REGIONAL MUNICIPALITY OF WATERLOO

WATERLOO REGION LANDFILL LIAISON COMMITTEE (WRLLC)

MEETING SUMMARY

DATE: Tuesday February 2, 2021
TIME: 7:00 P.M.
LOCATION: Virtual meeting

Attendees
Neil & Trudy Haffner
David Hollinger
Deb Hayes
Lillian Bass
Harald Drewitz
Peggy Boettger
Steve Voisin
Bridget Mills – BCX
Jaime Anderson - BCX

Distribution
All Attendees – via email
Elaine Mortensen
Kim Hulm
John Strong
Trevor Mahoney
Eric Boyd
Ernst Alge
Rob Parent
Judy Rys
Rick Wallace
Robert Milligan
Jessica Alessio
Garry Bezruki
Mark Burns
Judith Lodi
H. Kayser
Fred Veller
Jivco Velimironii
Christine Sabourin
Nesib & Ljiliana Omerasevic
Aliya Malik
Mark Christensen
Jeremy Hetherington
Chris Spraakman
Dante Trigiani
Ajoy Opal

Wilf Ruland – Hydrogeology Consultant
Ben Kempel – CRA
Rachel Vaillancourt -- RMOW
Tracy Annett – RMOW
Mike Greenhill – RMOW
Linda Churchill – RMOW

Pam Kaur
Greg Voisin
Dale Ross
Anne Childs & Gary Hale
Henrik Noesgaard
Zahra Chuughtai
Tony Lea
Celia Valente & John Tracey
Cheryl Madill
Gerry Wettlaufer
Holly Corrigan
Gert Hardman & Angus McCleod
James Jackson – Waterloo Chronicle
Jennifer Yessis
Dana Mohammed - MOE, Guelph
Elizabeth Clarke – RMOW Councillor
Westvale Comm. Assoc. – c/o Eric Boyd
Sean Strickland – RMOW Councillor
Thomas Schmidt - RMOW
Dave Hardy – Hardy Stevenson & Associates
Bil Ioannidis – City of Kitchener Councillor
Albert Hovingh – RMOW
Kaoru Yajima – RMOW, Water Services
Tim Ware – RMOW
Brenna MacKinnon - RMOW
Linda welcomed everyone to the third landfill liaison meeting being held virtually due to the pandemic. Due to the stay at home orders, all attendees were connecting from their homes. Residents were able to participate in the virtual meeting by using the chat function or by unmuting and speaking.

Introductions were made to start the meeting. Wilf Ruland, the consultant that provides comments to the committee on environmental issues related to the site groundwater and surface water, started the meeting with a summary of his comments on the 2019 Annual Progress Report and associated reports/correspondence. Wilf is a hydrogeologist who reviews the site groundwater reports and provides feedback to the Committee and the Region.

**Summary of Wilf Ruland’s presentation:**

The City of Waterloo first permitted the Waterloo Landfill Site (Site) and the Region took over site operations in 1973. The Site sits on top of the Waterloo Moraine which is a very valuable groundwater resource. When waste disposal began, wastes were accepted at the site that would not be accepted at a municipal solid waste landfill today. In addition, the Original Landfill Area (OLA) was not designed to the engineering standards that are currently used and there are gaps in the underlying fine grained unit (clay layer). The impacts at the site are coming from the OLA as the leachate makes its way downward to the groundwater. There are impacts to the northwest, the south and the east that the Region is addressing. Harald asked if the waste mound is going down in height given the leachate is draining. Wilf said not significantly as the waste still has structure even though liquid drains out of the pores.

Wilf believes there could have been a special area for liquids in the northwest corner as there are high concentrations of trichloroethylene (TCE) present. The Region has operated a shallow interceptor sump, referred to as EW347-06, from 2007 to 2019, to remove the groundwater in this area. To continue to address the impacts seen in the NW corner, after evaluating additional remedial options, the Region developed a bench scale study to look at the effectiveness of the preferred option - In-situ enhanced aerobic bioremediation (ISEB). ISEB has since been implemented with the first round of injections completed in the fall of 2019. Harald commented that there was a lower volume of liquid pumped in 2019 but Wilf clarified that the operation of EW347 is influenced by precipitation as well the Region turned the pump off at the beginning of the ISEB injection program (Fall 2019).

Tracy commented that there is a review of the ISEB program underway and the corresponding results to date. Higher volatile organic compounds are being seen and the Region is developing next steps.

Impacts from the east side of the site are moving in a southerly direction and the Region is pumping groundwater along the southeast and south sides of the site. The critical contaminant of concern is vinyl chloride and it is very volatile when exposed to air. Groundwater pumping wells cut-off the groundwater flow so there is containment of the impacts at the south boundary. Wilf is satisfied in the extraction system performance along the south boundary and he has no outstanding concerns.

New monitoring wells installed in 2019 on the east side confirmed detections of vinyl chloride in the hydrocorridor above compliance levels. The East Boundary Off-site Vinyl Chloride Action
Plan was developed with short and long term actions outlined to further investigate the detections. Short term actions include precautionary private well sampling, surveying the new monitoring wells to better understand groundwater flow, completing an expanded well survey, evaluation of the Strange Street well field pumping rates, and increased on-site extraction well pumping. Lillian asked how significant would an external water taking need to be to pull the east plume? Wilf said it would need to be a substantial water taking. David Hollinger asked if it was investigated if water taking at the Westmount golf course could have an effect. Long term actions will include an evaluation of how the vinyl chloride reached the east side. The Region has completed the short term actions and some of the long term. Tracy commented there is a report being finalized by the end of March which will recommend an additional extraction well and that additional external water taking sources such as the Westmount golf course and Westhill golf course were investigated.

Wilf said that the private well water quality remains excellent except for high iron which is naturally occurring. The surface water quality is also very good. Harald asked if the iron levels in the ponds are a concern, as they appear elevated. Wilf clarified that if iron was the only elevated parameter, then yes, it would be a concern however there can be higher turbidity and that can increase iron results. Wilf commented that there is not much you can do but vegetate ponds and the Region does a good job of this.

The Erb Street Well Field shows no signs of potential issues from the landfill as it is cross gradient. David asked for an update on the status of federal and provincial 1,4-dioxane limits. Wilf clarified that there have been no new limits issued for drinking water guidelines but that we are screening against the discharge to the ponds given there is a Provincial Water Quality Objective.

Wilf has the four following recommendations outlined in his letter:

1. (ongoing recommendation)
   (a) The MECP should use its powers to deal promptly and firmly with the threat which the Sanico Landfill poses to the Erb Street Well Field.
   (b) A thorough investigation is needed in the main part of the Sanico Landfill (to which access has been denied) and downgradient areas between the landfill and the Erb Street Well Field, and this is the MECP’s responsibility.
   (c) The Waterloo Landfill Liaison Committee should issue an invitation to the MECP’s hydrogeologist to provide the Committee with an update presentation on the Sanico Landfill and its groundwater impacts in 2021.
   (d) The possibility of groundwater contamination from the Sanico Landfill reaching the Waterloo Landfill property should be discussed in the next Annual Report.

2. (ongoing recommendation)
   (a) The Region should at all times be collecting as much leachate from the landfill as possible and immediately transferring the collected leachate to local wastewater treatment plants.
   (b) If there are any impediments to the Region removing as much leachate as possible from the site, then such impediments should be eliminated.
   (c) Future annual reports should include a report on any downtime(s) of any component(s) of the leachate collection system lasting more than 1 day, including when the system component(s) went down and when operations resumed and the reason for the downtime(s).

3. (carried forward)
   The Region should continue to consider the possibility of a significant water taking (outside of Regional well fields) to the east of the site. If there is a significant unknown off-site water taking nearby, then this could account for the site’s vinyl chloride plume being drawn in an easterly direction.
4. (ongoing recommendation)
   (a) A copy of this review should be sent to the MECP hydrogeologist who is responsible for reviewing the landfill Annual Reports.
   (b) The 2020 Report should provide an accounting of the Region’s progress in implementing the recommendations provided by their consultants, by the MECP, and by myself with respect to the design, operations and monitoring of the landfill.

Wilf’s review and recommendation letter is attached.

1. Review of Previous Minutes & Business Arising

There were no comments on the previous minutes from November 17, 2020.

Previous minutes and agendas are found on the Region website.

2. Complaints

There have been no communications from November 2020 to January 2021. The total number of complaints in 2020 was fourteen odour complaints.

The summary of complaints is attached to the minutes.

3. Submittals from Local Residents

There were no submittals from residents.

4. MECP Submittals

The Region emailed the East Boundary Update #2 on October 7, 2020. Copies were provided to Wilf and Trudy and are available by request, please contact Linda or Tracy.

Upcoming submittal are annual reports for Landfill Operations (April 1) and Stormwater (April 30) then also an environmental assessment waste management update (May 1). There will also be groundwater submittals including an update on the East Boundary Status and Insitu Enhanced Bioremediation Post Monitoring Update.

5. Landfill Operations

i. The landfill gas control system ran at a monthly average flow of approximately 1100 cfm over the past two months. Attached is the table showing the monthly average gas flows for 2020.

ii. The leachate pumping rates are also presented on the gas flow sheet (attached) under the column monthly total flow. Pumped volumes of leachate were lower as are typical through the colder weather.

iii. The south/east groundwater extraction system continues to operate with all ten wells pumping at a combined rate of approximately 2,550 l/min and still well within permitted discharge rates in the ECA/PTTW. Most of the pumping rates have been increased in the 6 of 7 east side extraction wells since fall 2019. Monitoring has been ongoing to understand the influence that the increased pumping rates is having on the vinyl chloride on the eastern side of the Site. Extraction well EW361-09 was replaced and put back into operation on August 31st at a pumping rate of 460 L/min. Rehabilitations were completed on 6 extraction wells. The pumping rates are available by request. They will be incorporated into the annual progress report.
iv. Linda presented the 2021 construction schedule. This year will be a busy year for construction at the Waterloo landfill site. Construction of the west landfill gas header that was begun in 2020 will be completed as early as possible in the spring.

Another short project is a retrofit of piping at the Cell 4B temporary leachate pump which will involve the excavation of a small amount of waste scheduled for late in February. Linda said that there will be odour control products used and the duration will be as short as possible. Bridget commented that the wind direction could also be taken into consideration – winds from the east away from any residents would be preferred. Linda said they will attempt to incorporate this into the works/schedule.

There will also be road work at Gate 1 along the east side of the landfill and a south access road to the tipping area constructed.

Groundwater works will also be ongoing throughout 2021 such as the installation of an extraction well along the east side and associated works.

The last project will be the removal of excess soil from the south end of the site. Tracy said this will be a hauling contract and there will be a dust management plan required as part of the contract.

Harald asked when the green bin program first started and the tonnage diverted from the landfill. Region staff said they would get back to Harald on this at the next meetings.

A copy of the construction schedule is attached.

6. Well Water Sample Results

The next round of sampling will be collected next spring.

7. Landfill Studies

i. The Landfill Development Sequencing and Landfill Gas Action plan has been completed and the reports under this assignment are finalized. This work will determine the development of the remaining cells in the south expansion area as well as a detailed landfilling plan for the next five years including road works, capping, soil movement requirements and landfill gas system planning. A presentation to the Committee is scheduled for the May 2021 meeting.

8. Other Business

In 2021, the May meeting will include a presentation on the landfill development plan and landfill gas action plan update being completed by Golder and Comcor. A tentative topic for September is air quality and a groundwater update is the tentative topic for November.

If any of the residents have any ideas on upcoming meetings and topics, please let Linda know.

Next Meeting: Tuesday, May 4, 2021 at 7:00 pm

This meeting summary was prepared by Linda Churchill.
## Waterloo Waste Management Facility

**Communication Summary**

January 01, 2020 to January 31, 2021

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January 01, 2020 to January 31, 2021

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