

HIGHLAND CREEK TREATMENT PLANT (HCTP)  
Neighbourhood Liaison Committee (NLC)

Meeting #11  
Monday June 16, 2003

Highland Creek Treatment Plant Meeting Room  
51 Beechgrove Drive

7:00 p.m. to 9:00 p.m.

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**DRAFT SUMMARY NOTES**

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**ATTENDANCE**

**Residents:**

Alan Carter, Co-Chair  
Ann Brazier  
Francis Chang  
John Howes  
Cathy Humphrey  
Wing Lam  
Robert MacFarlane  
Reg Marshall  
William (Bill) Sheehan

**City of Toronto:**

Mae Lee                      Public Consultation Unit  
Mark Rupke                 Senior Engineer, WPC  
Martin Shigeishi           HCTP Plant Manager

**Note Taker:**

Carolyn Pettitt

**AGENDA**

1. Introductions
2. Review of Summary Notes (February 25, 2002 Meeting)
3. Odour Assessment Study – HCTP
4. Water and Wastewater Division – Organizational Structure Update
5. Raw Sewage Spills
6. Population Growth
7. Other Business

## 1. INTRODUCTIONS

- 1.1 **Alan Carter** called the meeting to order at 7:00 p.m. All participants introduced themselves.

## 2. REVIEW OF SUMMARY NOTES (Meeting of February 25, 2002)

- 2.1 **Bill Sheehan** expressed concern that NLC meetings are not being held often enough. **Wing Lam** suggested that there should be two NLC meetings per year. **Alan Carter** explained that a prior meeting of the NLC had to be cancelled due to security issues. **Mae Lee** noted there was a tour of the plant in August 2002 and planting activities for the community. Meetings for the area residents can also be in the form of open house/tour and spring/fall planting activities. She also added that there needs to be agenda items to warrant a meeting. If there is not much happening at the plant then there is no update to the community. She encouraged participants to contact her if there are agenda items they would like to suggest.
- 2.2 **Bill Sheehan** noted that item 3.42 on page 5 of the minutes was grammatically incorrect, but he could not remember the wording or the context of the statement that was made. **Alan Carter** suggested that **Bill Sheehan** submit the corrected wording to **Mae Lee**.
- 2.3 **John Howes** recommended the minutes be adopted with the correction made to item 3.42. **Robert MacFarlane** seconded the recommendation.

## 3. ODOUR ASSESSMENT STUDY

- 3.1 **Mark Rupke** gave a brief presentation of the Odour Assessment Study that was conducted at the Ashbridges Bay Treatment Plant (ABTP) and explained the type of odour study that could be done at the Highland Creek Treatment Plant (see Appendix A for a copy of the presentation slides). In particular, he noted the following points:
- The purpose of an odour assessment study is to:
    - conduct tests to understand where odours come from within the plant;
    - determine strength and volume of odour emissions;
    - make sound recommendations to mitigate odour impacts; and
    - involve the local community.
  - Odour assessment tools include:
    1. *Olfactometry (measuring the strength of smells or how strong something smells);* Olfactometry is the science of measuring 'odour' not specific chemicals. It uses the human nose to determine odour units. One odour unit is the limit at which half the population can just detect an odour. Samples of odours are collected at the source (such as a vent) and sent to the lab in a bag. Odour samples were taken from a variety of locations at the ABTP and were measured in terms of odour

units per second in order to take into account airflow. Four rounds of testing took place, one round for each season, in order to determine whether changes in temperature affected the amount of odour produced. Each round of testing lasted for several days in order to take into account different processing parameters, (i.e. to include problem days). It was found that most odour at the ABTP comes from the aeration and primary tanks.

2. *dispersion modeling (where does odour go);*  
Dispersion modeling is computer based modeling that shows how odours move from the plant out into the community. Five years worth of hourly meteorological data and site-specific inputs such as building configuration and topography were used to generate the models. The computer keeps track of worst case odour units and generates contour lines to show the dispersion of odours.
  3. *odour surveys (to subjectively survey odour in the community).*  
Community odour surveys are used to qualitatively confirm the results of dispersion modeling results. A team of trained odour detectors begins the survey for downwind of plant and walk towards the plant sniffing for odours as they approach. They have masks on and then take them off to smell. They record the intensity and character of odour at each location.
- The overall odour impact of the ABTP is 100 odour units at the plant. The MOE standard that we are trying to achieve is 1 odour unit. A frequency analysis indicated that the ABTP exceeds 10 odour units 500 hours a year. The frequency analysis gives the City an idea of how bad and how often the plant really smells.
  - Recommendations from the odour assessment study included:
    - Covering the open primary tanks,
    - Replacing existing odour controls,
    - Implement process changes (change handling operations),
    - Install a new biofilter (Biofilters rely on bacteria that eat the organic odours – results in a 99% odour reduction rate.)
    - Goal is to get down to one odour unit.
  - Implementation of the recommendations at the ABTP will cost approximately \$130 million. Some of the cost will be to make process changes. \$130 million represents a few percent of the total costs of the plant so the implementation is relatively inexpensive.
  - The Odour Study at the ABTP started in 2001 and finished in winter 2003. Detailed design will be completed in 2005, with the first odour controls on-line in 2006. All modifications to the plant will be complete by 2011.
  - The City will also be doing an odour study at the Humber Treatment plant and would like to do one at the HCTP.

- The Odour Study at the HCTP could be an 8-20 month study. The NLC could be involved in reviewing the RFP for the study and in the selection of the consultant.
  - Proposed HCTP Odour Study Timeline – 8 month sampling timeframe
    - \*Because of election year no council meetings from September 2003 to January 2004
    - prepare RFP (June – August 2003)
    - bidding and award contract (September 2003 – March 2004)
    - sample, measure, model (May – October 2004)
    - Conceptual design (August – November 2004)
    - Final report (January 2005)
- 3.2 **Bill Sheehan** asked how a person’s nose is trained to smell. **Mark Rupke** replied that people are trained to smell very dilute odour streams and become used to quantifying and identifying the odours they smell. They are taught what digestors and aeration tanks smell like so they can identify the smells of different parts of the plant.
- 3.3 **Bill Sheehan** asked what standards are there for odour. **Mark Rupke** replied that there are international standards for the measurement of odour.
- 3.4 **Robert MacFarlane** noted that it will be hard to dilute smells at the plant because the facilities are enclosed.
- 3.5 **Reg Marshall** expressed concern that the odour assessment is a set up of “smell police” who will come out and tell people in the community that there really are no odours. **Mark Rupke** replied that the purpose of the project is to identify where the odours come from so we can solve the problems. The assessment helps the City to make sure money is spent on the right things to reduce odour.
- 3.6 **Reg Marshall** noted that it is only when there is a problem at the plant that smells occur. Smells don’t happen when the plant is running correctly.
- 3.7 **Ann Brazier** asked how long the assessment takes. **Mark Rupke** replied that it is not something that can be done in a month. At a minimum it will take 8 months to do the testing.
- 3.8 **Bill Sheehan** asked how much the assessment would cost. **Mark Rupke** replied that the City can estimate how much it will cost but until the bids come in the City will not honestly know. The ABTP assessment cost \$600,000. Highland Creek is a smaller plant and somewhat simpler so the cost for the assessment at the HCTP should be less.
- 3.9 **Robert MacFarlane** noted that the plant smells the worst in July and August because of humidity of the air. **Mark Rupke** concurred that meteorological patterns do contribute to odour, e.g. temperature inversions can affect dispersion of odour.
- 3.10 **Reg Marshall** asked if tanks are closed at the ABTP. **Mark Rupke** replied that they are.

- 3.11 **Bill Sheehan** asked where the meteorological data come from. **Mark Rupke** replied that the data comes from local weather stations and on site data collection.
- 3.12 **Bill Sheehan** asked whether an odour gets mapped in the dispersion modeling if no one smells it. **Mark Rupke** replied that the computer maps what odour will do. The modeling does not try to recreate any particular odour situation.
- 3.13 **Bill Sheehan** asked for clarification on what was meant by an odour unit. **Mark Rupke** replied that one odour unit is the point at which half a group of people can just detect a smell.
- 3.14 **Francis Chang** asked how many people would be in the group trying to detect the smell. **Mark Rupke** replied that usually there are 8 people because human noses have different sensitivities.
- 3.15 **Reg Marshall** asked what process is followed when odour complaints are made. **Martin Shigeishi** replied that when a call is received the wind direction is checked to confirm that a smell coming from the plant could have been detected at the location the person called from. There are a number of industries along Coronation Street so sometimes people detect odour from there and mistakenly think it's coming from the plant. If it is likely that the smell is coming from the plant then staff tries to correct the problem. The plant does not get very many complaints in a year. Complaints are more likely to occur in summer due to meteorological reasons and the fact that people are outside more.
- 3.16 **Bill Sheehan** asked if the amount of odours at the HCTP justifies the study. He commented that it does not seem that odour is a problem at the plant. **Mark Rupke** replied that people's tolerance for odours is diminishing. People are demanding more from their government. **Martin Shigeishi** added that the industries on Coronation Street don't get many odour complaints but they are still being proactive about reducing smells. **Mark Rupke** further noted that people may not be complaining about odours from the plant because they are used to them. He stressed that the City is doing the study to be a good neighbour.
- 3.17 **Ann Brazier** asked how often systems at the plant fail and hence create odour. **Reg Marshall** commented that it is not just when systems fail that odour is created. Smells also occur when tanks are cleaned. **Martin Shigeishi** noted that every time a tank is cleaned it doesn't mean that it will smell. He added that although there is no standard that is proactively enforced, the Ministry could still conceivably come in and ask the plant to meet the 1 odour unit target.
- 3.18 **Reg Marshall** expressed concern that the City was using the odour assessment to "make some money through the back door". **Mark Rupke** replied that the City does not get funding for project from the Ministry of Environment.
- 3.19 **Bill Sheehan** commented that he felt the City was using the study to justify future expenditures.

- 3.20 **Reg Marshall** asked if the study was “etched in stone”. **Mark Rupke** replied that yes the City intends to do the study.
- 3.21 **Reg Marshall** asked if there is any possibility of using trees to deflect and absorb the odours. **Mark Rupke** replied that other studies have shown that odours just blow right through the trees, even conifers. Trees are not a useful technique to reduce odours.
- 3.22 **Alan Carter** commented that the Commissioner has never attended an NLC meeting and there is no councillor present at this meeting. Speaking as a resident and taxpayer, he asked the City staff if there was not some knowledge gained from the ABTP study that would enable City staff to make some informed decisions about the HCTP without having to go through an 8 month study and 5 year implementation process. **Mark Rupke** replied that the study at the ABTP did enlighten staff and the City certainly builds on staff knowledge. Unfortunately a study is needed because it is important to spend time assessing what the right changes should be. To eliminate odour you have to get rid of all the smells not just some. Staff will inform the consultants of where the odours are coming from and when, however, people working at the plant can become immune to the odour that’s why its important to do the study. While the studies are not cheap they are small in comparison to the total cost of the plant. It is not a waste of money to make sure that funds are ultimately spent on solutions that solve the problem.
- 3.23 **Bill Sheehan** commented that the City wants to create a crisis with a consultant study so they can spend lots of money. He felt strongly that the NLC should be involved as much as possible if there is a study.
- 3.24 **Ann Brazier** suggested that if the City knows where the problems are at the ABTP they are likely to be the same at the HCTP. She asked why the problem areas could not just be compared. **Mark Rupke** replied that there are different covers at the HCTP than at the ABTP. Unless the study is done it is really not possible to identify where the smell is coming from. **Mae Lee** added that there is no digestion at the HCTP but there is at the Humber and ABTP and HCTP is incinerating the treated sludges unlike ABTP.
- 3.25 **Bill Sheehan** asked who decided that the project was going ahead. **Mark Rupke** replied that the study is in the City’s current capital works budget. Council approved the present budget that has a line item in it for the Highland Creek odour study.
- 3.26 **Wing Lam** commented that every organization has limited resources and has to prioritize how it uses its resources. He asked how high a priority odour is. He suggested that there could be other priorities for people in the community. **Mark Rupke** replied that the highest priority is the quality of sewage treatment. The second priority is cost savings. Odour is becoming a growing priority. He noted that it may be the case that the study shows that odour is not a real problem, however the study will give the City a roadmap for how to make changes at the plant to reduce odours. The study also helps to keep the issue of odour at the forefront of plant managers’ minds.

- 3.27 **Mae Lee** explained that the Odour Study for the HCTP will be an agenda item at an upcoming Works Committee meeting. Community members can make deputations at the committee meeting so that Councillors on the committee will know your opinions and how you feel about the study. She also noted that NLC members could write to their councillors to express their thoughts on the study. She reminded participants that there is a political process. Councillors direct staff, but if the community does not want something done they need to speak up.
- 3.28 **Mae Lee** will notify the committee members when the Odour Study comes before the Works Committee.
- 3.29 **Bill Sheehan** suggested that the City just ask people about the odour in the community. **Martin Shigeishi** noted that there is a certain methodology that must be followed when doing an odour assessment.
- 3.30 **Ann Brazier** asked **Martin Shigeishi** if he knew where the odours were likely to be coming from. **Martin Shigeishi** replied that he could make an educated guess but noted that he may be desensitized to the odours at the plant because he is at the plant all the time. **Mark Rupke** added that the City will scope the study based on staff knowledge. The study not only identifies where the odours are but can make recommendations on how to solve them. No staff member wants to make an educated guess when making modifications to the plant to fix odours comes with a million-dollar price tag.
- 3.31 **Alan Carter** noted that some of participants comments reflect the general public's distrust of RFP's and consultants.
- 3.32 **Bill Sheehan** commented that only the gate house area smells.
- 3.33 **Reg Marshall** asked if the NLC could be held accountable if a consultant is selected that is problematic. **Mark Rupke** replied that NLC's play an advisory role to the City, they are not responsible for decisions the City makes.
- 3.34 The NLC participants expressed interest in being involved in the RFP process. **Mae Lee** suggested that the committee members receive a copy of the draft RFP in late August/early September (or once the draft is ready) and discuss the RFP and RFP process at the next NLC meeting which would take place in September. The Committee agreed with this suggestion.

#### **4. WATER AND WASTEWATER DIVISION – ORGANIZATIONAL STRUCTURE UPDATE**

- 4.1 **Martin Shigeishi** noted that City Council, at its April meeting, approved the designation of Water and Wastewater Services as a Business Unit rather than a Division. This designation will help speed business and financial planning. Bani Bawa is the project manager for the new unit. The unit will stay under Works and Emergency Services.

- 4.2 **Mae Lee** added that the Chief Administration Office (CAO) recommended to Council in late 2002 the creation of the separate unit for Water and Wastewater Services (WWW) in order to speed up the purchasing processes. Council decided then to set up a separate business committee to make purchasing faster for rehabilitation projects. And at the June 24 – 26, 2003 Council Meeting, decision was WWWW Division to stay within Works and Emergency Services Department and continue to work with Council's Works Committee.

## 5. RAW SEWAGE SPILLS

- 5.1 **Alan Carter** noted that he had read about raw sewage spills into the Red River in Edmonton due to a broken valve at a treatment plant. He asked whether it was possible for this to happen at the HCTP and what kind of safeguards are there in place to prevent raw sewage from entering Lake Ontario. **Martin Shigeishi** replied that there are no combined sanitary and stormwater sewers that are directed to the HCTP. Only residential and industrial waste is handled at the Highland Creek plant so there are no by pass events. If there are high flows there is a mechanism to bypass the flows into the lake if the infrastructure of the plant was to be jeopardized. Ground water does infiltrate pipes so it is possible that there could be bypasses at the plant. There was a bypass at the plant in February 2001 due to unusually high precipitation and equipment malfunction at the plant.
- 5.2 **Bill Sheehan** asked if there is a back up system at the plant. **Martin Shigeishi** replied that the plant is not at full capacity so the extra capacity serves as a backup. There are no retention tanks at the plant.
- 5.3 **Ann Brazier** asked when the plant will be at full capacity. **Martin Shigeishi** replied that that depends on population growth.

## 6. POPULATION GROWTH

- 6.1 **Alan Carter** noted that the population of Toronto is expected to grow by half a million in the next 10 years. He asked how this will affect the plant. **Mark Rupke** replied that the growth is only predicted to increase flows going to the HCTP. The present flows are 165 megalitres per day. A water efficiency plan is being implemented so new residents will use less water than current residents will, and flows of old residents will decline. By 2030 flows should only reach 200 million litres per day. The capacity of the plant is 218 million litres per day so there are no capacity concerns.
- 6.2 **Alan Carter** asked whether there would be more bypass events if more of the plants capacity is used due to population growth. **Mark Rupke** replied that plants are able to handle 20% to 30% increases in flows without bypassing. **Mae Lee** added that in May 2002 there was 100 mm of precipitation, the highest amount of precipitation since Hurricane Hazel and no bypass occurred. **Martin Shigeishi** commented that high

volumes of flows don't necessarily result in a bypass situation, it could be that the quality of the treatment process is affected for a short time during the high flow event.

- 6.3 **Francis Chang** asked whether or not the City has to notify the ministry if there is a bypass. **Martin Shigeishi** replied that yes the City has to notify the MOE.
- 6.4 **Bill Sheehan** asked why some years there are more, and other years there are less, flows to the HCTP. **Mark Rupke** replied that flows are not consistent for a variety of reasons, e.g. people have longer showers during economically prosperous years, industry moves in, or industry moves out.

## 7. OTHER BUSINESS

- 7.1 **Bill Sheehan** noted that on June 5, 2000 he asked a question about the number of sewer use offences have to occur before there is a charge laid. He has not yet received an answer to his question. **Mae Lee** suggested that **Bill Sheehan** email Vic Lim directly.
- 7.2 **Bill Sheehan** noted that on March 26, 2001 the minutes state that there was a contribution of \$160 million to the plant. **Martin Shigeishi** clarified that this money was used for the Works Best Practices Program implementation at the treatment plants. The program is to be completed by 2004. Martin will provide the committee with an update on the WBPP at the next meeting.
- 7.3 **Bill Sheehan** requested that the minutes be sent out within a month after the meeting, rather than just before the next meeting.
- 7.4 **Bill Sheehan** asked for clarification on the cost of the new digesters. He noted that the Certificate of Approval stated the cost was \$18.6 million. **Martin Shigeishi** noted that the project is not complete so the final costs have not been determined. He will attach to the minutes the contract amount awarded for the construction of the new digesters (see Appendix B).
- 7.5 **Alan Carter** noted that he will be stepping down as co-chair for personal reasons. He has been co-chair since 1997. He thanked everyone for their dedication to the NLC and committee members thanked him for his hard work. **Mae Lee** suggested that the committee use rotating co-chairs.

## 8. NEXT MEETING

- 8.1 The next meeting of the HCTP NLC will take place in early/mid September (Fall 2003) once the Draft RFP for the Odour Assessment has been distributed to committee members.

The meeting adjourned at 8:50 p.m.

### Appendix A – Odour Assessment Presentation Slides

## **Appendix B – Contract Amount for the new Anaerobic Digesters**

**General Contractor: Bondfield Construction**

**Contract Value: \$25.8 Million**

**Note: \$18.65 Million was an estimate that was stated in the original (1988) Certificate of Approval for this project. This Certificate of Approval was amended in September 1998 and describes the revised scope of work. An updated estimate for the project was not stated in the amended C of A.**