

COUNCIL MEETING - DECEMBER 18, 2001

PROPOSED APPLICATIONS OF THE CITY OF TORONTO TO THE MINISTRY OF THE ENVIRONMENT TO AMEND KEELE VALLEY LANDFILL SITE CERTIFICATE OF APPROVAL FILE: A 230610

Recommendation

Councillor Mario Ferri recommending that the City of Vaughan Council advise the Ontario Ministry of the Environment that the City of Vaughan supports the submission of applications by the City of Toronto to the Ministry of the Environment to amend the Keele Valley Landfill Site Certificate of Approval #A 23061 to:

1. I) "Change the definition of the lands that make up the post closure site;
- II) Use additional site boundary criteria triggers to monitor the site and its control system; and
- III) Change the rapid stabilization program (leachate recirculation) to eliminate high rate pumping and injection of moisture into the site;"

it being pointed out that once the actual submissions are made to the Ministry, that the Ministry will formally circulate those Applications to the City of Vaughan for formal comments;

2. That a formal, specific, and detailed request be made to the Minister of the Environment early in the New Year, to have the Provincial Government remove any and all legislative provisions (i.e., additional lift provisions) that may be currently in place that could hinder or delay the complete closing of the Keele Valley Landfill Site on or before December 31, 2002.
3. That the Region of York be requested to also support these resolutions and that copies be forwarded to:
 - The Honourable Michael Harris, Premier
 - The Honourable Elizabeth Witmer, Minister of Environment
 - Tina Molinari, M.P.P. Thornhill
 - Greg Sorbara, M.P.P., Vaughan-King-Aurora
 - City of Toronto
 - York Major Holdings Inc.

Purpose

The purpose of this report is to obtain City of Vaughan support to the submission of proposed applications by the City of Toronto to amend the Certificate of Approval governing the operation, maintenance and closing of the Keele Valley Landfill Site.

Background - Analysis and Options

Attached to this report are documents filed by the City of Toronto and its public meeting of Tuesday, November 27, 2001, to support its proposed application(s) to the Ministry of the Environment to amend the Certificate of Approval of/for the Keele Valley Landfill Site.

The documents provided are a “**Summary of the City of Toronto’s Proposed Amendments to the Provisional Certificate of Approval A 230610 for the Keele Valley Landfill Site**” and outline in detail the proposed amendments that the City of Toronto is putting forward to the Ministry of the Environment.

The Ratepayer Associations affected by the influence of Keele Valley have indicated their support of Toronto’s position as has Vaughan C.A.R.E.S. as did the public (by show of hands ±180) at Toronto’s November 27, 2001 Public Meeting.

The Keele Valley Landfill Site Liaison Committee has also received a presentation of the details of the Amendments from the City of Toronto.

Conclusion

City Council’s support to the above-noted recommendations is respectfully requested.

Attachments

1. Documents Filed by the City of Toronto

Respectfully submitted,


Mario Ferri
Councillor

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Information Brief

Provided for Public Meeting on November 27, 2001


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Summary of the City of Toronto's Proposed Amendments to the Provisional Certificate of Approval A230610 for Keele Valley Landfill Site

The Keele Valley Landfill Site is scheduled to close at the end of 2002 and the City of Toronto must now develop its closure and end use plans for the site. This process involves reviewing and preparing all of the engineered systems for the closure. The City of Toronto is proposing to amend two areas of the C of A before starting the post-closure phase. They are:

1. The final definition of the lands that will form the post-closure Site in the C of A; and
2. The rapid stabilization program (leachate recirculation) defined in the existing C of A.

The main objective for the first proposed amendment is to define the lands needed to manage the Site through its entire post-closure phase for the potential contaminating life span of the Site. Toronto must show it has control of the lands and resources that may be needed to implement and maintain all primary control systems and to monitor and implement any approved contingency programs as required. This amendment includes updating the site boundary criteria which is used to determine that the Site is performing according to the applicable environmental standards.

The main reason for the second proposed amendment is to modify the rapid stabilization program (leachate recirculation) to eliminate the high rate pumping and injection of moisture into the Site. *Leachate is a liquid that forms when rainwater or melting snow seeps through the landfill and mixes with the waste.* Toronto has gained new knowledge and information on this topic since operations began in 1983 and has taken major steps to enhance the Site's rapid stabilization. Toronto's experience shows that a full-scale rapid landfill stabilization program using injection wells may not achieve further environmental benefits. In fact, it may have some negative implications. Further pumping of moisture could also delay development and implementation of the End Use Plans for the Site.

Rather than using just one parameter like chloride to evaluate the situation, Toronto proposes using several parameters in order to get a more comprehensive measurement result. Using more than one criteria is actually part of the framework found in the "Reasonable Use Criteria" developed by the MOE, and in working with these new criteria guidelines over the last few years it's realized they better reflect the new technology now available. Only using chloride alone is not ideal because chloride is found in road salt making it difficult to interpret whether groundwater quality changes and increased levels of chloride are a result of leachate from the landfill or from road salt impact. Making use of the improved monitoring and analytical tools now available along with a more comprehensive range of criteria will result in improved evaluation.

Gas Generation, Collection and Control

The proposed Site Boundary would fulfill the requirements for the control of landfill gas. Toronto manages landfill gas controls within the fill area and the primary buffer. All active control systems and any contingency measures would be installed and maintained within these areas owned by Toronto for as long as they are needed (expect to require active gas controls for another few decades). The collected landfill gas will continue to be utilized on-Site to produce electricity.

Stormwater Management

Redefining the Site Boundary works well for management of stormwater. All existing stormwater features located within the fill area will be rehabilitated. The features in the proposed golf course development, which is located in the buffer lands, is expected to result in enhanced groundwater recharge and the design will help reduce quantities of stormwater runoff in future rainfall and major storm events.

Compatibility with Present End Use Planning Process

Using portions of the secondary buffer lands as a golf course is ideal. It allows the lands to be put into productive end use as quickly as practical without in any way compromising Toronto's ability to operate, monitor and maintain the control systems on the Site as required.

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the liner systems to protect groundwater quality in the aquifer system below the Site. Since that time, the proven performance of the liner system has met and exceeded original design criteria and expectations. In fact, the liner performance has improved over time rather than degraded.

The potential negative implications of implementing an active pumping system for the purposes of rapid stabilization for all areas of the Site significantly outweigh further potential benefits. In Toronto's opinion, the preferred approach is to close the Site and continue to maintain required systems as long as the monitoring program confirms appropriate engineered systems are needed.

The attached table presents a summary of the implications of high rate pumped injection of moisture into the Site for rapid stabilization.

Description	Specific Effects	Potential Benefits	Potential Risks
Permeability of the Waste	The permeability of the waste decreases with time and with depth in the Site. Moisture addition accelerates this process.	None	<ul style="list-style-type: none"> Decreases the efficiency and effectiveness of the leachate collection systems more rapidly Impacts service life considerations for engineered facilities and systems
Groundwater and Surfacewater	Mound heights will increase in the Site	None	<ul style="list-style-type: none"> Moulding could increase to levels that could potentially result in stress on the liner and final cover systems and increase the potential for discharge of leachate to surfacewater or impacts to groundwater Perched mounds would increase the potential for leachate seepage on the landfill slopes
End Use Development	Pumping to add moisture through injection systems would entail a high level of activity on the Site	None	<ul style="list-style-type: none"> The intensive operating and maintenance activities may retard end use development The increased potential for leachate seepage could produce odour, surface water quality impacts, and aesthetic concerns that could negatively impact end use of the Site and adjacent buffer lands.

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