City of Hamilton  
Public Works Department  
WASTE MANAGEMENT DIVISION  

MINUTES

Special Glanbrook Landfill Coordinating Committee Meeting  
Monday, April 16, 2007  
Glanbrook Landfill Meeting Room  
4:30 p.m. to 6:30 p.m.

ATTENDEES:

MEMBERS:  Allan Freeman, Chair  
            Andy Fevez  
            Councillor Dave Mitchell  

WASTE MANAGEMENT, CITY OF HAMILTON  
Craigm Murdoch, Manager of Waste Disposal  
Fabiano Gondim, Supervisor of Landfills  
Frank Falcone, Project Manager, Landfills

WASTE MANAGEMENT OF CANADA CORPORATION:  
Ron Wright (Resource)  

MINISTRY OF ENVIRONMENT:  
Joanne Placko (Resource)  

NIAGARA PENINSULA CONSERVATION AUTHORITY:  
Annie Michaud (Resource)  

REGRETS:  Sheila May  
           Brook Ryan  
           Mike Caruso WRTF

Review of Minutes from Previous Meeting

Allan Freeman mentioned that in the last meeting there was one item about possible natural gas wells in Phase 1, near LM 4 in the landfill. Allan stated that when they did the cell inspections they did not see any indication of a natural gas well. He believes that if there was a natural gas well in this area it would have been capped in 1948.

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1. Landfill Gas Project Update

Craig Murdoch provided a summary for the Hamilton Renewable Power (HRPI) gas project. Craig advised that Councillor Mitchell is returning as Chair of the Board of Directors for HRPI and he is also the GLCC representative.

The new Board of Directors approved going to the City of Hamilton
requesting that money be borrowed to proceed with the energy portion of this project. The gas collection project was approved as part of our budget process in 2006, so the part that was in question was the energy generation component. Councillor Mitchell mentioned the energy portion will be a profit to the city and once the project has paid for itself, Council will determine what to do with the annual profits.

Craig Murdoch advised that we just finalized the design. A drawing will be e-mailed to GLCC members tomorrow. It is a series of horizontal collectors and on any finished side slopes we will have vertical wells. The horizontal collectors are spaced fairly closely to allow the system to collect as much gas as possible. The Air C of A has been submitted to the MOE, as of last week and the Site C of A was submitted to the MOE in March.

Craig Murdoch indicated that the delay in receiving the site Certificate of Approval does not stop us from starting construction. Any comment received from the MOE will be addressed as we go. The piping was for the collection system was ordered approximately 1 or 2 weeks ago, and we should be receiving it in about 4 weeks.

Fabiano Gondim advised that the pre-construction survey was completed. This was done to confirm the survey CRA received as part of the bid process was accurate. CRA went to the landfill for geotechnical investigation of the area where the flare and engines are going to be installed and investigated the drainage conditions as well. They are coming back on April 17 to do pre-construction video where they record the existing site conditions. Fabiano said CRA will be mobilizing on the first week of May.

Craig said that the compound that will accommodate the flare, two engines and blowers will be on the south side of the landfill beside a pad that was used for previous construction activities. So it is far from the residents on Hall Road. There will be a visual barrier with all trees here and it is also a good location because it is outside the waste footprint, so we are not affecting the landfilling operations in any way. It is on virgin soil and CRA has completed the geotechnical investigation as Fabiano mentioned so that the concrete pad can be designed properly. Another design feature that the City requested was to add on a third blower so that the flare can be run independently and concurrently with the engines, allowing extra capacity for odour control.

Councillor Mitchell asked if this excess gas could be collected and stored. Craig Murdoch replied that it couldn’t because it is not like the sewage treatment plant where we have the large storage tank. The landfill vents gas so to compress it and put into a storage tank that would have to be a huge tank and it would also be quite expensive. With odour control being the number one priority with electricity generation being a benefit, it was decided that we could flare any excess gas, if necessary.

Craig Murdoch advised the Committee that there are two landfill gas engines, therefore in the case of maintenance one engine can be
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down for maintenance work while the other is still running. The whole
system is modular, so an additional engine can be put in place should
the demand be there and then the revenues can pay for that engine in
the future. Additionally, there are smaller engines that are less costly
that can be purchased in case the landfill doesn’t generate enough
excess gas for another full sized engine.

Craig Murdoch advised that Toromont Cat was the successful
proponent that we are partnering with on the project, and they’ll have
an operational and maintenance contract with HRPI and the contract
will be for a period of 1 to 20 years. They will operate the system for us
including the well field and if at any time HRPI decides to take the
operation in-house then it can be done. The draft operations contract
is being finalized right now.

Craig Murdoch is working with Phil Homerski, Public Affairs
Coordinator for the Public Works Department, to publish an article in
the Glanbrook Gazette letting residents know about the Gas Project
and about all of the actions the City has and will take to address odour
issues. It would be nice for people to see that we are not ignoring their
concerns, we are working towards solutions.

Craig let the Committee know that if they have any questions after the
gas collection system drawing is sent out, please let us know. Fabiano
is well-versed in the principles landfill gas collection systems since his
background is in landfill gas.

Allan Freeman said that if the City is doing a press release then the
City needs to time it with the installation of the engines and
construction of the collection system. Allan advised that it is better to
give 2 or 3 releases than too many. He suggested that it could be
done part way through the installation of the gas collection system and
when starting the actual construction on the site for the engines and
then again when you are ready to throw the switch.

Craig said that he’ll work with Waste Management’s Community
Outreach section to come up with 2 or 3 milestones to encourage
Media participation.

2. **Status of odour study and fence odour neutralizer system**

Fabiano Gondim informed the Committee that the City has hired a
consultant (SNC Lavalin) to prepare a landfill gas odour study in two
parts. The first part is to confirm that there are no concerns with health
to the area residents and to verify previous air testing results; and the
second part of the study is to assess how effective alternative daily
cover (woodchips and film) is in containing odours. SNC Lavalin has
started collecting samples and initial results from the lab indicate
nothing different than typical landfill gas, with hydrogen sulfide
concentration of about 28 parts per million in the worst location (pipe
that draws landfill gas to the flare). SNC Lavalin is setting up a trailer
on Hall Road to collect full time air samples for the next 30 days.
Collected samples will be sent to the lab with information on weather
and wind conditions in order to complete a full assessment.
Craig Murdoch said a report will be shared with the committee members when it is received. The purpose is not to refute that odours are a problem, it is to characterize odour and landfill gas. Right now we know that people on Hall Rd have been impacted in the past. The modeling will also give us potential concentrations of hydrogen sulfide or methane gas at individual residences.

Fabiano Gondim gave the Committee an update on the odour neutralizer system on the north side of the site along the fence. The system installation is complete and is ready to be run. The system has not been activated as of yet, to allow air sampling for the current odour study. This will take 30 days and then we will start the odour neutralizer system. Staff will turn on the system if any odour complaints are received however there have been no complaints for the past month.

Joanne Placko said that she was at the landfill last Wednesday afternoon and went for a drive and actually went out to the northeast slope where she had detected odour in the past and there were no odours on that occasion.

Councilor Mitchell requested that staff review the list of 28 homeowners that may be eligible for air purifier units, as the actual number may be higher after review of the air study.

Councilor Mitchell asked why the odour was stronger before and currently there is no odour. Frank Falcone replied that one possibility is due to additional waste was placed on the northeast corner the odour decreased. Additionally Fabiano Gondim added that the flare was not running at full capacity during winter because of condensate build up in the aboveground hoses, decreasing the amount of gas that was actually drawn and flared (reducing the ability to control odours), and now that the weather is warmer we do not have this condensate problem anymore. Fabiano also mentioned that the current low odour levels with no odour complaints for the last few weeks is likely the result of a combination of efforts for odour mitigation that the City has implemented.

Councilor Mitchell mentioned to the Committee that Council approved $150,000 in the budget in home air purifiers. He asked staff to work on evaluating air purifiers as soon as possible and he also mentioned that the units will help alleviate any potential odours during the construction phase of the landfill gas project.

Fabiano Gondim said that the purchasing department has prepared a summary of the bidder list and we are in the process of evaluating the submissions to the Request for Information document released on March 28\textsuperscript{th}, 2007 and closed on April 13\textsuperscript{th}, 2007.

Craig Murdoch indicated that the next steps will be assessing the technical data and looking at the company that has the best performance for hydrogen sulfide. Once we look at that we will then be negotiating with the company for the supply, installation and warranty on the units. We can probably expedite the purchasing
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process getting it to council through Councillor Mitchell; otherwise it could take 6 weeks to get it to council.

Everybody agreed that once we receive odour complaints we should run the fence odour neutralizer system and stop collecting air samples for the odour study.

3. **Status of On-Site and Off-site Soils for Daily cover**

   In follow up to the last meeting where Alan Freeman asked staff to look into the possibility of purchasing land to mine soils for the landfill, Frank Falcone updated the Committee that landfill property and other properties in the vicinity of the landfill are zoned as OS3 and A1. The OS3 is open space conservation and removing soils is restricted and the A1 zone is agricultural.

   Craig Murdoch said that because purchasing land and trucking soils is extremely expensive, we are trying to do the no cost options right now and one day we may have to buy properties to extract soils to be used as daily cover when we are getting to the final stages of the landfill. We would like to make decisions as financially responsible as we can, since anything we do can have an effect on the tax payers of the City.

   Frank Falcone said that we are currently using soil from Stage 3 area that is designated as final cover. We are going to be borrowing it for the short term, and for the long term we are going to be replenishing it in the future when we get a source.

   Craig Murdoch said that the City has taken a multi prong approach to mitigate odour issues from as many fronts as we could. No single solution will mitigate odours on its own and we are hoping that all of the efforts can collectively minimize odours, and this is the reason why the odour levels are currently down.

4. **Status of MOE applications for 2nd flare and alternative soils**

   Fabiano Gondim updated the committee on the second temporary flare installation. The application for the second temporary flare was submitted on February 12th, 2007 then went to Environmental Bill of Rights (EBR) for the thirty day comment period. To date no comments have been received. Fabiano also mentioned that the alternative soils for daily cover application was submitted on March 16th, 2007.

   Joanne Placko said that the alternative soils application may not be posted on the EBR as long as it is approved by the GLCC.

5. **Status of Odour Purifier Units**

   Covered on item 2.

6. **New Business**

   Annie Michaud updated the Committee on the biannual Biomonitering report the Niagara Peninsula Conservation Authority was hired to conduct by the City. She sent out the 2006 Biomonitering report a few weeks ago and just want to make sure everybody received it. Essentially the results are the same as 2004: there was no added impact from the landfill to the Buckhorn Creek and Welland River and
results are consistent with previous years, if not a little better. The only thing that is different from the 2004 report is that the NPCA recommends that two of the monitoring stations upstream and downstream of the flowing spring near the entrance to the site no longer be sampled. It was felt that this area is not a barrier to fish migration and therefore the monitoring is not required. Additionally, the NPCA recommends leaving the flowing spring as is, with no remedial action required.

NEXT MEETING – Monday, May 28th, 2007 @ 4:30 pm

Minutes prepared by Frank Falcone, reviewed by Fabiano Gondim and approved by the GLCC on May 17, 2007.