

6.5 Richmond Landfill Site: Time for Closure

On October 31, 2008, three groups applied under the *EBR*, requesting that the Ministry of the Environment (MOE) consider substantive amendments to the approvals for the Richmond Landfill site (located within the Town of Greater Napanee) to protect the local environment, and public health and safety. They argued that the amendments should:

- prohibit Waste Management of Canada Corporation (WMCC), the owner and operator of the site, from accepting any more waste after December 31, 2008;
- impose site closure and post-closure requirements; and
- require WMCC to implement a monitoring and reporting program to determine the “nature, extent and environmental fate of the leachate plume generated at the site.”

Background

Located on thin soils and highly fractured bedrock, the Richmond Landfill site was established in 1954, before approval for such operations was required under the *Environmental Protection Act (EPA)*. Today, the site has five cells, called phases. Phase One was constructed without a liner or a leachate management system. Leachate enters the underlying groundwater where it is diluted. Phases Two through Five were constructed with liners, but according to MOE, they do not meet current standards in O. Reg. 232/98 – Landfilling Sites, made under the *EPA*. Leachate that reaches the edges of Phases Two through Five is collected in perimeter drains.

Local residents, farmers and businesses rely on wells for their drinking water. However, only the top layer of groundwater is potable; the lower layer is naturally saline. Wells cannot be deepened to access new potable water if the top layer becomes contaminated with leachate or salinized.

In November 2006, the Minister of the Environment refused for a number of reasons to approve an environmental assessment (EA) study for a major expansion of the site that would have increased its fill rate to 750,000 tonnes annually from 125,000 tonnes:

- The proponent failed to develop a suitable plan for demonstrating ongoing regulatory compliance;
- The undertaking did not meet regulatory requirements for protecting groundwater and the proponent did not provide a satisfactory explanation for how the proposed expansion would prevent leachate from moving off-site; and
- The environmental effects of the proposed expansion could not be predicted because the impacts of the existing operation were not adequately described in the EA study.

Soon afterward, various groups began urging MOE to prohibit further waste disposal at the site and to require its prompt closure and post-closure care. Instead, MOE asked WMCC to update its groundwater and surface water monitoring plan and, in March 2007, to update its 20-year-old closure plan. MOE was still reviewing the proposed closure plan when this application was submitted to the ECO.

Summary of Issues

According to the applicants, the site poses serious risks to groundwater, particularly salinization and leachate contamination of the top layer of groundwater, and to surface water; and that:

- If the site was capped, the estimated volume of leachate generated annually would drop from 22 million litres to 16 million litres;
- Leachate from up to half of the site is leaking into the underlying groundwater;
- There is evidence that lower saline groundwater is upwelling into the upper fresh groundwater on the site; and
- There is strong evidence that contaminated groundwater and stormwater runoff from the site are flowing into a nearby creek.

Since both MOE and WMCC have stated that there is no evidence of off-site impacts to groundwater and/or surface water, the applicants urged MOE to amend the provisional C of A to require “the development and implementation of a robust on-site and off-site groundwater water monitoring/reporting regime to definitely resolve this dispute.”

The applicants also believe that there is no public need to keep the site open. The annual fill rate has fallen from almost 125,000 tonnes annually several years earlier to less than 15,000 tonnes in 2007.

The applicants concluded that the site is “fundamentally unsuitable for waste disposal purposes.” Since WMCC has had ample time to prepare a “technically sound closure plan,” MOE should amend the site’s provisional C of A to force WMCC to address the outstanding issues, such as surface water and groundwater monitoring, rather than leaving it to WMCC’s discretion and timeline. (For a more detailed review of this decision, see Section 5.2.21 of the Supplement to this Annual Report.)

Ministry Response

In December 2008, MOE denied the review for two reasons:

1. Closure and post-closure requirements will be imposed in WMCC’s closure p 1. lan including on-site and off-site surface water and groundwater monitoring and reporting requirements. MOE was already reviewing the submitted Closure Plan and C of A at the time the *EBR* application for review was received.
2. WMCC and MOE have not identified any impacts to off-site groundwater and the existing environmental monitoring program has not provided any evidence of landfill leachate impacts to surface water.

MOE explained that the site is in compliance with its provisional C of A, but that it had recommended changes to the site’s environmental monitoring program that would enable MOE to determine if there are off-site impacts to groundwater.

WMCC also commented on the application, explaining that it has 70 groundwater monitoring wells that are sampled on a semi-annual basis and that no impacts to groundwater or surface water have been identified by the existing monitoring program.

Other Information

In our 2005/2006 Annual Report (pages 33-38), the ECO explained that there are two sets of regulatory standards that may apply to landfill sites: Regulation 347 – General Waste Management, made under the *EPA*, and O. Reg. 232/98. In the report, the ECO discussed how MOE has failed to ensure that Cs of A of aging landfill sites, particularly those that were approved prior to the 1998 landfill standards coming into force, reflect the newer standards to the extent possible.

MOE reposted the proposed closure plan on May 1, 2009, in the form of proposed amendments to WMCC’s provisional C of A. The proposal replaces the existing surface water, groundwater and landfill gas monitoring program and adds about one hundred new conditions, including conditions related to leachate management and post-closure care. MOE explained that, although WMCC would not be required to close the site immediately, it would be required to comply with its closure plan when the site reached its approved capacity limit. (For additional information, refer to Environmental Registry Number 010-1381.)

ECO Comment

The ECO believes that MOE’s decision to deny this application was unjustified. MOE’s contention that the “continued operation of the Richmond Landfill in accordance with its Cs of A...does not have [the] potential for harm to the environment” contradicts the expert hydrogeology opinions provided by its own staff and the applicants. Furthermore, MOE has stated that the lack of compelling evidence of contamination is not proof that it has not or will not occur. The ECO does not believe that MOE would have proposed substantive changes to

the site's existing provisional C of A if it had been fully protective of the environment, determinative and consistent with O. Reg. 232/98. MOE's own statements and actions undermine its decision to deny this review. Not only is the geology of the area inherently unsuitable for waste disposal, neither MOE nor WMCC has identified any pressing need or public good for allowing the site to continue to receive wastes. Since the site currently receives only about 10 per cent of its historical volumes of waste, the ECO does not believe that there would be any undue social or economic hardship to the area if the site were closed.

In conclusion, the ECO believes that there are compelling environmental reasons for MOE to require the immediate, orderly closure of the site and no compelling social or economic reasons for continuing to keep it open.

Recommendation 11: The ECO recommends that MOE require the immediate closure of the Richmond Landfill Site.