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Environmental Assessment and
Approvals Branch
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Ministère de l'Environnement
Direction des évaluations et des
autorisations environnementales
Étage 12A
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Toronto ON M4V 1L5
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March 25, 2009

Alison Braithwaite, Director, Environmental Performance
Niagara Waste Systems Limited
Post Office Box, No. 100
Thorold, Ontario
L2V 3Y8

Dear Ms. Braithwaite:

**Re: Application for Approval of Waste Disposal Sites
Detailed Design for Stage 1 Liner and Leachate Collection System
Niagara Falls City, Regional Municipality of Niagara
MOE Reference Number 2419-7Q4J9K**

I have reviewed your submission of detailed design for Stage 1 Liner and Leachate Collection System of the South Landfill, to satisfy Condition 30 of the Provisional Certificate of Approval No. 0084-78RKAM. Based on my review of the design drawings and the specifications prepared by AECOM February 2009, I provide the following comments for your consideration:

Design Drawings

1. Drawings No. LF-002 to LF-006, for the temporary berm on side slopes, it appears that it follows the 3(H):1(V) slope from the landfill base to the existing ground surface. Since the temporary berm will be used for vehicle access, and there is about 25 metres difference in elevation between the landfill base and the ground surface, an access ramp should be constructed with an acceptable slope. Accordingly, the plan view of this portion needs to be revised;
2. According to the Piping Layout for Primary Leachate Collection System (Drawing No. LF-006), the two leachate pipes at the northeast corner are end-plugged. Is there an issue of potential leachate mounding in this area?
3. Drawings No. LF-007, Typical Cross Section B needs to be revised as per Comment No.1. In addition, the HDPE pipes in "Detail 10" should be non-perforated cleanout pipe, and the treatment in primary leachate collection layer (extra thickness) is not necessary;
4. "Detail 20" in Drawings No. LF-008, the geomembrane anchor trench, as the top of the geomembrane is below the clear stone layer, there may be a potential for leachate overtopping.

Thus it is preferred that the geomembrane extends to the same elevation of the top of clear stone layer.

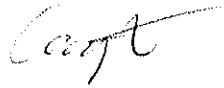
5. In "Cross Section G" in Drawing No. LF-012, it appears that one 760 mm diam. pipe in the primary pump chamber is missing (at the same location of the left 219 mm diam pipe).

Specifications

6. Section 4.2.1 "Clay Soils", it refers to the Specifications for the clay liner used in the East Landfill. It would be beneficial to include the gradation requirement here.

If you could provide your response to the above by April 9, 2009, it would be appreciated. If you have any questions, please contact me at the above phone number or email.

Yours truly,



Rick Li
Senior Waste Engineer

c: District Manager, MOE Niagara
Edward San, AECOM

**AMENDMENT TO PROVISIONAL CERTIFICATE OF
APPROVAL****WASTE DISPOSAL SITE
NUMBER 0084-78RKAM**

Notice No. 2

Issue Date: April 17, 2009

Niagara Waste Systems Limited
Post Office Box, No. 100
Thorold, Ontario
L2V 3Y8

Site Location: 2800 Thorold Townline Road
2800 Thorold Townline Rd
Niagara Falls City, Regional Municipality of Niagara

You are hereby notified that I have amended Provisional Certificate of Approval No. 0084-78RKAM issued on January 30, 2008 for the use and operation of a 53.9 hectare waste disposal site within a total site area of 85.68 hectares, being known as the South Landfill Site, as follows:

DETAILED DESIGN - STAGE 1 LINER AND LEACHATE COLLECTION SYSTEM

Pursuant to Conditions 30 and 31 of this Certificate, approval is hereby granted for the detailed design for Stage 1 liner and leachate collection system, all in accordance with the documentation listed as Items 26 through 30 in Schedule "A".

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

26. Detailed Design Drawings for Stage 1 Base Liner and Leachate Collection System, South Landfill Site:
- (1) Drawing No. LF-001 "Existing Conditions and Facility Layout" dated February 10, 2009, prepared by AECOM.
 - (2) Drawing No. LF-002 "Grading Plan - Attenuation Layer" dated February 10, 2009, prepared by AECOM.
 - (3) Drawing No. LF-003 "Grading Plan - Secondary Leachate Collection System Layer" dated March 26, 2009, prepared by AECOM.
 - (4) Drawing No. LF-004 "Piping Layout - Secondary Leachate Collection System Layout" dated February 10, 2009, prepared by AECOM.
 - (5) Drawing No. LF-005 "Grading Plan - Top of Primary Clay Liner" dated February 10, 2009, prepared by AECOM.
 - (6) Drawing No. LF-006 "Piping Layout - Primary Leachate Collection System Layout" dated

March 26, 2009, prepared by AECOM.

(7) Drawing No. LF-007 "Typical Details - Liner System for Landfill Base and Side Slopes / Temporary Berm (Cross Sections 'A' and 'B')" dated March 26, 2009, prepared by AECOM.

(8) Drawing No. LF-008 "Typical Sections - Temporary Berm Connection Detail / Interim Temporary Berm and Anchor Trench" dated March 26, 2009, prepared by AECOM.

(9) Drawing No. LF-009 "Typical Sections - Cross Sections 'D' and 'E' " dated April 3, 2009, prepared by AECOM.

(10) Drawing No. LF-010 "Typical Details - Details of Base Liner at Toe of Slope Along West and South Side Slopes" dated February 10, 2009, prepared by AECOM.

(11) Drawing No. LF-011 "Typical Details - Details of Base Liner at Toe of Slope Along East Side Slope / Cross Section 'F' / Detail '24' " dated February 10, 2009, prepared by AECOM.

(12) Drawing No. LF-012 "Typical Details - Sections and Details for Primary and Secondary Leachate Pump Chambers" dated March 26, 2009, prepared by AECOM.

(13) Drawing No. LF-013 "Typical Details - Primary and Secondary Leachate Pump Chambers / Bedrock Excavation at Top and Toe of Side Slope" dated February 10, 2009, prepared by AECOM.

(14) Drawing No. LF-014 "Primary Leachate Collection System Cleanout Structures on Base Liner" dated February 10, 2009, prepared by AECOM.

(15) Drawing No. LF-015 "Primary Leachate Collection System Cleanout Structures on Base Liner" dated February 10, 2009, prepared by AECOM.

27. Report entitled "Detailed Design for Stage 1 Liner and Leachate Collection System, South Landfill" dated February 2009, prepared by AECOM.

28. Letter dated March 25, 2009 addressed to Alison Braithwaite, Niagara Waste Systems Limited from Rick Li, Ministry of the Environment providing review comments on detailed design drawings and specifications.

29. Letter dated March 31, 2009 addressed to Rick Li, Ministry of the Environment from Edward San, AECOM providing response to the Ministry's March 25, 2009 letter.

30. Letter dated April 3, 2009 addressed to Rick Li, Ministry of the Environment from Edward San, AECOM providing information on the buffer zone and associated facilities.

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

The reason for this amendment is to approve the final detailed design for Stage 1 Liner and Leachate Collection System as required in Conditions 30 and 31 of the Certificate of Approval. This is to ensure that the Site is designed, constructed and operated in an environmentally acceptable manner.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. 0084-78RKAM dated January 30, 2008

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
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

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 17th day of April, 2009



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

RL/
c: District Manager, MOE Niagara
Edward San, AECOM