | Annual      |
| M4-1, M4-3  | B | A       | Annual      |
| M4-2  | B | A, E    | Annual      |
| M42-3   | B | A       | Annual      |
| M48-2, M48-3  | B | A       | Annual      |
| M96, M97, M98, M99-1, M99-2, M100, M101, M102, M103, M104 |   | A, B, E | Semi-annual |
| North Chamber, South Chamber                              | L | C       | Monthly     |
| North Chamber, South Chamber                              | L | D       | Semi-annual |

**List A:**

GENERAL CHEMISTRY: pH, conductivity, hardness, ion balance.  
MAJOR IONS: Alkalinity, chloride, sodium, sulphate, calcium, magnesium, potassium  
METALS: Aluminium, cadmium, chromium, copper, iron, silver  
NUTRIENTS: Nitrate, nitrite, Total Organic Carbon, COD, BOD, Ammonia, TKN  
OTHER: Mercury, phenols  
VOLATILE ORGANIC COMPOUNDS (VOC's): Benzene, toluene, ethylbenzene, xylenes

**LIST B:**

SELECTED VOC'S:  
1,1-dichloroethylene, 1,1-dichloroethane, 1,1,1-trichloroethane, tetrachloroethylene, 1,4-dichlorobenzene  
POLYCYCLIC AROMATIC HYDROCARBONS (PAH's):  
naphthalene, acenaphthylene, acenaphthene, flourene, anthracene, phenanthrene, flouranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, indeno[1,2,3,cd]pyrene, dibenzo[a,h]anthracene, benzo[g,h,i]perylene

**LIST C:**

Arsenic, cadmium, cobalt, chromium, copper, mercury, molybdenum, nickel, lead, selenium, zinc, alkalinity, hardness, Dissolved Organic Carbon (DOC), pH, ammonia, nitrite, nitrate, TKN, phenols, PAH's (as indicated on list B), benzene, toluene, ethylbenzene, xylenes, USEPA 624 VOC's, purgeable hydrocarbons.

**LIST D:**

Silver, aluminium, boron, barium, beryllium, calcium, sodium, magnesium, manganese, iron, total phosphorus, conductivity, hydrogen sulphide, sulphate, BOD, total Trihalomethanes.

**LIST E:**

Volatile Organic Compound Scan as per USEPA624

Detection limits shall be low enough in order to allow for comparison with the Ministry's Ontario Drinking Water Standards.

Conductivity, pH and temperature readings are to be taken from samples collected from each well during each sampling event.

**SCHEDULE "C" : SURFACE WATER MONITORING PROGRAM**

Surface water samples shall be collected in the spring and the fall from the following locations:  
**S2, S3, S4R, S5, S7, S8R and S9**

In addition, the North-east and Northwest ponds shall be sampled during discharge events up to two times per year.

Surface water samples shall be analyzed for the following parameters:

|                             |  |
|-----------------------------|--|
| GENERAL CHEMISTRY:          | pH, conductivity, ion balance.   |
| MAJOR IONS:                 | Alkalinity, chloride, sodium, sulphate, potassium                                  |
| METALS:                     | Arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, zinc        |
| NUTRIENTS:                  | Total Ammonia, Nitrate, nitrite, Un-ionized ammonia, Total Kjeldahl Nitrogen       |
|                             | Total phosphorus, Biochemical Oxygen Demand, Chemical Oxygen Demand.               |
| OTHER:                      | Cyanide, Mercury, phenols, turbidity, colour, temperature, Total Suspended Solids. |
|                             | Total Dissolved Solids   |
| VOLATILE ORGANIC COMPOUNDS: | Benzene, toluene, ethylbenzene, xlyenes  |

One blind duplicate sample shall be collected during each sampling event for quality assurance/quality control.

Velocity, depth and cross sectional area measurements shall be taken at each surface water station during each sampling event. In addition, flow measurements in Marysville Creek and Beechwood Ditch should be taken during each sampling event.

Surface water samples are to be collected from the downstream surface water station first then subsequent stations while traversing upstream.

Weather conditions during and 48 hours prior to the sampling event are to be observed and recorded.

Detection limits shall be low enough in order to provide comparisons with the Ministry's Provincial Water Quality Objectives.

Conductivity, pH, temperature and Dissolved Oxygen readings are to be taken at each surface water station during each sampling event.

### **SCHEDULE "D" : LANDFILL GAS MONITORING PROGRAM**

1. The Owner shall monitor probes GM1 to GM6 inclusive for methane concentrations on a monthly basis from November to April inclusive and two more times from the period of May to October inclusive.
2. If methane concentrations exceed 20% of the Lower Explosive Limit (LEL) at any time, the Owner shall resample the monitor within 24 hours.
3. If the resampling confirm that methane concentrations exceed 20% of LEL, the Owner shall conduct an investigation to determine the source of the methane concentrations.
4. If the source is landfill related, the Owner shall submit to the Director and the District Manager an action plan to reduce methane concentrations within 30 days of the resampling date.

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

1. *The reason for Condition 6 being revised is to ensure that landfilling operations are conducted in an environmentally acceptable manner. Daily and intermediate cover is used to control potential nuisance effects, to facilitate vehicle access on the site, and to ensure an acceptable site appearance is maintained. The proper closure of a landfill site requires the application of a final cover which is aesthetically pleasing, controls infiltration, and is suitable for the end use planned for the site.*
2. *The reason for Condition 8 being revised is to demonstrate that the landfill site is performing as designed and the impacts on the natural environment are acceptable. Regular monitoring allows for the analysis of trends over time and ensures that there is an early warning of potential problems so that any necessary remedial/contingency action can be taken.*
3. *The reasons for Condition 9 being revised are to ensure that regular review in accordance with the Ministry's existing standards of site development, operations and monitoring data is documented and any possible improvements to site design, operations or monitoring programs are identified. An annual report is an important tool used in reviewing site activities and for determining the effectiveness of site design.*
4. *The reasons for Conditions 14 to 20 inclusive being revised are to ensure that sufficient funds are available to the Ministry to close the landfill, and to carry out all expected post-closure care activities and any contingencies. Failure to include requirements for financial assurance would not be in the public interest and may result in a hazard or nuisance to the natural environment or any person.*
5. *The reason for condition 30 being revoked is to reflect that no leachate spray irrigation can occur on the closed landfill site in order to ensure protection of the environment.*
6. *Condition 35 has been included to ensure that the site is closed within the proposed timelines.*

7. *The reason for Conditions 36 to 40 inclusive, 43 to 47 inclusive, 51, 59 and 140 is to clarify the legal rights and responsibilities of the Owner under this Certificate of Approval.*
8. *Conditions 41 and 42 are included to ensure that the appropriate Ministry staff have ready access to information and the operations of the Site, which are approved under this Certificate.*
9. *The reasons for Conditions 48 & 49 are to ensure that the Site is operated under the corporate name which appears on the application form submitted for this approval and to ensure that the Director is informed of any changes.*
10. *The reason for Condition 50 is to ensure that appropriate Ministry staff have ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this Certificate of Approval. This condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the EPA and OWRA.*
11. *Conditions 52 and 53 are necessary in order to ensure that waste is inspected and deposited in order to ensure protection of the environment and in accordance with standard waste disposal practices.*
12. *The reasons for Conditions 54, 56, 62 and 137 are to ensure that the Site is operated, inspected and maintained in an environmentally acceptable manner and does not result in a hazard or nuisance to the natural environment or any person.*
13. *The reasons for Condition 55 are the protection of public health and safety and minimization of the potential for damage to environmental control, monitoring and other works at the landfill Site. Scavenging is the uncontrolled removal of material from waste at a landfill site.*
14. *The reason for Condition 57 is to ensure that noise from or related to the operation of the landfill is kept to within Ministry limits and does not result in a hazard or nuisance to any person.*
15. *The reason Condition 58 has been included is in order to prevent ponding in on site ditches and any adverse impact on the environment and human health.*
16. *Conditions 60 and 61 are needed in order to make certain that any discharge of surface water may not have an adverse impact on the environment.*
17. *The reason for Condition 63 is to specify restrictions on the extent of landfilling at this Site based on the Owner's application and supporting documentation. These limits define the approved volumetric capacity of the site. Approval to landfill beyond these limits would require an application with supporting documentation submitted to the Director.*
18. *The reason for Conditions 64 and 65 is to specify the approved areas from which waste may be accepted at the Site and the annual amounts of waste that may be accepted for disposal at the Site, based on the Owner's application and supporting documentation.*

19. *The reason for Conditions 66 and 67 is to ensure that a landfill operators manual is available with specific duties and responsibilities of employees provided in order to prevent an adverse impact on the environment.*
20. *The reasons for Conditions 68 to 71 inclusive are to specify the normal hours of operation for the landfill Site and a mechanism for amendment of the hours of operation.*
21. *The reasons for Condition 72 are to specify site access to/from the Site and to ensure the controlled access and integrity of the Site by preventing unauthorized access when the Site is closed and no site attendant is on duty.*
22. *Condition 73 is necessary in order to ensure that all waste loads are inspected and waste that is disposed of at the site is in accordance with the terms and conditions in this Certificate of Approval.*
23. *The reason condition 74 has been included is to ensure that access roads are clear and do not pose a safety hazard to the general public.*
24. *The reasons for Condition 75 are to minimize the potential for clogging of leachate collection pipes and to ensure effective operation of the leachate collection system components for as long as they are required. Failure to clean out these components on a regular basis may result in a decrease in their service lives. Regular cleaning of the leachate collection pipes is especially important during stages of landfilling when the level of both organic and inorganic constituents in the leachate is high and, consequently, the potential for clogging due to encrustation is greatest. As the landfill reaches the more stable methane producing stage, pipe cleaning may be required less frequently.*
25. *The reason for Condition 76 is to ensure that the Site is supervised and operated by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person.*
26. *Conditions 77 and 82 are needed to ensure regular inspections of the site are conducted in order to protect the natural environment.*
27. *The reasons for Conditions 78 to 80 inclusive are to provide for the proper assessment of effectiveness and efficiency of site design and operation, their effect or relationship to any nuisance or environmental impacts, and the occurrence of any public complaints or concerns. Record keeping is necessary to determine compliance with this Certificate of Approval, the EPA and its regulations.*
28. *The reason for Conditions 81, 84, 88 and 114 is to ensure that the Owner follows a plan with an organized set of procedures for identifying and responding to unexpected but possible problems at the Site. A remedial action / contingency plan is necessary to ensure protection of the natural environment.*
29. *Condition 83 has been added in order to guarantee that leachate seeps are identified and repaired*

*in a timely fashion in order to prevent an adverse effect on the environment.*

30. *Condition 85 ensures that additional information is provided to the Ministry on the leachate removal rates so that the Ministry is aware of what volumes and where leachate from the site is being disposed of.*
31. *Condition 86 and 87 are fundamental to ensure that leachate sump pits are emptied on a regular basis and that a warning system is available to the Owner so that an adverse impact on the environment can be avoided.*
32. *The reason for Conditions 89 to 106 inclusive is to establish a forum for the exchange of information and public dialogue on activities carried out at the landfill Site. Open communication with the public and local authorities is important in helping to maintain high standards for site operation and environmental protection.*
33. *The reason for Conditions 107 and 108 is to establish a procedure for dealing with complaints regarding site operation in order to maintain high standards for site operation and environmental protection.*
34. *The reasons for Conditions 109 to 113 inclusive are to ensure protection of the natural environment and the integrity of the groundwater monitoring network.*
35. *Conditions 115 to 119 inclusive ensure that records are kept by the Owner and that the Ministry has those records available upon a request to the Owner.*
36. *The reasons for Condition 120 are to ensure that the Ministry is informed of any spills or fires at the Site and to provide public health and safety and environmental protection.*
37. *Conditions 121 to 124 inclusive are contained in the Certificate to guarantee that appropriate measures are taken by the Owner to prevent future occurrences of spills or fires at the site and to protect public health and safety and the environment.*
38. *The reasons for Conditions 125 to 136 inclusive 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.*
39. *Conditions 138 and 139 have been included in order to prevent subsurface infiltration of contaminants during composting operations.*

**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, the Environmental Review Tribunal 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 Tribunal. 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 Review Tribunal  
655 Bay Street, 15th Floor  
Toronto, Ontario  
M5G 1E5

AND

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

AND

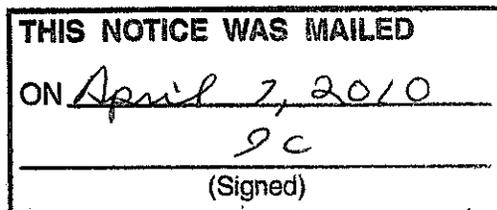
The Director  
Section 39, *Environmental Protection Act*  
Ministry of the Environment  
2 St. Clair Avenue West, Floor 12A  
Toronto, Ontario  
M4V 1L5

\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)

*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](http://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 31st day of March, 2010



Ian Parrott, P.Eng.  
Director  
Section 39, *Environmental Protection Act*

GW/

c: District Manager, MOE Kingston - District  
Craig Dobiech, MOE, Kingston District  
Brian Kaye, Supervisor, MOE, Kingston District  
Victor Castro, MOE, Technical Support, Eastern Region  
Kyle Stephenson, MOE, Technical Support, Eastern Region  
Randy Harris, WMCC, Richmond Landfill  
Tim Murphy, WMCC  
Jeff Armstrong, Henderson Paddon and Associates ✓  
Chief Don Maracle, Mohawks of the Bay of Quinte  
Rod Jeffries, CAO, Mohawks of the Bay of Quinte  
Mayor Gordon Schermerhorn, Town of Greater Napanee  
Rebecca Murphy, Clerk/Treasurer, Town of Greater Napanee  
Terry Murphy, General Manager, Quinte Conservation Authority  
Ian Munro  
Reeve Margaret Walsh, The Corporation of the Township of Tyendinaga  
Steve Mercer, Clerk/Treasurer, The Corporation of the Township of Tyendinaga