City of Hamilton
Public Works Department
WASTE MANAGEMENT DIVISION

MINUTES

Glanbrook Landfill Coordinating Committee
Monday February 26, 2007
Glanbrook Landfill Meeting Room
4:30 p.m. to 6:30 p.m.

Attendees:
MEMBERS: Allan Freeman, Chair
Andy Fevez
Brook Ryan
Sheila May
Mike Caruso WRTF
Councillor Dave Mitchell

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

WASTE MANAGEMENT OF CANADA CORPORATION: Ron Wright (Resource)
Reid Cleland (Resource)

JAGGER-HIMMS LIMITED: Jason Balsdon (Resource)

MINISTRY OF ENVIRONMENT: Joanne Placco (Resource)

GLANBROOK GAZETTE: Martin Bryan

Regrets:
NIAGARA PENINSULA CONSERVATION AUTHORITY: Annie Michaud (Resource)

Review of Minutes from Previous Meeting

Andy Fevez asked if the letter to the residents about the installation of the temporary, portable flare was sent out before or after the last meeting. Craig Murdoch indicated that it was sent out after the last meeting.

Andy Fevez asked why the motion to encourage the Wildlife Management Committee to continue to oil the eggs was not included in the minutes of previous meeting. Craig Murdoch said that it would be reflected in the current minutes. Motion: To encourage the Wildlife Management Committee to continue to oil goose and gull eggs by Andy Fevez and seconded by Brook Ryan during GLCC
Review of Minutes from Previous Meeting

November 2006 meeting. All in favour. Motion carried.

Andy Fevez asked about the natural gas well referred on page 4 in the area of LM4, if have the wells been capped and is there a possibility of them seeping through? Craig Murdoch indicated that LM4 is in the vicinity of the old capped gas well but when the new LM4 was drilled it was not drilled to the base of the landfill. Allan Freeman clarified that the original landfill base was inspected before waste was placed at Stages 1 and 2 and no visible gas well was found at that time.

Andy Fevez said that he can not access the pond data in the format that it is e-mailed to him and he would like the City to look into the possibility of producing it in a different format and if not to send a hard copy in the mail. Andy said that the e-mail attachments are not attached to his e-mail. Craig Murdoch said that it was possible the service provider was stripping the attachment from the e-mail. The City will try to format it as a jpeg and send it to the members or mail to anyone having difficulty.

Minutes of November 27, 2006 were approved as amended. Motion to approve by Andy Fevez and seconded by Brook Ryan. All in favour. Motion carried.

ITEM

1. GLCC Chair appointment

Andy Fevez made a motion that Allan Freeman continue as chairman of the Glenbrook Landfill Coordinating Committee. Seconded by Andy Fevez. All in favour. Motion carried.

2. Landfill Gas Control

Craig Murdoch updated the committee on the odours at the landfill. A lot of City staff time is being spent on solving the odour problems at the landfill and the City is doing everything possible to mitigate odours in the short term, and will continue to do so. He indicated that the City recognizes that the gas odours are a major issue and that it is a high priority for the City to address this as soon as possible.

Craig Murdoch explained that there are a number of issues that have contributed to the odour at the landfill. One of the biggest ones is the closures of SWARU in 2002. It can take a few years to notice the effect which is currently occurring. The reason we are experiencing gas odours now is that when waste breaks down in the absence of oxygen it gives off methane gas. In the past, organics were burned off when SWARU was operating and now the organics are breaking down in the landfill and are giving off this gas. Methane itself is odourless but there are trace compounds within the gas that give it the odour you smell and that is usually hydrogen sulfide which is rotten egg or sulfur smell or mercaptan that have similar smells. The other problem is that in the past we have had dry seasons and the effect of using wood chips wasn’t felt. When snow melts or it rains the landfill’s leachate collection system has been taking leachate away. We have had a very wet fall and the wet fall accelerated the landfill gas generation. The odour has been concentrated in the north east corner of the landfill which has been the most active landfill section of the site.

Additionally, with the installation of the leachate collection system the landfill gas has an easier pathway to the surface out through manholes and
cleanouts.

Some of the steps the City has done to minimize the odour include:

- Installed a portable flare and then increased the capacity of the flare. At this point the flare cannot handle the amount of gas being produced;
- The City sealed the leachate system manholes and cleanouts;
- We installed a weather station to monitor the direction of the wind;
- Waste Management of Canada brought a portable suppression unit on site;
- We moved the tipping face to the east slope because it is an area of the landfill that can be graded to a finished slope and capped with final cover and that will help the odour in that area;
- We are using clay again as daily cover; and
- We have hired a consultant (SNC-Lavalin) to do an odour study and to evaluate sources of the odour and the potential health effects (if any). In 2003 and 2004 studies were done by RWI to monitor the air quality and they are now being conducted again. SNC-Lavalin will collect new data and compare with RWDI data from 2003, 2004 and come up with a final report summarizing the results. This report will be shared with the Committee.

The city completed the installation of an odour neutralizer system at the north east corner of the site and it consists of a large tank of odour neutralizer solution using plant based material that is non hazardous and non toxic. The material is sprayed at regular intervals out of nozzles that are on top of the litter fence. The unit is not currently running due to the freezing temperatures. The unit can not run below minus 15 degrees Celsius or it will freeze.

The City has applied for a CofA amendment to add an additional portable flare to the site that would add an additional 300 cubic feet per minute to the current 500 cubic feet per minute that is currently being extracted and combusted by the portable flare. The new flare when approved will be installed halfway down the east side of Stage 2.

The City has conducted a trial on an air purifier unit in the Zimmerman’s home on Hall Road and have since removed it due to its poor performance. In contacting a technical person with the company to ask questions about the unit, the City was told that the unit will only work in an air tight house with the unit in a small air tight room and it will only remove 60-70% of the odour during a long period of time, generally 1 to 1.5 hours. As most homes are not air tight, this makes air purifier units ineffective. If you did have an air tight house when someone opens a door the odour will re-enter the room and the unit will have to catch up. This is the reason this particular unit was removed from the Zimmerman’s house. Craig Murdoch said the human nose can detect hydrogen sulfide to 0.5 parts per billion, which is equivalent to one drop of water in two Olympic size swimming pools.

The City will continue to look for air purifier units that may potentially remove the odours associated with landfill gas but to date the City has contacted two consultants (Comcor and SCS Engineers), which are the largest consultants in Canada and the United States that deal with landfill gas to assist, and they
have not heard of any unit that will remove the landfill gas odour.

- Frank Falcone added that when the unit was installed at the Zimmerman's home, the sales person stated that the unit was state of the art and said that these units were intended for labs that have a controlled air flow into the room and not for homes especially ones that are not air tight.

- Councillor Dave Mitchell added that he talked to the Vice President of the company that supplied the units and he said that in a new home that is more air tight than the existing homes, the unit will only remove 60-70% of the odour.

- Allan Freeman provided literature on a company that produces air filters for the City to include in its search for a successful air purifier.

- A motion was made to "Direct staff to immediately investigate the possibility of installing air purifiers units for 28 homes being effected in the area"; Sheila May declared a conflict of interest; moved by Mike Caruso seconded by Brook Ryan. All in favour. Motion carried.

3. Landfill Gas Project Update

- Craig Murdoch updated the committee on the landfill gas project. The City had an open house last week and a number of people showed up. The City has a preliminary design in place and it is in the process of being finalized. The City will have a special pre-construction meeting before the next scheduled GLCC meeting to give the GLCC members a presentation on the landfill gas project construction. Andy Fevez asked if odour issues can also be discussed at the meeting and the City agreed. Craig Murdoch said that the President and Vice President of Hamilton Renewable Power are preparing a report that will go to the Hamilton Renewable Power Inc. (HRPI) board on March 16. Councillor Dave Mitchell is the chairman of that board. The report requests that the funds be approved to proceed with the project. After the Report goes to HRPI, it will proceed to Council for final approval. HRPI and the City have already approved staff to move forward with the design and with retaining a company to supply and install the system so this is the final stage. The contract to start the construction is in the final stages of being completed. Construction should start within the next couple of months. Craig said the CofA application will be going out in the next couple of weeks because we have to have the preliminary drawings and specifications in with the application. The City has to obtain or amend two kinds of C of As for the landfill gas project, a site and an air C of A.

4. Importing Alternative Soils – presentation and discussion

- Reid Cleland introduced himself to the committee and explained his new responsibilities as manager of the Glenbrook Landfill for Waste Management of Canada Corporation (WMCC). Reid explained that due to the deficiency of soil at the landfill he has made a recommendation to the City that they consider the importation of alternative soils to be used as daily and intermediate cover on site. Reid has used alternative soils as daily and intermediate cover on other sites that he manages that were deficient in soils in particular the Warwick landfill site. In 1998 WMCC applied to the MOE to use alternative soils that would have one tenth the concentration of the parameters that the ministry would consider as hazardous soils. Jason Balsdon from Jagger Hims, the consultant to WMCC, has been collecting
data since 1998 on ground water and surface water at the site and had demonstrated that the use of this material as daily cover and intermediate cover does not have any detrimental effect on the surface or ground water. The soil has been very effective in controlling litter and odour at the landfill as well as making the active gas collection system work more effectively. Reid has asked Jason to share with the City all the data that they have collected at the Warwick Landfill since 1998 to demonstrate to the City and to the members of the GLCC that the soil is appropriate to be used at the landfill to control odour and litter.

Jason Balsdon provided a PowerPoint presentation to the GLCC on the use of Alternative Soils for Daily and Intermediate Cover. Questions were asked by the GLCC members and answered by Jason Balsdon.

Allan Freeman asked Jason Balsdon to give a copy of the associated regulations to the GLCC. Jason said he would forward them to Fabiano.

Councillor Dave Mitchell asked the City to provide a copy of the PowerPoint presentation to the GLCC members.

Reid Cleland explained the process for obtaining alternative soils. If you were the generator of the alternative soils you would hire a consultant to test the soil and do the analysis. The results are then provided to the receiver of the soil. The receiver of the soil will review the results to see if they meet the parameters that were set for the site to be used as daily and intermediate cover. Once the soil is on site the receiver of the material may take a composite sample of all the material received to confirm that the test results that were provided from the generator are representative of the material that has arrived at the landfill. Reid stated that the protocol that was used at the Warwick Landfill works and that they have caught some soil that did not meet the criteria and sent the soil back to the generator.

Allan Freeman asked the City if they have looked to see if there are any local sources for the soil; either farms or any area on the City’s landfill property that can be mined and used as landfill cover. Frank Falcone indicated that a majority of the landfill property that is not part of the landfill footprint that can be considered as a source of soil is either in the flood plain of the local creeks or is heavily wooded areas. Allan Freeman said he thinks the process to approve the alternative soil will take longer than we think and to look at alternative sources of soil to cover the landfill before end of spring.

Councillor Dave Mitchell said that if the guidelines have already been proven to be working at the Warwick Landfill then we should move ahead and use them at the Glanbrook Landfill. Joanne Placko suggested that the City get the application in as soon as possible and then provide the documentation at a later date. Councillor Mitchell suggested that the committee request the City to investigate the possibility of any source of soil on the landfill property.

Craig Murdoch said that the City will investigate if there is a local source or a source of soil on the landfill property and the City will talk to the Niagara Conservation Authority about any regulations and constraints to remove the soil if any. He said that he felt it would take the same amount of time to talk to the Conservation Authority and get their approval as it would to get the approval from the MOE on the alternative soil. Craig liked the suggestion from Joanne Placko about getting the application into the MOE as soon as possible but wanted to get the committee’s thoughts on that.
ITEM ACTION

baz Sheila May felt that it was the only way to go. Brook Ryan agreed.

baz Motion “That the City submit an application to the MOE to be supported by documents to follow for the importation of soil”, moved by Allan Freeman seconded by Andy Fevez. All in favour. Motion carried.

baz Motion to “Investigate any source of material on site as an emergency supply of soil and cover”, moved by Sheila May seconded by Brook Ryan. All in favour. Motion carried.

City

5. Status of Leachate Mound

baz Frank Falcone updated the committee on the leachate mound. Frank indicated that the leachate mound has gone up and down a few inches but overall has remained the same with the exception of LM1, which has gone up approximately 3 meters since the last meeting. Frank mentioned that the City staff that measures the levels reported an increase in the amount of landfill gas coming out of this monitoring well. The City has come to the conclusion that the increase in the level in LM1 is due to the increase in landfill gas that is present in the vicinity of LM1 as witnessed by the large amount of landfill gas that is present in LM3. Frank said that the City will monitor the situation to confirm if the new landfill gas collection system that is to be installed will lower the leachate levels. Craig Murdoch said that the leachate collection system is holding its own which is good news when you consider the amount of precipitation we had in the fall and the fact that we don’t have soil as daily cover. Frank said that the new wells have been installed but have not been surveyed yet. They will help to give a better indication of leachate levels.

baz Allan Freeman asked if the City have determined why LM4 leachate level is so high and Frank responded by saying that the City suspects that it is due to landfill gas because the new well that was drilled beside LM4 has a large amount of landfill gas coming out of it therefore we cannot measure levels from it.

6. Pond Data

baz Frank Falcone handed out the pond data and indicated that a few ponds have failed as highlighted by the shaded area in the tables. He mentioned that they are actually improving quite a bit as the snow melts and we have rain. The City tests them pretty often and it would seem like they’re improving since fixing the seeps that were mentioned at the last meeting. Allan Freeman liked the new format of the table in that it shows what was done with the pond water.

7. GLCC member at Waste Reduction Task Force

baz Fabiano Gondim said the Waste Reduction Task Force (WRTF) is looking for one of the GLCC members to be part of their committee, like Mike Caruso comes to the GLCC as part of the WRTF so they’d like one of GLCC members to be part of their committee as agreed previously. Brook Ryan said that if there is no other person that wanted it he would do it but he could not commit to all the meetings. Allan Freeman said that between himself and Brook they would make sure that one of them is at the Waste Reduction Task Force meeting.
ITEM

8. Waste Reduction Task Force Update
   ☐ Mike Caruso updated the committee on the Waste Reduction Task force.

9. New Business
   ☐ Andy Fevez asked for a copy of the monitoring done at the Glanford and Binbrook Landfills. Craig Murdoch said that the City will provide it before the next meeting.
   ☐ Brook Ryan made a comment that he believes that residents around landfills should have a 25-30% reduction in property taxes as compensation for living close to landfills.
   ☐ Fabiano was following up to a question asked at the last GLCC meeting asking for an update on the flow monitoring station for Buckhorn Creek. The study has been completed by the consultant; they got all the available historic data they needed without spending any money on a new monitoring station. MOE accepted historic data for the purpose of that study and the study was completed, resulting in the current criteria for Chloride levels to discharge pond water into Welland River and Buckhorn Creek.

NEXT MEETING – Monday, April 16th, 2007 @ 4:30 pm

Minutes prepared by Frank Falcone, reviewed by Fabiano Gondim and approved by the GLCC members.