

Ministry of the Environment

P.O. Box 22032
Kingston, Ontario
K7M 8S5
613/549-4000 or 1-800/267-0974
Fax: 613/548-6908

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C.P. 22032
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K7M 8S5
613/549-4000 ou 1-800/267-0974
Fax: 613/548-6908



MEMORANDUM

June 22, 2009

TO: Craig Dobiech
Senior Environmental Officer
Kingston District Office
Eastern Region

FROM: Victor Castro
Surface Water Scientist
Technical Support Section
Eastern Region

RE: Richmond Waste Disposal Site
Certificate of Approval # A371203
Submissions made by Canadian Environmental Law Association and
XCG Consultants Limited on behalf of the Mohawks of the Bay of Quinte

I have reviewed the following documents as they relate to surface water impact issues at the Richmond Waste Disposal Site.

1. Letter dated September 13, 2007 from XCG Consultants Ltd. to Mohawks of the Bay of Quinte, Re: Peer Review, Waste Management of Canada Closure Plan, Richmond Landfill Site, Ontario
2. Letter dated May 29, 2009 from XCG Consultants Ltd. to Mohawks of the Bay of Quinte, Re: Review of Draft Amendment to Provisional Certificate of Approval, Waste Disposal Site, Richmond Landfill Site, Ontario
3. Letter dated May 29, 2009 from XCG Consultants Ltd. to Mohawks of the Bay of Quinte, Re: Surface and Groundwater Sampling, Richmond Landfill Vicinity
4. Letter dated May 30, 2009 from Canadian Environmental Law Association to MOE Environmental Assessment and Approvals Branch, Re: EBR Registry No. 010-1381 – Richmond Landfill Site Proposed Amendments to Certificate of Approval No. A371203 (including attachments from Wilf Ruland, P. Geo.)

My comments on each of these documents are provided in the same order as they are listed above.

1. Letter dated September 13, 2007 from XCG Consultants Ltd.

On page 4, Part B. Regulatory Requirements and Best Practices, Item 8, the consultant concludes that "... it would be prudent to proceed with immediate closure of the landfill, in order to reduce the risk of increasing the severity of ongoing environmental impacts and/or causing new negative environmental impacts in the future."

In the past I have stated that with respect to the surface water features adjacent to the Richmond Landfill, there is no evidence of an adverse impairment. The Beechwood Ditch water quality problem was initially addressed by Waste Management collecting the stormwater from the southwest pond and trucking it to the Napanee Water Pollution Control Plant. More recently, the southwest pond has been replaced with a much larger stormwater management facility and the discharge is conditional upon passing an acute toxicity test and stormwater monitoring.

In my comments dated December 5, 2007 on the Final Closure Plan, I stated: "Although there has been no evidence to date of any adverse impact resulting from landfill operations on Marysville Creek, and impacts to Beechwood Ditch have been mitigated by trucking the contents of the south stormwater management pond to the Napanee WPCP for treatment, the longer the site remains operational and exposed to infiltrating precipitation the greater the potential risk of impacts to the surface water features."

Under Item 12, XCG disagrees with Waste Management's proposal to abandon the stormwater management ponds post-closure. As per my original comments on the Final Closure Plan, I also do not support the decommissioning of the stormwater ponds at the Richmond Landfill until such time as the water quality monitoring consistently shows that there are no surface water quality issues associated with the discharge from any of the ponds.

On page 7, Part C MBQ Specific Concerns, Item 2 first bullet, XCG discusses the potential for significant impacts to Marysville Creek downstream into the Tyendinaga Mohawk Territory, if proper inspection frequencies post-closure are not established and the stormwater ponds are decommissioned. In my view, impacts to Marysville Creek so far downstream are very unlikely. Nonetheless, it is prudent to establish a proper inspection program and maintain the stormwater ponds to protect Marysville Creek and the Beechwood Ditch in the immediate vicinity of the landfill. The future monitoring program should be detailed enough to pick up any changes in water quality in Marysville Creek.

On page 8, Item 4, the consultant recommends "... the establishment of surface water monitoring points at the pond outlets." I have reviewed Certificate of Approval (CofA) No. 5268-7E8LJW (Industrial Sewage Works) for the existing stormwater management ponds and Condition 8 & 10 already require monitoring and reporting for all planned discharges. Care should be taken not to include additional conditions that would contradict or weaken the existing CofAs.

2. Letter dated May 29, 2009 from XCG Consultants Ltd.

On page 3, at the end of Item 3, the consultant recommends that the existing surface water monitoring locations S4, S8, S9 be replaced in light of the new south stormwater management facility as approved by CofA No. 5268-7E8LJW. For your information, on May 29, 2009 the MOE received an email from Waste Management with a proposal for new surface water monitoring stations at the south end of the site. Waste Management required MOE endorsement of the proposed new stations in advance of the spring 2009 monitoring session. Two new replacement stations were proposed – S4R to replace S4, and S8R to replace S8. S9 was not replaced as it was used to monitor runoff water flowing into the historic southwest pond. These changes to the surface water monitoring program were accepted by the Regional office.

On page 4, under Item 6, XCG provides comments on Conditions 60 and 61 of the Draft Amendment. These conditions relate to the monitoring of the stormwater management ponds at the Richmond Landfill. CofA No. 5268-7E8LJW was issued on August 19, 2008 and already regulates the monitoring and reporting of the three stormwater ponds at the Richmond Landfill. Unless there is something significantly missing from the existing CofA for the stormwater ponds, I do not think it would serve any purpose to complicate things and add additional conditions in the Draft Amendment that may conflict with the existing Industrial Sewage CofA.

With respect to the inclusion of petroleum hydrocarbons into the sampling program for the southwest stormwater pond, I do not object to this being added. The current monitoring program, as per CofA No. 5268-7E8LJW, requires sampling for BTEX, however, a more comprehensive scan for petroleum hydrocarbon fractions (F1 to F4) would be able to detect the heavier hydrocarbon constituents, if they were present. The long-term monitoring program for the site is being updated. I will include the petroleum hydrocarbon fraction analysis (F1 to F4) at that time.

3. Letter dated May 29, 2009 from XCG Consultants Ltd.

The results of the surface water monitoring program undertaken by XCG showed that there was little or no variation in contaminant concentrations between the upstream and downstream samples in the Beechwood Ditch.

4. Letter dated May 30, 2009 from Canadian Environmental Law Association, including attachments from Wilf Ruland (Letter dated May 30, 2009 and September 12, 2007).

There is no technical information or specifics provided in the CELA letter regarding surface water issues at the Richmond Landfill for me to comment on.

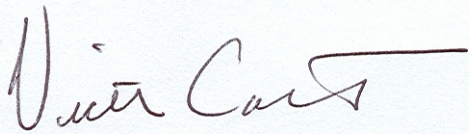
In the May 30, 2009 letter from Wilf Ruland, he comments (page 9) that there is a discrepancy between Conditions 60 and 61 of the draft CofA Amendment and Conditions 8 and 9 of CofA No. 5268-7E8LJW. I have already commented on this issue on Point #2 of this memorandum. I

am satisfied that the existing Industrial Sewage CofA No. 5268-7E8LJW regulates the three stormwater management ponds appropriately for the time being. In the future, if the toxicity testing is consistently passed and the monitoring results show no significant impacts, I can see Waste Management requesting an amendment to operate these ponds in an open position. This should not be considered until the site is stabilized and we have an adequate data set.

In Mr. Ruland's Recommendation #9 (page 9 of his letter) he recommends that the ponds be required to meet Provincial Water Quality Objectives (PWQO's) prior to allowing the pond contents to be discharged. I do not agree with this recommendation. PWQO's are not discharge criteria, but are simply indicator level criteria. The surface water monitoring program should compare the results against the PWQO's, however, they should not be used as compliance criteria, in themselves.

The September 12, 2007 letter raises similar issues that have already been discussed above.

If you have any questions regarding the above, please contact me at (613) 540-6862.

A handwritten signature in black ink that reads "Victor Castro". The signature is written in a cursive style with a long horizontal stroke at the end.

Victor Castro
VC/gl

c: P. Taylor
K. Stephenson
G. Washuta (EAAB)
File SW-05-04 (Town of Greater Napanee, Richmond WDS)