
Appendix 3C

October 23, 2007

Public Information Session Summary Report

D U R H A M / Y O R K

RESIDUAL WASTE STUDY

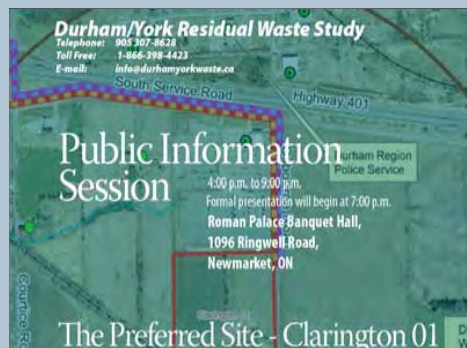
C O N S U L T A N T ' S R E C O M M E N D E D P R E F E R R E D S I T E

Roman Palace
Banquet Hall,
Newmarket


October 23
2007



**DURHAM YORK RESIDUAL
WASTE STUDY
OCTOBER 23, 2007
ROMAN PALACE BANQUET
HALL, NEWMARKET**



The Independent Public Facilitator

- My name is Robb Ogilvie and my role is to make sure the discussions are fair, transparent, balanced and informed
- **Fair** means everyone will be treated with respect, their opinions given a fair hearing.
- **Transparent** means summaries of these sessions will be published.
- **Balanced** means no one will be allowed to dominate or hog the discussion.
- **Informed** means the process will be based on "facts"

Toll Free 24/7 line: 1-866-386-6225
Email: mobal@ils.net



Independent Public Facilitator

We value your opinions

- Holly Huhen is an urban planner with me who will keyboard a "live-time" summary of the discussions
- You will receive a copy of the summary
- If we made any errors or omissions, tell us and we will correct them



Independent Public Facilitator

FACILITATOR: Good evening. My name is Robb Ogilvie and I am the independent public facilitator for York and Durham. Tonight we have two Regional Councillors here, Councillor Ferri, who is also Chairperson of the Waste Management Committee and also Councillor Taylor. Thank you for coming tonight and Councillor, I think you agreed to do some opening comments for us.

COUNCILLOR FERRI: This is an ongoing process and we encourage feedback from everyone. We would like to deal with all of your concerns. The objective is to have a long-term solution to our waste and it is a safe solution.

FACILITATOR: Thank you. Let me do a couple of introductory slides and then we will get to the main presentation by Andy Campbell, who is York Region's Director of Solid Waste Management and Administration.

Those of you who have been to previous sessions know that as the independent public facilitator, my role is to make sure the discussions are fair, transparent, balanced and informed. Fair means that everyone will be treated with respect, their opinions

will be given a fair hearing. Transparent means that summaries of these sessions will be published. If you notice any errors or mistakes, please let us know and we will make the correction. Balanced means no one will be allowed to dominate or hog the discussion. Informed means that the process is based on the facts and anybody who knows Andy Campbell knows he is an "Attila the Hun" on the question of making sure the facts remain available.

The purpose of tonight is to present the Consultants' preferred site, which is the Clarington 01 site, and the reasons for recommending this site and to answer your questions and any concerns that you may have. Andy is going to be doing a detailed presentation and those of you that know Andy know it will be a good presentation, factual, and he is very good in terms of giving you straight answers to the questions you have.

In terms of tonight's agenda, we are going to do the presentation from 7:00 p.m. until 8:00 p.m., a question and answer session from 8:00 p.m. to 9:00 p.m. and then from 9:00 p.m. to 9:30 p.m. we will be back at the display panels.

The ground rules for tonight are as follows. You have the right to ask any questions and you deserve a straightforward answer. It does not mean you will like the answer, but you deserve an answer. When enough is enough, I would like your permission to allow a question, answer, and follow-up-answer and then I will move on. When a question is asked, give the other person time to answer the question. Please do not interrupt. Wait until they are finished. Accept the concerns and goals of others as legitimate. This does not mean you have to agree with each other, simply respect each other's right to be here and to hold different opinions. To ensure that everyone who wants to speak has an opportunity, please keep your questions/comments to a 4-minute limit.

There are question cards that you can use if you would like to ask a question, but would prefer not to use the microphones. Please write your question on the card and submit it to me. Questions submitted using these cards will be asked by me, to the Study Team on your behalf.

There are two paper assistants, the "I didn't get a chance to say..." form and the

Purpose of Tonight

- To present the Preferred site (Clarington 01) and the reasons
- To answer your questions and concerns

Andy Campbell
Director of Waste Management & Administration for York Region



4

Independent Public Facilitator

Tonight's Agenda

7:00-8:00 - Presentation



8:00-9:00 - Q&A session



9:00-9:30 - Answering Questions at Display Panels



Independent Public Facilitator

Can I have your permission to use these Ground Rules?

- You have the right to ask any question and you deserve a straight forward answer... doesn't mean you will like the answer, but you deserve an answer...
- When enough is enough - I would like your permission to allow question-answer-follow-up-answer and then I will move on
- When a question is asked, give the other person time to answer the question... please don't interrupt, wait until they are finished
- Accept the concerns and goals of others as legitimate. This does not mean you have to agree with each other, simply respect each other's right to be here and to hold different opinions.
- To ensure that everyone who wants to speak has an opportunity, please keep your questions /comments to a 4 minute limit.



6

Independent Public Facilitator

Question Cards

Do you Have a Question?

If you would like to ask a question, but would prefer not to use the microphones, please write your question on this card, and submit it to the independent facilitator. Questions submitted using these cards will be asked by the independent public facilitator, to the study team on your behalf.



7

Independent Public Facilitator

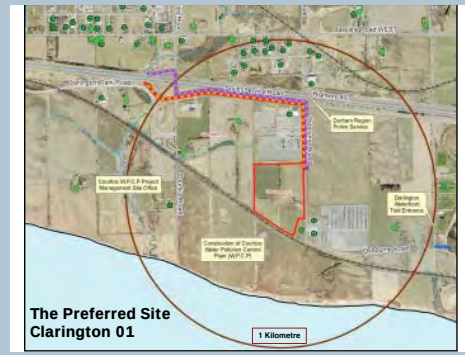
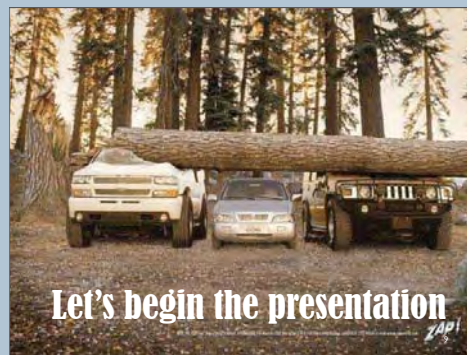
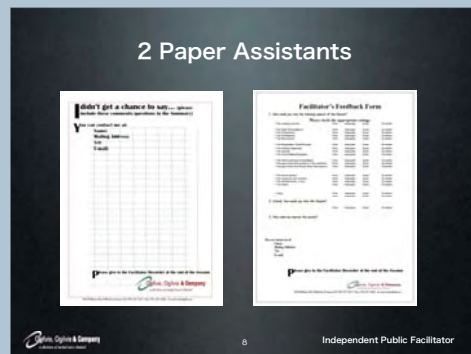
Facilitator's Feedback form. We are ready to go to the presentation with Andy Campbell.

ANDY CAMPBELL: I am here tonight to talk about waste and I recognize a lot of faces. Many of you have been out to our public meetings. Between York and Durham, this is around our 63rd, 64th public meeting that we have had on this Environmental Assessment (EA) process. Most of you got involved, likely, a few months ago when we started putting "x"s on a map, because that is when people really care about what we are doing on a lot of our projects. Some of you have been here longer than that, right from the start, and thanks to all of you for taking the time out of your evening to come and talk to us. The challenge we have been going through over the last couple of years, we started this in 2005, is what do we do with our garbage. Our landfill sites in York Region are gone. Keele Valley is closed. We have been shipping our garbage to Michigan. We have been shipping our garbage down to St. Thomas, near London and they don't like our garbage. The same as how we didn't like Toronto's garbage when it was in York Region at Keele Valley. So we have been trying to find solutions and part of it is, what do we

do with the garbage that is left over. More importantly, how do we have less garbage to begin with?

Across York Region, we are proud to say that as of the middle of September 2007, all of York Region is on the 3-stream waste diversion system. You all should have your Green Bin now and hopefully are participating. You have your Blue Box with more things in it and hopefully over the coming years, we will add more materials. But you have this nasty garbage that is left over, that we cannot find a home for right now. In the study we have been saying that we want to get to at least 65% waste diversion and some people say why not higher. If you saw a press release in the last week or so, we measured the garbage for 2 weeks in September across the entire Region to see just what crosses our weigh scale, so there is no funny business with tonnage and big calculations. It was what was picked up in the garbage truck, the recycling truck, in the organic truck, at the curb outside your house. When we took those weights in Newmarket, congratulations, we had 78% diversion. Whether that is sustainable or not we will see over time. Out of that 78%, we have to take out some rejects because there is

usually 3 to 4% of what is in the Blue Box that is not recyclable and in our organics because that plastic bag you put your waste in is not compostable, so we have to pull that material out. We will take a couple of knocks down from that 78%, and we will get to add back in the grass recycling component and some other reuse components. As a whole for those 2 weeks, York Region did make the 65% diversion rate, and that is a straight weight in the truck, there is no monkey business on the calculation. Congratulations to all of you that are participating because the way we have less material being disposed of by incineration or Energy From Waste (EFW) that we are talking about tonight, the only way we can have less is if you and I, as citizens, produce less garbage to begin with. As long as we have something left, we have to find a home for it and there are not too many options in the world; there is bury it or burn it. There are some higher order technologies with gasifying and things like that, but there are not too many options. That is what our Environmental Assessment (EA) has been looking at. Landfill is not an option; diversion is our option. Recycling is our option, but we still have something left over. What we have been going through since April of 2005



is what would that be. What we had in June of last year, through the Study the Councils adopted, is an EFW solution as the technology family that would be used. The next part of the process was where are we going to build the facility. You have seen some pictures around the back and if you have been at some of the other meetings, we have spent a lot of time talking about what that facility might look like and where it might go. We have had meetings and said, we have short-listed 5 sites across York and Durham Regions. Remember this project is in conjunction with Durham Region. We have partnered with them on many projects, specifically our wastewater treatment. 80% or more of the stuff you flush down the toilet in York Region goes to Durham to get processed. In waste management, we decided to partner with them also and are looking at building it together. We had 5 short-listed sites and over the last few weeks, the Consultants have recommended a single site.

Now just to refresh your memory, I think everybody has a handout here and we will try and go through these and speak, hopefully, to the bigger picture and not exactly to the slides. At the last public meeting, one of the

short-listed sites was in East Gwillimbury and that is not the recommended site. The Consultants' recommended site is what we are calling the Clarington 01 Site. Courtice Road is the interchange at Highway 401 that some of you may be familiar with. We have the Darlington Nuclear Plant over here. We have Lake Ontario across the bottom. That circle is the 1-kilometer radius drawn around it. This piece of property is owned by Durham Region, and this property down here is where they are building a wastewater treatment plant. This site was purchased for municipal purposes some time ago. You can see there are a couple of residences, the green dots on here, just a few residences. North of Highway 401 there are a few more houses and residences that we have to be concerned with. For a lot of you, the big issue is, you did not want the East Gwillimbury site ranked very high. We will show you the rankings for it, but at this point, the Consultants are recommending that the facility be built here, at the Clarington 01 site. There were public meetings the same as this going on in Clarington over the last few weeks with a higher attendance, but we are going through the process here tonight to explain to you where we are at in this process.

When we approached the siting it was through the Terms of Reference (ToR). For those who have not attended other meetings, that is a game plan that the Ministry of the Environment (MOE) has approved that we are following. We are in an individual EA, which is a very strict process where we have to identify our game plan, or how we approach the Study, which is the ToR. We have to go through Alternatives To and the methodology. We look at the technologies, look at the sites and look at the broad range of impacts that this facility would potentially have on the environment. We are looking at a broad range. The process that we have been going through, the steps you can see, we are down at Step 7 right now. At first, we started with methodology and area screening, when we looked at the entire York and Durham Regions. We were trying to find the site. The boundaries that we looked at were within York and Durham Regions. Then we had to take out, by what we call area screening, areas that were not appropriate, such as residential areas, parks, the Greenbelt and the Oak Ridges Moraine. We had entire public meetings on that earlier this year. All of the information, if you want to get into it, is available on the project website, www.ogilvieogilvie.com.



Presentation Outline

Residual Waste Study

- ◆ The short-list evaluation process
- ◆ Evaluation of the short-list of sites
- ◆ The consultants preferred site recommendation
- ◆ Next steps

Slide 3 of 30

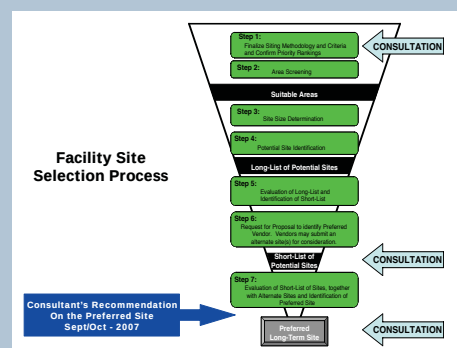


The Evaluation of Alternative Methods

Residual Waste Study

- ◆ Identify the preferred site to locate a thermal treatment facility
- ◆ Completed in accordance with approved EA Terms of Reference, including consultation and stakeholder input
- ◆ Considers a broad range of potential impacts and benefits from the development of the proposed facility

Slide 4 of 30




Public and Agency Consultation

Residual Waste Study

- ◆ Over 60 consultation sessions held to date
- ◆ Information posted on Study website www.durhamyorkwaste.ca
- ◆ Since announcement of short-list approximately 170 comments received and addressed

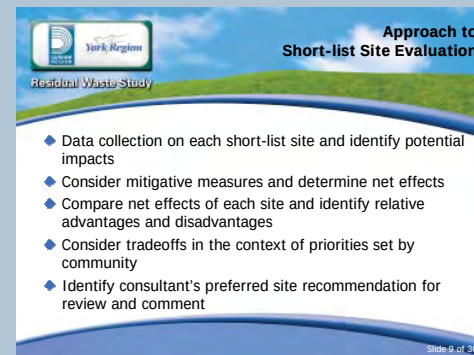
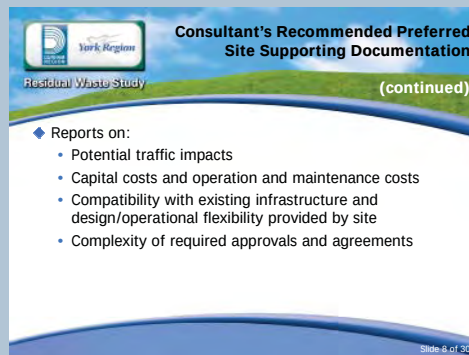
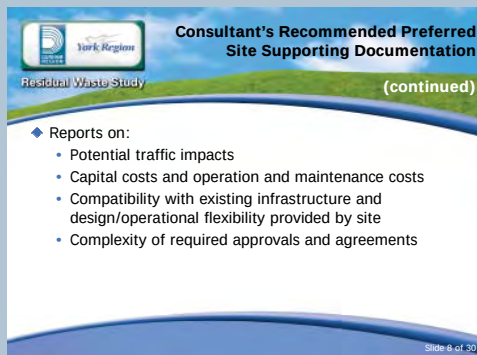
Slide 6 of 30

durhamyorkwaste.ca. Likely, we have a few thousand pages of information, it is a lot to read but a lot of it is summarized on the boards around the room. Please take time afterwards, if you want to ask specific questions, you can likely get those pieces of information from what is on the boards there.

We had our long list of potential sites, the 5 sites that we were looking at and we are down at Step 7 now, where we have the Consultant's Preferred Site. When you look at the other things that we are doing here, a question that people have is how can we determine a site when we do not know the exact technology that we are going to be using. We said that we are going to be using thermal technology and that could be plasma arc gasification, another type of gasification, or mass burn incineration. There are lots of different technologies out there. We have just closed a Request for Qualifications (RFQ) about a week and a half ago, where we went out to the market place and said we are interested in thermal technology. There are 50 or 60 vendors out there who are interested in this project. We had 11 proposals submitted to us a week and a half ago and I think tonight Angelos brought me my set to start reading

through in a technical way. We have to go through these 11 proposals over the next couple of weeks to look at how do we short list or do we short list those potential vendors down to a smaller list. Then in February, we will go for a Request for Proposals (RFP), which is a firm price proposal, where we will invite 5 or 6 companies, possibly, and give them a few months to do their design. As part of the EA and to answer some of the final site questions, we need specific numbers for emissions that the different vendors plan to have. Each technology is a little bit different, they put different air pollution control equipment on the end and as part of our evaluation, we have to do a site-specific health risk assessment and we have to make our submissions to the MOE for our EA and for our operating permit, which is under the Environmental Protection Act (EPA). We will still be going through this process over the next year. We have averages and estimates from existing facilities, but we will be defining those explicitly in the summer of next year. We will be having public meetings at that time again to go through some of those issues with you. The Clarington 01 site looks like it is the best site out of the Short-List that we have gone through.

We have looked at air quality impacts, water quality impacts, and environmentally sensitive areas. We do have some air quality impacts from these facilities; they are not perfect. We do recognize there are emissions from these facilities. The challenge is, are the emissions within regulatory limits and are they very small. For example, burning 4 or 5 logs in your fireplace in your home for one evening has more emissions than if the waste generated by that household were processed at the facility for an entire year. Those are the levels of the environmental controls we have on these plants today. They are tremendous. For those that have not been out before, plants from 20 to 30 years ago had tremendous emissions coming out of the plant. The technology today is different and the emissions levels are dramatically lower. We will be selecting world-class technology, which will be equal to what is in Europe and in the United States and in Asia. There are stringent standards. We also looked at compatibility with existing land uses. You saw in the previous slide, there was not a large residential area around it; it is in a heavy industrial area. It has a sewage treatment plant beside it. We also had to look at the



archaeology and cultural resources. The site is on the shores of Lake Ontario and First Nations certainly inhabited the shoreline of Lake Ontario over history.

Traffic impacts are always one of people's concerns. York Region, in this situation, will be transporting 20,000 tonnes of garbage to this facility a year. That may sound like a lot. That represents 3 truckloads a day of waste. That is not a lot. Today, we are shipping just under 100,000 tonnes of waste to Michigan, as we speak this year. 20,000 tonnes going to Durham Region is 3 highway trailers a day on Highway 401 in that area. So although there is some impact, it is not significant.

Capital costs are certainly an issue. This plant will likely cost \$200 to \$250 million. That is a lot of taxpayers' money. We have to spend it wisely. The maintenance costs in these facilities all have to be included. When considering costs, we look at the building and the existing infrastructure. One of the advantages of the East Gwillimbury site was that it was beside a recycling plant. We already had weigh scales there. The roads were upgraded when we built that facility, when we built the new Regional office there.

This plant location in Clarington, the roads need to be improved, they have not had the capital infrastructure improvements in that area, so there are some trade offs. The East Gwillimbury site was better on existing capital infrastructure. For the Clarington 01 site, we have to spend more money on it, so we were looking at those sorts of things. This plant will be producing electricity, as an example. The Clarington 01 site does not have an existing high quality electrical inter-connection. Our site in East Gwillimbury already has it because there is an industrial subdivision there that has good power lines in the vicinity.

There is also the complexity of our required approvals and agreements. One of the issues we have talked about before is that the East Gwillimbury site is in the Greenbelt. The answer is yes, there are exemptions, and you can go back and forth on whether the Greenbelt Plan applies or not, but that is part of the complexity. That is one reason that the East Gwillimbury site scored lower than the Clarington 01 site.

The Consultants went out and completed data collection on the sites. Currently we

have air monitoring stations set up, one in East Gwillimbury and two in Clarington. Right now, we are collecting background air emissions, they are part of the baseline studies, knowing that when we get to the air emissions, you have to know what the background is like. We are doing those studies right now because as part of the design and when we get to the RFP stage, we have to identify to the vendors, here are the background conditions, so that they can design their emission equipment to make sure they are mitigating any potential problems.

What we were looking at is the analysis. When you look at the board and when I talk tonight, it is not a numerical analysis. On the construction required to fix up roads and electrical wires, you can calculate a number for Clarington, it costs this much and East Gwillimbury costs this much. When we looked at other issues, it is a relative comparison. What we were doing in this analysis, out of the five sites, one advantage is compared to the other four sites. Disadvantages are also compared. That is how this evaluation was done. Remember we are doing a comparative evaluation to select the best site. It is a different approach than some may be looking



Application of Advantages and Disadvantages	
Regional Waste Study	
Ranking	Description
MAJOR ADVANTAGE	• In many cases a significant net benefit would result
ADVANTAGE	• In many cases a net benefit would result
NEUTRAL	• No potential benefits/impacts or advantages off-set by disadvantages
DISADVANTAGE	• Some impact • May require some mitigative measures to reduce potential impact.
MAJOR DISADVANTAGE	• Significant impact • Would require extensive mitigative measures to reduce potential impact.

Use of Community Priorities in Comparative Evaluation	
Regional Waste Study	
• HIGH PRIORITY	–Public health and safety and natural environment considerations
• MEDIUM PRIORITY	–Social and cultural considerations –Economic/financial considerations –Technical considerations
• LOW PRIORITY	–Legal considerations



for because we have to consider some of the tradeoffs. Is this site better than the next? We have to find one site at the end of the day and the Consultants have said that the Clarington 01 site is the preferred one.

I have talked about this evaluation. A site would have a major advantage over another. On page 13 on the bottom, you can see how the 5 sites scored against each other. We ended up with 4 sites; one came off because the vendor on the one Clarington site withdrew his agreement to sell the land. The final evaluation was 4 sites, not 5. We will get to that slide in a bit.

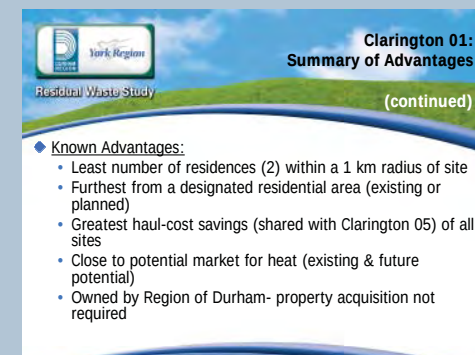
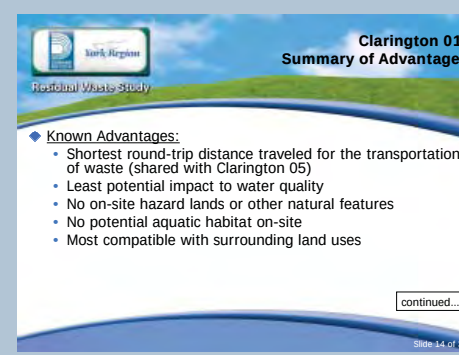
This is the other part of the evaluation, what is important to you when you try to make a decision. You have to have some weighting or evaluation when you look at what is important, and what is not important. The number one priority is public health and safety; clearly, that is what is important. When you look at legal considerations, such as a zoning change, this will result in public consultation. For some surveys that we did, people said, pay more attention to the health and safety than whether we have to change the zoning. Again, for economics, people are

saying, if you have to spend a bit more money to build a better plant that is more important. That is how we did this rating of high priority, medium and low.

We talked about the Clarington 01 site; you have seen it already. Some of the advantages of that site include the following. The majority of the waste is in Durham Region. You may have seen in the paper that York Region is making a 20,000 tonne per year commitment. This facility might be a 150,000 tonne to 200,000 tonne per year plant. York Region, when we started this process a year ago, had an option for sending 120,000 to 150,000 tonnes of waste to this plant. But we have the Dongara pelletizing plant that is being built in Vaughan right now. When we started this EA the contracts were not signed, they did not have all their MOE approvals for that facility. We were not sure which option we would be undertaking. That plant now is under construction, it is at the corner of Highway 27 and the 407. That plant is going to take 100,000 tonnes of our waste, sort through it and produce a pellet, an energy pellet that will be burned in an industrial facility instead of coal or to offset the burning of natural gas. We are looking at burning

it in greenhouses down in Leamington. For the greenhouses, there is a tremendous need for energy there. They have soaked up every kind of wood waste in the area. They are burning bunker “C” oil now because natural gas prices are up. They do not have good quality air emissions from the greenhouses, so we are looking to use this energy pellet to improve the air emissions. It is an affordable application. There will be a small gasifier put into a greenhouse operation. A typical greenhouse in Leamington is 50 acres under one roof. We will put a gasifier in and again we are burning waste, not through the EA project that we are talking about here today, but through the other project that York Region has undertaken which is 100,000 tonnes of waste. We have already committed 100,000 tonnes to thermal application. For this project here tonight, we are only talking about 20,000 tonnes. This is not our big EFW project. That other project did not have to go through this EA process because of how it was structured. This one, because we are looking to build a burning plant, we are going through this individual EA.

Durham Region has the most waste, so when you think of trucking all the waste from



Durham over here that is a lot more trucks. We would have 3 trucks going there everyday. They would have the equivalent of about 10 trucks of garbage trailers if the plant was built here. About the scoring from a transportation cost standpoint, that site had an advantage. It had the least impact on water quality. Although it is next door to Lake Ontario there is no stream on or adjacent to the site. The East Gwillimbury site, as you can see in the diagram in a minute, does have a small stream right on the property boundary and then we have the Black Creek that is a kilometer and a bit away. As for natural features, you saw on the map, it is just a field south of Highway 401. There is not a tree or anything; it is just a flat field, so there are no hazards. There is no stream on the property itself; it is not an issue. With the nuclear plant down the street and the wastewater treatment plant, it is a heavy municipal environment, so it fits from a compatibility perspective.

There are a couple of residences within a kilometer of the site. When you look at the likewise comparison, this site is the furthest away. The Clarington 01 site has the closest potential market for heat in Durham Region. The site has a wastewater treatment

plant next to it, so some of the steam heat that is produced by the EFW facility can be used in the wastewater treatment plant in the biological process that would again produce some gas and help with their sludge management. Also, because it is a heavy industrial area that is not built up yet, this is what is called the Clarington Energy Park Area. This plant will be the first. It will have the ability to set up a district heating system so that as facilities are built around it, they could be heated by steam instead of the example here in East Gwillimbury. The facilities are already there, so the cost to retrofit all those other buildings makes it a disadvantaged site from a steam heat perspective. The property is owned by Durham Region. The East Gwillimbury site is owned by York Region, so it is kind of equal when you look at ownership. You would not have to go through any procurement or purchase issues with the vendors.

Some of the disadvantages of the Clarington 01 site are the following. One of the issues as you saw is that it is close to Highway 401 and there is a lot of traffic on Highway 401. There is potentially lower air quality along that Highway 401 corridor. That is part of the

background studies that we are doing now, to measure it. Part of what we have to do is say, will our plant in that location adversely increase the existing air emissions. When you look comparatively, the East Gwillimbury site does not have the poor quality air shed that the Clarington 01 site has, so actually East Gwillimbury might have scored higher, better than this site. That is why it is one of the disadvantages to this site. The Clarington 01 site needs to have over a kilometer of roads built to upgrade it and if you have been out to the East Gwillimbury site, we did that work back in 2003 and 2004. So all of the roads there have already been rebuilt. That cost is a sunk cost. Here it is a new cost, so it scored worse here. As for existing water and natural gas services, again, at this site, because it is undeveloped in this Clarington Energy Park, that is a new cost and it becomes a disadvantage. Whereas in East Gwillimbury, those service elements are already there, so East Gwillimbury scored higher.

There is a potential presence of species of conservation concern. In East Gwillimbury, we have the red shouldered hawk. There are no breeding grounds on the property itself, but when they went out there, they did see

**Clarington 01:
Summary of Disadvantages**

Residual Waste Study

◆ **Known Disadvantages:**

- ◆ Close proximity to highway 401 and the vehicular emissions related to this transportation route
- ◆ Haul route requires approximately 1.2 km of road improvements
- ◆ Extension of water and natural gas servicing will be required
- ◆ Requires some additional approvals - common for all sites

**Clarington 01:
Summary of Disadvantages
(continued)**

Residual Waste Study

◆ **Potential Disadvantages:**

- Potential for the presence of species of conservation concern
- High potential for the presence of prehistoric (common among properties along the lakeshore) and historic archaeological resources
- Extension of electrical infrastructure may be required

Slide 17 of 30



**East Gwillimbury 01:
Summary of Advantages**

Residual Waste Study

◆ **Known Advantages:**

- Potentially better background air quality relative to other sites
- No parklands within 1 km radius of site
- No wooded areas on-site
- Low to Medium potential for the presence of historic archaeological resources
- Lowest estimated capital cost to develop site

continued...

the hawk and said therefore we have to make sure we look into it, as we get further into our Study over time. I mentioned earlier about prehistoric and historic archaeological resources along Lake Ontario. The same thing is potentially present along the Black Creek. We know that a First Nations community did live in these areas. In the initial archaeological finds, we have not found any evidence that is significant. I do not know if we even found anything at all, but given this stage of the Study, they went through the maps. One of the things that was on the Clarington map was a dot from 1857 or something like that, and they are not sure on that 150 year-old map if that dot was a house, or a grave marking, or what it was. When we go further in, we have to pay a little bit of attention to what that dot was on the map and investigate it as we do our designs. The electrical infrastructure at Clarington is not sufficiently built into that area yet compared to East Gwillimbury, so it was a disadvantage at the Clarington 01 site and an advantage in East Gwillimbury.

Here is a site that you are familiar with, or most of you will be. Here is the East Gwillimbury site. This is Woodbine Avenue

to Highway 404. We have Davis Drive, and here is the site. This building beside it is our Blue Box recycling center and the Region's Transportation and Works office building. Some of you live in these homes around here and that circle is the 1-kilometer radius. I have talked a lot about how this site was evaluated and at the end, there was nothing found on this site that said it was unacceptable. It scored high in some areas, lower in others. At the end of the day you will see, as on that last slide, it is a neutral by comparison. So there are no showstoppers, but it is not the preferred site at this time.

There are no wooded areas on the site. Again, we talk about the site, and this is some of the discussion we had before with residents. It is the perimeter of the site, which is the red box. You can see the wooded areas, the wood lots near Warden Avenue. The Clarington 01 site is out in the middle of nowhere, from a vegetative perspective. Again, because we have developed the site previously, we have electrical connections, water, natural gas and roads. At this site in East Gwillimbury, one advantage is because we have weigh scales out there we would not have to build

weigh scales. That is not a lot of money, but a couple hundred thousand here and there adds up. There are some synergies with the existing site and we have already paid to improve the roads as a result of the infrastructure that is there today.

The disadvantages for the East Gwillimbury Site, as I mentioned earlier are as follows. If Durham Region has to ship all of their waste over here, that is a lot more trucking. It is not a lot of trucks, but it is a cost when you look at the comparison between the two sites. In the analysis, it is cheaper to take York Region garbage over to Durham Region, than it is to bring Durham Region garbage over here. The onsite watercourse, which is the ditch in between the site and the recycling center, although it is dry most of the year, it is deemed as a cold-water fishery. We had a problem with that, but that is the ruling that the Federal Government has put on it. When we built our recycling plant out there, we had to make sure we designed our storm water management as if that was a cold-water fishery, although it is a dry ditch most of the time. The Greenbelt, I have mentioned already. One of the things that I have not talked about is the surplus area. The Clarington 01 site is

**East Gwillimbury 01:
Summary of Advantages**

Residual Waste Study (continued)

◆ **Known Advantages:**

- Electrical grid connection available at site
- Site serviced by water and natural gas
- Potential synergies with York Region Waste Management Centre
- No road improvements required to haul route
- Owned by York Region and property acquisition is not required

Slide 21 of 30

**East Gwillimbury 01:
Summary of Disadvantages**

Residual Waste Study

◆ **Known Disadvantages:**

- Longest round-trip distance traveled for the transportation of waste
- On-site watercourse (typically dry) classified as coldwater fishery
- Site located in Greenbelt Plan area, although not constrained by development requirements within Greenbelt Plan

continued...

Slide 22 of 30

**East Gwillimbury 01:
Summary of Disadvantages**

Residual Waste Study (continued)

◆ **Known Disadvantages:**

- Designated estate residential within 1 km radius of site
- Least haul-cost savings of all sites
- Least surplus area of all sites
- 2 residences along proposed haul route on Davis Drive
- Requires some additional approvals - common for all sites

Slide 23 of 30

**East Gwillimbury 01:
Summary of Disadvantages**

Residual Waste Study (continued)

◆ **Potential Disadvantages:**

- Potential for the presence of species of conservation concern
- High potential for the presence of prehistoric archaeological resources
- Highest potential impact to water quality
- Potential aquatic habitat on-site
- Limited potential market for heat
- Extension of sewer may be required
- Regional Official Plan amendment may be required

Slide 24 of 30

a bigger piece of property. At York Region there is a lot of pressure for other facilities to be built on that site now. So if we were to use the East Gwillimbury site, we would likely end up with less than that red box that is on there because they want to put a couple of other buildings on that site. There was not much surplus area that could be used. There is an opportunity to expand the facility over time to 400,000 tonnes. If you wanted to have more room on the site for buffers, we would want to put in some nice trees and things like that. All of that takes up room and the East Gwillimbury site has less opportunity than the other sites to put some other visual features on it. This site was the only site that had homes along the haul routes. So coming off Highway 404 it does pass by residential units, whereas at the Clarington 01 site, the trucks are not passing directly by any homes.

Economics are key. Plants around the world sell their steam heat. They make more money selling steam than they do making electricity and this site has the least potential to sell that steam. You might be able to find some users, but it would mean looking at an expansion of the urban area, the industrial area up near Green Lane or north of the site, before

you would really start to see if there was a use for steam. The existing subdivision is pretty well built out right now and we would need an Official Plan amendment to put the facility on this site, which is one of those legal regulatory issues that we have to deal with if we go to this site.

The Clarington 04 site was not selected, again that being a disadvantaged site, so I will not talk further about it. If you want some more details afterwards, we can talk about it.

The Clarington 05 site was not selected. One of the main reasons it is coming off the list is that Highway 407 is going to be coming down at this location and when they bring Highway 407 down to Highway 401, as they build this new interchange, and all the collector lanes that are going to go into it, this site gets cut almost in half with setbacks and infrastructure as Highway 401 is widened. This site really dropped off because there is not enough land left. When you look at the Clarington 05 site, one of the issues here would be some development on the interchange also, which will lead into the property. We also have this stream going through the middle of the site. If you lose some area to the Highway

401 expansion, you end up having to put the plant down in this area here, and again it is an awkward shaped site. It ends up being a small site. There are other issues that we can go through, but those were the primary reasons why those other two sites fell off the map and they were both owned by private vendors.

Public health and safety, and the natural environment are the highest priorities, followed by social and cultural considerations, economic/financial considerations, technical considerations and then legal considerations. You can see each site, and this is a relative comparative analysis, the advantages compared to the other sites. Some people might say it is an advantage where it says major disadvantage. A major disadvantage to the environment that was maybe in the details, but in this chart it is a disadvantage compared to the others. The report is online, I do not think we have any copies here, you can download it off our site and there are more detailed tables on each of these sites with more analysis. The background information is available if you wish to go through that information. But in the end, we ended up with Clarington 01 as being the



Summary of Comparative Evaluation Results				
Regional Waste Study				
Environmental Category	Clarington 01	Clarington 04	Clarington 05	East Gwillimbury 01
PRIORITY: HIGH				
Public Health and Safety and Natural Environment Considerations	ADVANTAGE	NEUTRAL	MAJOR DISADVANTAGE	DISADVANTAGE
PRIORITY: MEDIUM				
Social and Cultural Considerations	ADVANTAGE	DISADVANTAGE	DISADVANTAGE	NEUTRAL
Economic/Financial Considerations	ADVANTAGE	DISADVANTAGE	NEUTRAL	NEUTRAL
Technical Considerations	ADVANTAGE	NEUTRAL	ADVANTAGE	ADVANTAGE
PRIORITY: LOW				
Legal Considerations	NEUTRAL	DISADVANTAGE	DISADVANTAGE	NEUTRAL
Overall:	ADVANTAGE	DISADVANTAGE	DISADVANTAGE	NEUTRAL

Next Steps

Regional Waste Study

- ◆ Open Houses in both York and Durham:
 - Durham Region - October 3rd in Bowmanville
 - Durham Region - October 9th in Courtice
 - York Region - October 23rd in Newmarket
- ◆ Public Polling to be completed in October
- ◆ Other events as requested/required

advantaged site. East Gwillimbury is neutral in comparison and the other two dropped off the list.

We will be doing some public polling. The reason we are doing that is that many times people that have come out to public meetings are the people that have a negative view of things. It is “not in my backyard”; versus how do you look at the larger picture. So what we will do is a public opinion poll presenting some of this information to get the wider regional view because waste management is a region-wide issue; it is not just an East Gwillimbury issue or a Newmarket issue. Although the neighbours have a lot of input and we need to make sure that we deal with their issues, we have to deal with waste management on a region wide basis.

The timing that we are going through right now, some of the documents that went out a couple of weeks ago, we are looking at having public comment in by the end of October. We have had some requests to extend those deadlines and now we are looking at December 10, 2007 as the cutoff date for comments. For comments you put in today, there are opportunities still for us to consider

them, take a look at them and respond, so we will be doing that. We are looking to go to the two Regional Councils in January. That is a change in schedule if some of you have talked to me over the last couple of weeks. We were looking at having this decision made in December, but again we need to spend a little more time dealing with some of the comments that have come in over the last few weeks. We are taking the time to do the analysis right, prepare the answers correctly, make sure we have got things done so that when we present to Council we can get a decision in January. I mentioned our Request for Qualifications that was issued. It is closed now. We will be going through the short list of vendors so that we can get more specifics on the technology and that covers some of the questions you have. How it relates specifically to the health risk assessment, we will be doing that as we get more information through this process. I think what is key here, we are two years into this process, we have at least another year before we are done this EA because we still have a lot more studies to do and we have different stages. We have gone through the first technology stage and that was finalized. We are trying to go through the finalized siting stage, that is the second

part. Now we get into more detailed analysis, we get detailed vendor specific information so then we can finish the health risk assessment issues. We will be having public meetings, for sure. We will have them next year when we talk about specific technology and the site-specific health risk assessment, as we finalize our EA documents for submission to the MOE. That will be about this time next year and what I can answer today is that we will have a meeting at least through the end of the winter or spring time. We will not have anything new, just to make sure we provide an opportunity for everybody to remain involved in this project. So that is our timeline.

The Clarington 01 site is the preferred site. We are collecting background data. We are preparing our report, going through the last levels of peer review at Clarington and we will be looking to finalize this decision with our elected officials in January.

Dave Merriman, our technical consultant is here to help answer questions. Tonight we did not bring our health risk specialist Chris Ollson. That was a meeting we had last time, so if you want to get into detailed health issues, we did not bring a medical



Schedule/Timeline for Project Completion	
Project Milestone	Estimated Timeframe
Recommendation of Preferred Site	September 2007
Consultation of Consultant's Recommended Preferred Site	September to December 10, 2007
Council Decision of Preferred Site	January 2008
RFQ Issued	July 12, 2007
RFQ Closes	October 11, 2007
RFQ Evaluation Period	October to December 2007
Preparation of RFP Documentation	July 2007 to January 2008
Council Approves Qualified Respondents	January 2008
Council Approval to Release RFP	January 2008
Issue RFP	February 2008

Slide 28 of 30

Preparation of Interim EA Planning Document	
- Interim EA document will be issued late 2007/ early 2008 and will document: - Terms of Reference process - Evaluation of Alternatives To and identification of preferred technology- thermal treatment - Evaluation of Alternative Methods and identification of preferred site- Clarington 01 - All consultation - Tasks to be completed prior to submission to the Minister of the Environment	

Slide 29 of 30

Questions	
-----------	--

Slide 30 of 30



doctor of health tonight because that was not the intent. We have some Jacques Whitford people here that might be able to help. Ruwan Jayasinghe is with the Risk Assessment group. Again if we get questions we cannot get to, we will write them down and get back to you.

QUESTION & ANSWER SESSION

Question: Andy Campbell said it is not a preferred site at this time in one of his comments about East Gwillimbury. Does that mean it could come back to this site? For example, if the people of Clarington have a revolution over this thing and say, no way is it going here, is it a done deal for there, or will they listen to the people?

ANDY CAMPBELL: In our siting process, we have the Clarington 01 site. If for political reasons or because background air sampling determines that it is a totally unacceptable site, it does not move forward. Now the question becomes in our process, what do we do. Do we go immediately to the second choice, being East Gwillimbury or do we start some other process? We have not contemplated that yet. What is key, that

I wanted to bring up and why I mentioned it the way I did, is, this site is a municipal piece of property and at some point will have municipal infrastructure built on it. What that municipal infrastructure will be I do not know. If we build an incinerator EFW plant in Durham there is nothing there. Some people have said if this project falls apart would we look at a smaller plant within York Region alone. The answer is, we might and then would this site be back on? The answer may be yes, but it would be in a whole new process, if we end up going down that road. I do not want anybody to leave saying this site is fundamentally flawed and will never be used for anything. I do not want anyone to go away and come back in a couple of years and say, "Andy Campbell said we would never build on this site".

Question: I hope that everybody realizes that Lake Ontario is one of the world's largest suppliers of fresh water and there are millions of people that rely on drinking it, also eating fish from it. I have a National Geographic magazine here, 1972, a 20-page article. Back then that was quite the article and they recommended in the United States that they should not have incinerators

because they have methyl mercury. Also it is mentioned a few times, stuff that is manufactured when it is burned does release its mercury content. Now, methyl mercury does get into the brains of people quite readily, more than other toxins. During the election this year, it was said that the rate of autism has increased about three times for the number of children that suffer from it. One of the things that was looked at was the environment, in that it could be a cause along with other diseases. They have not proven which part of the environment is causing this in children. Now could it be the mercury in the atmosphere that is doing it? Who knows? But I think before a thing like this goes ahead there should be one red flag. If anything, spend \$200 million so that technically they can devise a system that will work 10 years from now and you do not have any worries. Because something that you stop now, could save billions in the future and that is the way I look at things. One Swedish doctor who did help with the environment, he helped to get rid of some of the problems in Sweden from methyl mercury. It was a matter of human failure. We cannot see beyond immediate needs. Mercury did the job; we used it and trusted the earth to absorb it. Not until



people and birds died did we find out how wrong we were. I could talk from experience, in Georgina 35-years ago, they started an aluminum recovery program. It is called the smelter in Keswick. The people were against it, but they were told do not worry; this is state-of-the-art equipment. Now the person walked off the site in 1997, 10 years ago and the mess he left, 80,000 tonnes of toxic waste is still on that site and it has not been removed yet. It is moving to the river and Lake Simcoe. That is going to cost millions to clean up and back then it would not have cost one penny if they had listened to some experts on it. That is all I have to say. Be careful of what you wish for, it could backfire.

DAVID MERRIMAN: Just one point, 20 years ago, the emissions from these kinds of facilities were much greater than they are today. They have been dropped thousands of fold. As discussed at previous public meetings, we have completed a generic health and ecological risk assessment where we hypothesized a water body right at the point of maximum impingement and a First Nations community eating the fish out of that water body, sort of a subsistence diet. That assessment showed that the facility

did not pose any unacceptable risks. The next phase in the Study, now that a site has been recommended, will be to do a site-specific risk assessment to look at what is actually there. The impact on Lake Ontario will certainly be taken into consideration in the modelling of that. You mentioned some European studies. I should point out that Germany, and most of Scandinavia, mandates that this is how the waste that is left after recycling must be managed. They have said it is not a choice. This is the law, as to how you should manage waste. Because they have done extensive environmental studies, they found that the best way to manage waste is by recycling and diversion. But there are studies, along with ours, that show there are significant environmental benefits to this approach compared to landfill and compared to remote landfill. The Europeans who are as health conscious as we are have been doing this for a number of years and this is their preferred way of managing their waste. But to your point, a comprehensive site-specific health and ecological risk assessment will be undertaken as part of the detailed studies on the site.

FACILITATOR: Is that going to be done before the decision is made?

DAVID MERRIMAN: Once the decision on the preferred site has been made, then a detailed site-specific study will be conducted as part of the next round of detailed studies. The generic health and ecological risk assessment was done and was presented at one of the meetings here. Now when we move into the next phase, after the site is selected, there will be a further detailed study on the health risks at that preferred site.

FACILITATOR: The person's question was based on an older article; your question was that there was a risk for mercury from burning incinerators. You were asking do we have that risk here.

Question: They had mentioned in the prior meetings that there is a small risk.

FACILITATOR: I am just trying to narrow it down a bit, is there a risk of mercury?

DAVID MERRIMAN: This generic health and ecological risk assessment that was done said there was no unacceptable health risk from mercury, based on that level of emissions, which was not based on the specific site. Now

OUR LANDFILL CAPACITY
IN MICHIGAN ENDS AT THE
END OF 2008, SO WE HAVE NO
LANDFILL CAPACITY AT THE
END OF 2008.



that study will be done in more detail on that site to confirm that fact and if there is an unacceptable risk I do not believe the project would proceed.

Question: I just want to say this, 35-years ago, it has to be better now, the emissions, but also in 35 years, you know how much will be burned compared to 35 years ago? Nearly everything, as we now have more manufactured goods than 35 years ago, with different chemicals. All this will be burned now; it was not burned 35 years ago.

FACILITATOR: We understand your concern and Dave is saying that once the preferred site is selected, they are going to do the site-specific detailed health assessment and if it turns up anything risky...

DAVID MERRIMAN: It is unlikely the facility would be approved.

Question: Just a comment on that, I am sure, we have held these sessions before and as the gentleman mentioned, we have been assured and you could probably repeat that same statement, these things are safe and so on and so forth. They might be, we do not know.

Andy has already congratulated everybody on the outstanding job they have done on recycling. I think it was great. I would also like to make a comment that the municipal governments have done an outstanding job on educating everyone and providing information on how to go about doing this so that we have achieved the high level so far in recycling. I would also like to say to Andy's group that they have done an outstanding job in finding sufficient capacity for our solid waste with the Dongara facility and the Green Lane facility. If we look at the diversion rate that we are at today, if it is roughly 65%, I think there is no reason why we cannot achieve higher. This is just out of the gate, we are at 65% and with the lawn waste and so on, which gets recycled I think that number will go higher. So if we look at the amount of solid waste that we have left over, the Dongara facility pretty much provides sufficient capacity for us, even with the growth of the Region. We do have some additional capacity at Green Lane, so for the next 20 or so odd years, we do not need this 20,000 tonne capacity. I would like to recommend that York Region completely withdraw from this project because there is no reason for us to be spending the money; there is no reason for us to be involved in this

project at all.

ANDY CAMPBELL: Just for clarification, our Green Lane landfill contract ends at the end of 2022, so although we have landfill capacity today, we do not have any in 2022. Our landfill capacity in Michigan ends at the end of 2008, so we have no landfill capacity at the end of 2008. The Dongara contract ends at the end of 2028, so we have no capacity at all for any waste in 2028. Part of what this process is, is looking longer than that. The term of this EA is 35 years. The world may be different 20 years from now; I hope it is. But we are trying to plan, through this process, that 20,000 tonnes of waste into this facility is a base load, a minimum load that gives us some protection that we will be able to have a home for our waste in 2025, in 2028. Part of our agreement with Durham is if we cannot find another home, say we have 50,000 tonnes worth of waste in 2028 and there is no landfill capacity in Ontario, our agreement with Durham is that we can expand this plant to meet our needs. Part of this 20,000 tonnes a year is our insurance policy in York Region to ensure that we can meet our disposal needs 20 years from now. So I certainly agree with you, you could look at it in the

THAT IS PART OF WHY
IN THIS PROJECT WE ARE
SAYING WE WANT MUNICIPAL
OWNERSHIP OF THIS
FACILITY, SO THAT WE CAN
GUARANTEE SOME LONG-
TERM LONGEVITY.



short term and say we do not need to do this project today. But think about 2028 and none of us know what 2028 is going to be like. This project is our long term insurance policy for York Region and that is what we are trying to set up at this point.

Question: I guess what we are saying is if that Dongara facility only has a life expectancy of 20 years, would they shut it down after that?

ANDY CAMPBELL: Our contract is for 20 years, so whether there would be an option to extend, would that plant have a useful life after 20 years? We do not know at this point, but there is no provision in that contract. They do not expect that plant to have much of a useful life after that.

Question: But we expect an incinerator to have a much longer life cycle?

ANDY CAMPBELL: One of the challenges is, if we are part owners, we can know through our rebuilds, our maintenance and our financing that it will be there 20 years from now, but with a private contractor, for those of you who are in business, when you have a contract you do not invest in an asset that you cannot

resell. That is the difference. That is part of why in this project we are saying we want municipal ownership of this facility, so that we can guarantee some long-term longevity.

Question/Comment: We are going to be paying money for the next 20 years into this facility and we might have to spend all kinds of money to upgrade this thing or do whatever in 20 years time. We could build one, a better facility because I am sure there is going to be much better technology at the time.

Question: Mine is really a logistic thing in terms of your map, the map with a circle around the East Gwillimbury site. Just outside the circle, you are missing 3 or 4 houses in your little green dots, just if you are keeping track of them, if the residences seem to be relevant. In your top right-hand corner, you see that blue pond, just off to the right of your circle, you are just about on top of my house.

ANDY CAMPBELL: We know the houses are there. For the presentation, they just put the dots on some of them.

Question: You have dots on everybody else's house.

ANDY CAMPBELL: No, just as you go further north, but thank you.

FACILITATOR: No, but that is very logical because it looked like the green dots were the only ones. It needs to be reflected a little more accurately.

Question: One thing I was wondering about these plants, do we have to keep putting garbage in them to keep them going or can we go up and down? Or does a fire have to keep burning in them?

ANDY CAMPBELL: For an EFW plant you start them off with natural gas to get them going, then they are self sustaining. These large plants, you cannot turn them off quickly and turn them on quickly, so you do want to have a constant amount of waste going in. The challenge, and that is what we have not done yet, is to determine the final size of this facility. Because you could size it for a base load, say 150,000 tonnes. You could fill up between the two Regions, we have 170,000 tonnes, so 20,000 tonnes a year automatically

THE CHALLENGE IS IF YOU BUILD IT FOR THE PEAK, YOU END UP WITH PROBLEMS WHERE YOU DO NOT HAVE ENOUGH GARBAGE TO FILL IT UP AND THEN WHAT DO YOU DO.



FROM THE GOVERNMENT SIDE, THEY HAVE STANDARDS AND THEY ARE DEFINED.

goes to landfill, so you have got that base load. You could also size it for a peak, so you design it for 200,000 tonnes and some weeks or days you have on a daily basis that equivalent and other days you do not. I will use Peel Region as an example. The Peel Region facility is designed for 170,000 tonnes of waste. It runs at around 150,000 tonnes and they put that in, year in and year out. They have another 100,000 tonnes or more that goes to landfill every year. The challenge is if you build it for the peak, you end up with problems where you do not have enough garbage to fill it up and then what do you do. Some people are really worried that we would start putting recyclables in to fill up that gap. Our challenge, when we build the facility and size it, is you do not make it too big, you make it for the size you need for that base load and then on a daily basis you are still sending things to landfill.

Question: So it does need a constant supply of garbage?

ANDY CAMPBELL: That is what works best.

Question: So then what is to stop us from, if it is a private...it is going to be a private plant?

ANDY CAMPBELL: It will be owned by the Region.

Question: So then if it needs garbage, what is to stop us from wanting to put more in there?

ANDY CAMPBELL: The physical size of the site.

Question: If we want to reduce the garbage that we are creating right now, if we need to keep putting in garbage, then we need to keep making garbage?

ANDY CAMPBELL: Well that is when we look at what is going to Michigan. There are nearly 3 million tonnes of waste going to Michigan and that does not have a home either. If we said we do not have enough residential garbage then you start to get garbage from other places. The key in the first place is not to make it too big so you do not get into that jeopardy where you have to find 100,000 tonnes of other waste.

Question: But if we have that plant, we have to keep on making garbage to satisfy the hunger.

ANDY CAMPBELL: Yes, that is why you want

to size it so it is not too big because if you are basing...

Question: So we have to keep feeding it?

ANDY CAMPBELL: That is correct.

Question: You said with mercury or whatever dioxins, or different chemicals and things, there were not any risks that we can accept. What risks are acceptable or how many risks?

RUWAN JAYASINGHE: From the government side, they have standards and they are defined. If it ends up in our modelling that we have too many dioxins being emitted then that is where Dave Merriman had mentioned earlier that we would not get a permit, so the design has to be such that it meets the regulatory requirements.

RUWAN JAYASINGHE: It is an unacceptable regulatory risk. That is what you are talking about, government standards, not a social risk. It is a regulatory risk, so under regulatory risks it is acceptable. We go by Health Canada, MOE, United States Environmental Protection Agency (USEPA) standards to base that risk.

THAT IS WHAT YOU
ARE TALKING ABOUT,
GOVERNMENT STANDARDS,
NOT A SOCIAL RISK.



SO THE THEORY IS THE
GOVERNMENT HAS SET
STANDARDS THAT ARE SUPPOSED
TO PROTECT OUR HEALTH AND
WELL-BEING AND THE STUDIES
SHOWED THAT WHAT IS BEING
PROPOSED IS NOT GOING TO
EXCEED THOSE STANDARDS.

Question: And that basically means we are only allowed “x” amount of cases of cancer or...

RUWAN JAYASINGHE: For cancer, the incidence rate is 1 in a million, so if there is a 43% chance of cancer in women you cannot tip the balance over that. If there is anything over 1 in a million then that is unacceptable and then it will not go through, so right now it does not tip that balance.

FACILITATOR: So the theory is the government has set standards that are supposed to protect our health and well-being and the studies showed that what is being proposed is not going to exceed those standards.

RUWAN JAYASINGHE: Exactly, based on the generic risk assessment study that we have done so far.

Question: So that study says that we can accept a certain amount of cases of cancer?

RUWAN JAYASINGHE: That is what the government states. There is an acceptable incidence rate of cancer. 1 in a million, that tipping balance, it is not 1 in a million

people will die of cancer. In the population right now, there is a 43% risk of getting cancer. So if you get that extra 0.0001% that is unacceptable (e.g., the risk rises to 43.0001%).

Question: I was just more talking about the fact that we accept cancer.

RUWAN JAYASINGHE: With that, if you did not attend the health risk assessment public meeting, when you look at the modelling that was done; there is a chart with a bunch of chemicals and a bunch of receptors. When we are saying we have an unacceptable risk in that table, there is a red box. Some flags did come up for certain chemicals, which show we have to mitigate them. If we have that analysis and went to the Ministry with red flags in it, we are not going to get approval and that is where we have to do the site-specific analysis later this year and into next year. Because when we do the modelling, if we end up with any red flags and we cannot mitigate those through further technology, the facility will not get approved.

Question: I do appreciate the spectrum of coverage that you were able to provide us

tonight. It certainly makes the picture fairly clear in terms of how the decision was made and what the decision was and the relevant advantages and disadvantages. I think that is a really positive way to present the decisions that were made in the process. The questions that I have are somewhat innocuous, at least they may be. We still want to come back and do the issue of economics, but we want to deal with that with the Regional Council. We want to deal with that with the Solid Waste Management Committee because I do not think this is the forum to bring those issues up. A couple of questions, one is with respect to the human health in the ecological risk assessment study that was done. The question that I have is, is that the same model that will be picked up and replicated once a decision has been made? If a decision is made with respect to Clarington 01, is that the model we will be using?

RUWAN JAYASINGHE: It will be the exact same model, but this time it will have more site-specific data from the actual site. The first, the generic study, used all regional data, but once the site has been picked, we will put more specific data into it and get a more accurate measure of the risk around that site,

IT WILL BE THE EXACT SAME MODEL, BUT THIS TIME IT WILL HAVE MORE SITE-SPECIFIC DATA FROM THE ACTUAL SITE.



WHAT HAS BEEN DONE HAS BEEN PEER REVIEWED, BOTH BY INTRINSIK AND DR. SMITH, THE PROFESSOR FROM UNIVERSITY OF TORONTO.

Clarington 01, if that is chosen.

Question: So the same model with the same mathematical assumptions and the same equations?

RUWAN JAYASINGHE: The assumptions might change; it is very conservative right now. Now that we actually know the site, we can actually be more specific in our assumptions and the conservative nature of the model itself. Once we get more data, site-specific data, it just makes it more accurate. Right now, the model is very regional, very generic.

Question: At some point, is that going to be open to public scrutiny and public questioning?

DAVID MERRIMAN: I believe so, it should be.

DAVID MERRIMAN: Yes, it currently is today.

DAVID MERRIMAN: What has been done has been peer reviewed, both by Intrinsik and Dr. Smith, the professor from the University of Toronto. Clarington hired their own independent peer reviewer. There have been no significant issues raised by any of those

peer reviews and issues that have been raised have been addressed.

FACILITATOR: So you are saying, Dave, that the same process is going to be used on the site-specific study, it would be peer reviewed?

DAVID MERRIMAN: I would expect so.

FACILITATOR: And with that information, the whole study is going to be available to the public?

DAVID MERRIMAN: I would expect so.

ANDY CAMPBELL: Yes, all the documents will be public.

Question: I have a couple of small questions, one goes to the issue of the RFQ. I think you suggested that there were about 11 proposals that have come forward.

ANDY CAMPBELL: Yes, we had 11 submissions.

Question: The process then is to select or short list the group?

ANDY CAMPBELL: With respect to those 11 submissions, we have two parts of the review. The first is we had some mandatory financial criteria that we had to go through. Then we have to go into a technical evaluation. One of the primary things we are looking at in the RFQ, which is a broad tender call, is people had to demonstrate that they have the ability to do a project of this magnitude. We are looking at the team that they put together and the financial backing that they have. They had to have at least 2 reference plants of a similar size and nature that have been running for at least 2 years so that they could provide real air emission data. That is one of the keys, as a lot of people have a bench scale or they have a great idea, but they have never built a plant and they do not have any real data that we can use to enter into our modelling. The other thing that they have is reference facilities so we can go and “kick the tires” on these plants, get the real air emissions, talk to the neighbours, talk to the municipal owners, talk to the regulatory agencies and that is all part of this RFQ process.

Question: This is a follow up to that. Once you have in fact short listed a small group of proponents that will go forward, are you

YES, BECAUSE THAT WOULD BE OUTLINED IN THE RFP DOCUMENTS. WE WOULD BE TELLING THE VENDORS AS PART OF THAT PROCESS THAT THEY WOULD NOT BE GETTING ANY STIPEND OR ANYTHING FOR SUBMITTING.



STAFF MIGHT HAVE TO GO DO THAT IF WE CANNOT GET SUFFICIENT INFORMATION.

planning to bank roll them to any degree to propose final models or to work up their models to any further degree?

ANDY CAMPBELL: We have not prepared the final RFP document at this point. We have not been talking about giving any stipend to prepare those documents. These vendors would be investing likely a quarter million dollars plus to prepare their submissions. If we invite 5 companies, 2 or 3 may choose that they can afford to spend a quarter million dollars putting together a proposal. We are not proposing at this time to pay them for their proposals.

Question: Presumably, that will be public information if and when that happens?

ANDY CAMPBELL: Yes, because that would be outlined in the RFP documents. We would be telling the vendors as part of that process that they would not be getting any stipend or anything for submitting.

Question: I guess somehow related to that, you talked about “kicking the tires”. Are any of our political representatives, will they be involved in looking at those sorts of

proponents and other plants that they may have built or have they in fact done that already, or what is the situation?

ANDY CAMPBELL: I have not gone through all of the documents to see what the reference facilities are because I am getting them tonight. I know out of the companies that were named, I think Councillors from Durham Region and some from Clarington and some from York Region have been to at least, what I believe would be, half of the reference facilities. In our evaluation process right now, we do not have an element for elected officials to go and “kick the tires” as part of the short-listing process. Staff might have to go do that if we cannot get sufficient information. Durham Region politicians went to Europe early in the summer, in July. Three York Region elected officials have gone over in the last 18 months. They have been to 3 or 4 plants in Europe.

Question: I understand. I guess in relationship to that is it possible to, is there any vehicle whereby we can see who has been so we could talk to those people as well?

ANDY CAMPBELL: Are you saying a list of the

elected officials that went on these tours?

Question/Comment: Yes I am.

ANDY CAMPBELL: I believe all those are public somewhere, but I am sure that we could get that list.

Question/Comment: I do not know where I would find that information.

ANDY CAMPBELL: I do not think we have a list on our website or anything like that

FACILITATOR: Is that something that could be provided in the summary? If it is public domain information we could just include that list in the summary because all you are trying to find out is who went to which plants.

Question/Comment: I guess the question is one of timing.

FACILITATOR: We will look after getting that list and putting it in the summary.

[Comment added later: York Regional Councillors Ferri and Heath visited European facilities in 2006.]

THEY TALKED ABOUT ALL THE FACILITIES THAT THEY VIEWED AND WHAT THEY SAW WAS FAIRLY DETAILED IN THE REPORT AND VERY WELL RECEIVED BY DURHAM COUNCIL.



OUR OPTION WOULD BE TO GO TO A BUFFALO EFW FACILITY BEFORE WE GO TO LANDFILL.

ANGELOS BACOPOULOS: What I can tell you, is that a report has been prepared that has gone to Durham Council that reported on the trip that the Councillors went on last July. They talked about all the facilities that they viewed and what they saw was fairly detailed in the report and very well received by Durham Council. It is something that we could send over from Durham to York Region as something that you might want to share.

Question: Were the names of the Councillors in that report Angelos?

ANGELOS BACOPOULOS: I think the names of the Councillors were in the report. I think all of the names of the people that were on the trip were included. I know that the facilities were all listed in a sort of mini version of what they saw in each one of the facilities.

ANDY CAMPBELL: I will make a commitment. We will get the report and if the names are not in it, then we will see if there is any protocol why we cannot get those names for you.

Question/Comment: That is acceptable.

Note: Included at the end of this Summary is the "Durham/York Residual Waste

Environmental Assessment Study – Staff Report on the Regional Municipality of Durham Energy From Waste Delegation to Europe, July 2007".

Question: Andy started this evening by congratulating everybody about the diversion rate of the new Green Bins. I have heard a rumor that in fact the material from the Green Bins has not actually been recycled, how true is that?

ANDY CAMPBELL: It is being recycled. Our challenge right now in that program is we use facilities in London, Quebec and in Michigan right now. In the last 3 weeks, the Quebec MOE or equivalent shut down the one facility that we were using in Quebec. We have switched to a separate second supplier in Quebec. Depending on what you have heard, in that transition, we had a glitch, but we have not landfilled any material. We do have a challenge. The program has been extremely successful. Every ounce of organic waste processing capacity in Ontario, Quebec, New York State and Michigan is fully consumed today. We are struggling. Our suppliers are handling the material, but it is in jeopardy. We have a tender out that is on the streets

right now to build 50,000 tonnes of new capacity. The siting of an organics facility in York Region is also a challenge, so we have made an agreement with Dufferin County. We are going to be building an organics processing facility in Dufferin County and that will come on line in 2009. We do have an issue; we have not landfilled it yet. I do not want to landfill it. Our option would be to go to a Buffalo EFW facility before we go to landfill. That would be my recommendation, but we are not at that point yet.

Question/Comment: My point is that a previous person said, "be careful what you wish for". It is great to think you have a solution, but if you do not really have an end solution, you really do not have a solution.

ANDY CAMPBELL: I agree.

Question: This leads me to another point, which somebody mentioned that the government set standards to protect the health and well-being of the public, is that correct?

ANDY CAMPBELL: That is the purpose of regulation, yes.

Question: And experts believe that the risk is

ONE OF THE BIGGEST DIFFERENCES BETWEEN THOSE TWO PROJECTS IS THAT IT IS A PRIVATELY OWNED SITE.



MAYBE IT WAS WHEN IT WAS SITED, AND THAT IS ONE OF THE CHALLENGES WE HAVE IN DEVELOPING WASTE FACILITIES.

acceptable with incineration, correct?

ANDY CAMPBELL: Yes.

Question: Then why do we have an issue still with Halton Recycling where that was also designed to provide a solution and in fact even today is making local residents sick? Businesses have issues with the people that are employed. That is where you supposedly had a solution where experts said this was going to be the solution and here it is, it still is not safe.

ANDY CAMPBELL: Well there is no health risk with that plant and that plant also is not meeting the environmental law right now, so it is under a compliance order. It is not fully meeting the expectations of the regulation.

Question: Right, but the Town cannot stop that at the moment, correct?

ANDY CAMPBELL: The MOE licenses that facility and I am not familiar with it. York Region is not involved in that.

Question/Comment: But the point being that York Region and Durham Region are in

the process of making decisions with regard to what they perceive to be a solution, i.e. incinerators, and yet I am telling you that even today when you make those decisions they have negative impacts upon the residents and businesses of the community where you make those decisions, whether it be Clarington or Newmarket.

ANDY CAMPBELL: One of the biggest differences between those two projects is that it is a privately owned site. We no longer use that plant, and we do not have any influence. If we owned that facility, we would certainly be in a different position, where you could say, Mr. Campbell fix the darn thing. Today you are talking to a private company and it is a different relationship. That is what is really important as we go further. I believe that public ownership puts a different onus on the owners to fix the problems when they happen and that is why I am really striving to have this EFW facility municipally owned. The Halton Recycling plant, York Region looked at buying it when it was in receivership a few years ago. I did the evaluation, at the end I said, it is a plant that York Region should not invest in. Another private company built it; they spent a lot of money trying to

fix that plant. I do not know all the ins and outs of why it is not fully working. They went through court proceedings, the court ruled in favour of Halton Recycling. I do not know all the details. When you look at it, if you did the siting for that facility with the businesses around it, is it in the right spot? Maybe it was when it was sited, and that is one of the challenges we have in developing waste facilities. Once you identify a waste facility, how do you keep the developers from building incompatible things around it? When you look at Halton Recycling that is clearly what has happened now. The residential development built up closer to it, other industry built around it. When we picked this site in Durham Region that is one of the advantages. How do you keep the zoning around it and keep that perimeter so you do not put incompatible use around it? That is our challenge in Clarington. You have seen the map of the site, there is nothing up close to it today and our challenge would be if we are successful in building that site, how do you make sure in the future people do not build right up to it.

Question: What incentive do we have in the future to, if we can reduce the garbage we are

ONCE YOU IDENTIFY A WASTE FACILITY, HOW DO YOU KEEP THE DEVELOPERS FROM BUILDING INCOMPATIBLE THINGS AROUND IT?



ONE OF THE ADVANTAGES IS THAT THIS IS A FACILITY AND A FACILITY HAS AN EQUIPMENT LIFESPAN COMPARED TO A LANDFILL.

creating now, what incentive do we have to reduce the amount of garbage being put in this incinerator? Or is it like a jug, where you just have to keep on feeding it garbage?

ANDY CAMPBELL: One of the advantages is that this is a facility and a facility has an equipment lifespan compared to a landfill. With a landfill you build it, it is there for 100 years and it never gets smaller. With an EFW plant, you are going to be rebuilding it over time as the equipment wears out and technology changes. At each of those points in time you have an opportunity to say, should we reinvest in this facility? Twenty years from now, you have to make a decision, we have 50,000 tonnes less garbage and we need to rebuild one of the boilers. You can say at that point, it does not make sense to rebuild the boiler, so you would not do that. That is one of the things to consider when we are looking at the future state, 20 to 30 years out and where we are today. If society was ready and not producing garbage today, we would not have to build it. Twenty years from now I hope society is better and this plant gives you that opportunity to have some flexibility. I hope over time the facility can grow if need be, or shrink if need be. The question is, how

do you sign a contract and how do you build it and what size? You build it to give you that flexibility over time. I hope we make the right decision so that we do not get into a problem where we have to feed the burning monster.

Question: Are there any examples of any that have stopped in a sense?

ANDY CAMPBELL: There have been a couple of private sector EFW plants in the US. What the government tried to do with the local government, a private firm built the incinerator, they had to have the garbage to feed the plant. The municipal government put a law in place that said all businesses and residences must send their garbage to this plant to feed it because they had hundreds of millions of dollars of bonds or loans out on the plant. The Supreme Court struck that down. It is called “flow control”. The challenge in the US is where they tried to force waste into a burner, the Supreme Court said, you cannot do that and as a result the company did not get the garbage they needed to pay the bills and ended up shutting down. There are examples where you have not been able to feed the burning monster and the company went out of business. The challenge

is if you build it and had your waste stream at that right size, you would not get into that financial jeopardy. That is our challenge as we make our final decisions.

DAVID MERRIMAN: Just to add to that point, York and Durham Regions are both growing rapidly so diversion rates and recycling rates are going to have to increase to offset the growth in population. Over the past few years, the quantity of material coming out of all households in North America has been going up, not going down. If you look at North American levels, recycling rates have been increasing and landfill rates have been holding about the same. With respect to closing facilities down, there was an EFW facility in Hamilton. It was not the greatest environmental performer, they looked at the economics of fixing it and they chose instead to shut it down. Now the Hamilton landfill site is filling up a lot more quickly than it was when that plant was running. Similarly, there was an EFW facility in London, Ontario and it was closed down.

Question: Is that farmland around there?

ANDY CAMPBELL: At East Gwillimbury here?

NOW THE HAMILTON
LANDFILL SITE IS FILLING UP
A LOT MORE QUICKLY THAN
IT WAS WHEN THAT PLANT
WAS RUNNING.



FOR THE EAST
GWILLIMBURY SITE, THERE
IS AGRICULTURAL LAND
AROUND IT. CERTAINLY, THE
DEVELOPERS ARE PUTTING
A LOT OF PRESSURE ON THE
TOWN TO GET THIS MADE
INTO COMMERCIAL LAND.

Question: Either of them, this one here?

ANDY CAMPBELL: For the East Gwillimbury site, there is agricultural land around it. Certainly, the developers are putting a lot of pressure on the Town to get this made into commercial land. Over the years, there will be more and more pressure on the Region. We are just under a million people now; projections are we will be one and a half million in the next 15 years.

Question: Do we know what is grown there?

ANDY CAMPBELL: The crops, I do not know off the top of my head.

Question: Or, if we eat that food ourselves?

ANDY CAMPBELL: The corn and beans that are in that area would get into the local marketplace.

Question/Comment: While we are congratulating ourselves about our diversion rate, that extra million and a half or whatever that is going to move into the Region, I am sure even if they divert a lot, we will still provide plenty of garbage to go down the

stream and end up wherever it is going to go. Secondly, I remember the last time we were here, there were a great deal of complaints about people who did not know that all of this was going on and that they had only heard a few weeks before by letter that something like this might happen in their backyard. I think we can congratulate Andy and the crew for getting the advertising out so that anybody, whoever read a paper in the last month knew that this was going to happen. I think it is probably a demonstration of the silent majority approving of what is going on by the fact that this is all the people who turned up today. So freedom, the price of it is eternal vigilance, so keep going and we will keep watching.

Question: This is for Andy. A few weeks back I saw my local Town Councillor and I asked her why they could not make it a law that people recycle. If you drove here tonight with no seatbelt on and the police caught you, you would get a ticket. Why can't they make it a law that people have to recycle? Also, the fact that I brought up that if you go to a transfer station, by-pass the garbage pickup system. You can take a green garbage bag full of recyclables and tin cans and take it

there and the man only looks out of his booth and says, do you have any hazardous wastes or recyclables? If you are that inclined you could say, no and he lets you through. I proposed for people that only use the transfer stations to have clear plastic bags and she said, that would be embarrassing. But why would it be embarrassing? You know what you have to do and if you do not want to do it, get embarrassed. But I still say, I do not know why they cannot make it the law. The last thing is, recently everybody has heard about the lead content in children's toys coming from China. A lot of it is on plastic. What do the recycling people do with these toys that they do not recognize as a lead contaminant. Does that show up in the process after it has been recycled or does that go away when it is produced?

ANDY CAMPBELL: On the lead in the toys, they are not in our recyclables. Toys are not in our recycling program right now. If the manufacturer gets those recalls or residents throw them in the garbage, they are in the garbage. Today that lead is going into a landfill and has to be controlled in the landfill site. With your question about clear plastic bags, some municipalities are starting to do

ONE OF THE THINGS THE MUNICIPALITIES HAVE LOOKED AT IS THEY HAVE THE ABILITY TO BAN THINGS AT THE CURBSIDE, WHICH IN EFFECT IS REQUIRING THAT YOU RECYCLE.



IN ALL MUNICIPALITIES, AS A RESULT OF AN INCREASE IN THE GREEN BIN, WE HAVE NEW BAG LIMITS IN PLACE.

that as part of the enforcement at the curb. Markham is going to be doing a pilot next summer or spring, I believe, on translucent bags, so it may not be totally clear, but it is going to be see-through so you can see if there are recyclables in it. One of the things the municipalities have looked at is they have the ability to ban things at the curbside, which in effect is requiring that you recycle. In the discussions that I have had with the municipalities they have said, well that is a big stick approach and we are trying to get to 65% and above. We can go in with a big stick and a lot of enforcement up front or we can stage our approach. I think what the municipalities are looking at; because collection is the local responsibility, is let us make sure we provide the service. Now that we have Green Bin for everybody, we are seeing what the results are. If we decided we have to get another 5%, what tools do we have to put in place to get that next 5%? It could be a ban, it could be clear bags, it could be adding more things to the Blue Box. We will make some changes in the next year. Then they say we need another 3% and what tools do you have to put in place. The municipalities can judge whether it is right or wrong. Choosing the heavy-

handed enforcement is the last option to do. Some people would say just do it up front, Markham is doing a pilot on it to test that a little bit. I think we have tools in our tool bag as to how we get to higher diversion rates. Enforcement, clear bags and bans, we are holding off on those. I would not say as the last resort, but not as the first resort.

Question/Comment: I will say one last thing Andy, in Georgina when they started the dollar a bag program you saw all sorts of garbage bags out on a Wednesday. When that came into effect on a Thursday, you saw the reverse, more recyclables out and less garbage bags. So it did work up there.

ANDY CAMPBELL: In all municipalities, as a result of an increase in the Green Bin Program, we have new bag limits in place. Everyone in York Region is now getting garbage collected every second week. Again, that is going from weekly collection of garbage to every second week. That is one of those tool approaches in the toolbox. You know we have made it more difficult to have garbage and if your garbage is stinky and it has been sitting there for two weeks, get that stinky stuff into the Green Bin because that

is where it belongs. We are trying different approaches and the entire Region has only been on the new program for a month. You know with Newmarket it is 78%. Is that attainable long term? I would hope so, but I do expect it to drop back a bit and then do we put some new tools in place to increase it over time? These are things we have to remember and look at.

Question: You were saying that we have this growth; we are growing, getting more garbage, etc. Does this mean that if we want to address the problem of garbage being made or in a sense do we have to address growth? Is that what we are saying here or what is being implied?

ANDY CAMPBELL: I think there are a couple of things in that statement. One is growth. More people means more consumption. More consumption means more durable and nondurable goods in the marketplace. It means that at some point they will have an end life and will have to go somewhere, which means more garbage. So that is one reality. The other reality though, and something we have to focus on, and that is something that all of you can look at, is how do you consume

MORE PEOPLE MEANS MORE CONSUMPTION. MORE CONSUMPTION MEANS MORE DURABLE AND NONDURABLE GOODS IN THE MARKETPLACE.



THIS YEAR WE JUST FINISHED NEGOTIATIONS AND THEY HAVE TO PAY MUNICIPALITIES 63 MILLION DOLLARS TO PAY FOR OUR PROGRAMS TO OFFSET OUR COST.

in the first place. How do vendors make things in the first place? People talk about zero waste. Zero waste philosophy states that a product is designed so it does not have waste at the end of its life. This chair, under zero waste philosophy, says the person designed it so the steel goes into recycling, this cloth can be composted and the foam can be recycled or something. Versus today, a person said I want to build a chair, I need some steel, I need wood, I need this and it goes in the garbage at the end. That is where we have to look at industry. I sit across a negotiating table from many of the stewards in Ontario on packaging, Coca Cola, Pepsi, Canadian Tire, Wal-Mart, Proctor & Gamble and that is our challenge, to force them. How do they make their products more recyclable so they are not garbage at the end? We are trying to put economic incentives in place through Waste Diversion Ontario. This year we just finished negotiations and they have to pay municipalities 63 million dollars to pay for our programs to offset our cost. That does not cover all of our costs and I am not sure it is that much of an economic incentive. On the issue of plastics, they have just agreed for an additional 2.4 million dollars for us to investigate ways to better deal with recycling

plastics in Ontario. Last year they invested 2 million dollars into determining how we can recycle glass better. The other side of the coin is, we have got garbage but how do we deal with the stuff in the first place? Because if we do not have the stuff, we do not need the landfill, we do not need the incinerator. The challenge is when you go to the store on Saturday, Canadian Tire offered a free bag, did every one of you go and get the free bag so you do not need a plastic bag the next time you go to Canadian Tire? How many of you make sure you do not use plastic bags at the grocery store? If you do get your plastic bags from the grocery store, how many of you take them back to the grocery store? Loblaws and Zehrs are taking them back voluntarily now to get them into a recycling program, so that is that other product stewardship side that I have to do. Hopefully, all of you do minimize that waste in the first place, but if I clean out the garage and I have got some stuff I don't need, I take it to Goodwill, I take it to Habitat for Humanity. I am in those stores all the time, every time after Habitat says, I will take this and I will not take this and Goodwill says, I will take this and I will not take this, I end up at the landfill to finish it off. That is the reality we have.

Question: That comment, that burning 3 or 4 logs of wood creates more dioxins than one of these plants in a year, where does that come from?

DAVID MERRIMAN: It is per household. If you took your garbage, it is on a per household basis. It is not the plant. If you take the garbage that a household creates and the amount of dioxins that come out from that, it is equivalent to the dioxins that are released by burning 3 or 4 logs. Environment Canada did a study on wood burning fuels. In that study, they estimated how much dioxin is released by burning a kilogram of wood, and it is a miniscule quantity. It is not that there is anything unsafe about fireplaces. Then we look at the emissions that are coming out of modern incinerators and because those dioxins are tested, we have done a calculation. We just recently came across this Environment Canada research on sources of dioxin because it is a contaminant and they have done a lot of work trying to identify sources. Incineration used to be a significant source of dioxin. Now in the national reporting, the Peel facility is not even in the reports because the emissions of it are

WE HAVE A GOOD DATABASE
OF WHAT TYPICAL
INCINERATORS EMIT AND
THEN ENVIRONMENT
CANADA DID A STUDY ON
WOOD BURNING STOVES.



so low. Environment Canada requires major sources of contaminants to be reported. In Germany, they have tracked dioxin emissions over the last 20 years and the emissions from incinerators have come down thousands of fold because of the new technology.

Question: It was a study by Environment Canada that said that?

DAVID MERRIMAN: The woodstove, the figures on emissions from facilities came from reports from vendors and some facilities report their emissions online. We have a good database of what typical incinerators emit and then Environment Canada did a study on wood burning stoves.



The Regional Municipality of Durham
To: The Works Committee
From: Commissioner of Works
Report: 2007-WR-17
Date: September 26, 2007



Work Residual Waste Environmental Assessment Study – Staff Report on the Regional Municipality of Durham
Energy From Waste Delegation to Europe, July 2007

RECOMMENDATION:

THAT the Works Committee recommends to Regional Council that this report regarding the Regional Municipality of Durham's Energy From Waste delegation to Europe be received for information.

REPORT:

1. BACKGROUND

In order to acquire first hand knowledge and understanding of other Energy From Waste facilities, a delegation from the Regional Municipality of Durham (Region) visited a number of facilities and met with government officials, agency representatives and local residents in Denmark, Sweden, Germany, Switzerland and Italy in July 2007.

Delegation members included the following:

Regional Municipality of Durham

- Roger Anderson, Regional Chair

- Garry Cubbitt, Chief Administrative Officer
- Cliff Curtis, Commissioner of Works
- Mirka Januszkiewicz, Director of Waste Management
- Ken Gorman, Director of Environmental Health
- Sherri Munns-Audet, Director of Corporate Communications

Municipality of Clarington

- Jim Abernethy, Mayor
- Charlie Trim, Regional Councillor and
Chair of the Regional Municipality of Durham Works Committee
- Mary Novak, Regional Councillor
- David Crome, Director of Planning
- Fred Horvath, Director of Operations
- Nancy Taylor, Director of Finance

Town of Whitby

- Pat Perkins, Mayor and Vice-Chair of the Regional Municipality of Durham Health and Social Services Committee
- Gerry Emm, Regional Councillor and member of the Regional Municipality of Durham Works Committee

City of Oshawa

- Nester Pidwerbecki, Regional Councillor and member of the Regional Municipality of Durham Works Committee

Town of Pickering

- Rick Johnson, Regional Councillor and member of the Regional Municipality of Durham Works Committee

Township of Uxbridge

- Howard Herrema, Regional Councillor and member of the Regional Municipality of Durham Works Committee

Project Consultants

- David Payne, Project Manager for the Durham/York Residual Waste Management Study, GENIVAR Consultants Inc.
- Jim McKay, Environmental Assessment Lead for the Durham/York Residual Waste Management Study, Jacques Whitford Ltd.

While in Europe, the delegation only visited facilities that utilized modern technology, including the top two (2) ranked facilities in the world, ASM Brescia (Italy) and SYSAV (Sweden), as awarded by Columbia University in 2006.

This report provides a description of the various facilities visited and documents the meetings held with government officials, outlining pertinent information that was received and valuable lessons learned.

2. FACILITY TOURS AND MEETINGS

In 2002, the European Union established a directive requiring the processing of all waste prior to landfill disposal. Most countries were already processing a significant quantity of their waste through incineration and in some cases

established a complete ban on the landfilling of any waste that could be utilized to generate energy.

2.1 Presentation – The Danish Waste Management System

Bettina Kamuk from Ramboll, an independent European Energy from Waste (EFW) consultant, provided background on the Danish Waste Management System. The presentation included an overview of all components of the Danish system such as reuse, reduction, recycling, composting, landfilling and EFW facilities.

Highlights of Presentation:

- There are twenty-nine (29) EFW facilities across the country providing over five (5) million inhabitants with heat and electrical power
- The average area occupied by an EFW facility is about ten (10) hectares and the average facility processes approximately 200,000 tonnes of waste per year
- Bottom ash is approved for use as a construction material after a period of several months of open air maturation
- Fly ash accounts for approximately three percent (3%) of the incoming waste stream and is exported for underground disposal in salt mines in Germany
- There is a landfill ban on material that is organic, recyclable or that could be utilized for energy production
- The monitoring of emissions from EFW facilities is the responsibility of the environmental and health authorities

Health risk assessments are not conducted on a site specific basis as it is believed by the authorities and public, that the regulatory limits are acceptable and therefore site specific risk assessments are not required or requested

- One (1) tonne of waste produces two (2) MWh of heat and two thirds ($\frac{2}{3}$) MWh of power

2.2 Nordforbraending EFW Facility, Denmark and Meeting with Local Residents

This facility is a mass burn combustion facility first constructed in the 1960's which processes a total of 80,000 tonnes per year and services six (6) municipalities. Recent modifications to the facility have resulted in the additional processing of 80,000 tonnes per year, producing more than 200,000 MWh of energy annually.

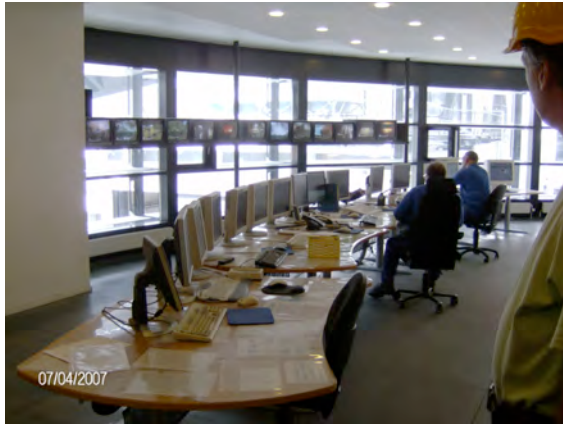
The delegation met with local residents living within five hundred (500) metres of the facility. At this facility, residential neighbourhoods are as close as one hundred (100) metres to the property line.



Exterior View



Aerial View



Control Room



View from Residential Area

Highlights of Tour and Meeting:

- Discussion with residents revealed that they had little concern living adjacent to this facility
- There were no complaints about noise or odour voiced by the residents
- The residents stated that living adjacent to a mass burn facility is acceptable and they are not worried about the health impacts from emissions

2.3 SYSAV EFW Facility, Malmo Sweden

This mass burn combustion facility is a combination of an older plant built in 1974 and a new facility completed in 2003. The facilities managed approximately 400,000 tonnes of residential and industrial waste in 2006 and approximately 145,000 MWh of electricity were produced. The facility is undergoing additional expansion resulting in an anticipated additional capacity of 200,000 tonnes per year.

This facility is internationally known for its efficient energy recovery as well as for its advanced flue gas cleaning process.



Exterior View



Body of Water
On Boundary of Property



Control Room



Stored Baled Waste
For EFW Processing

Highlights from Tour and Presentation:

- Total dioxin emissions in Sweden have dropped from one hundred (100) grams per year in 1985, from

eighteen (18) plants, to less than one (1) gram per year in 2005, from a total of thirty (30) facilities, including twelve (12) new sites and eighteen (18) retrofitted facilities

- The Malmo facility is located in an industrial area with a strait leading to the Baltic Sea on the property boundary
- The site also contains an ash processing area, composting facility, ash disposal landfill site, and metal recycling area
- The facility occasionally receives waste in excess of their capacity and the excess waste is baled and stored for use when the quantity of waste is reduced

2.4 The German Waste Management System Presentation, German EFW Association

While in Wurzburg, Germany, Carsten Spohn the Director of the German EFW Association delivered a presentation on the Waste Management System in Germany and in particular, how EFW fits into that system.

The presentation included issues related to development of EFW facilities in Germany and Europe including regulatory requirements, public policy, emissions monitoring, siting and communications.

Highlights from Presentation:

- In Europe, mass burn incineration with modern pollution control technology is considered, and has proven to be, the best available technology for managing the waste that remains after diversion
- The typical lifespan of an operating facility is thirty-five (35) years
- As plants age they are retrofitted with new technologies; if an upgrade is not possible, plants are closed and replaced with new innovative facilities
- There are currently no plans in Germany to construct gasification or plasma gasification facilities to manage Municipal Solid Waste (MSW)

- Two (2) gasification plants were built in Germany in late 1990 and early 2000 and were proven unsuitable for treating MSW and declared 'catastrophic' failures by the Director of the German EFW Association. Both of these facilities have been replaced with modern incineration facilities.
- All new plants and existing plant retrofits planned in the future are being based on some form of incineration technology
- Germany is also moving away from the use of Mechanical/Biological Treatment facilities and their related stabilized landfills in favour of the incineration option which has proven to be more economically and environmentally viable
- Germany's more than eighty (80) million inhabitants are serviced by about sixty-six (66) EFW plants which will treat about eighteen (18) million tonnes of household waste in 2007
- With diversion effects lowering the household waste available for combustion every year, Germany is close to being able to treat all of its post diversion household waste thermally
- Most German EFW facilities provide continuous reporting of emissions to regulatory authorities as part of their operating permits, and once per year an independent contractor will visit each facility to perform a continuous emission monitoring system accreditation and report back to the regulating authority and the public
- The public has real-time access to emission rates for some facilities through the use of the internet
- In addition, in some municipalities, the annual emission results are published in local newspapers
- Regulatory authorities are responsible for the collection of ambient air data through Regional monitoring stations
- The authorities also collect complete aquatic and biological test data in urban areas
- In the past, EFW facilities were sited away from developed areas but over the past decade this practice has changed. Facilities are now being sited in close proximity to or in developed areas, and areas around older

facilities are now being developed. This is due in part to a reduced stereotype regarding incineration, the incorporation of modern pollution control technologies, and the ability of the facilities to generate electrical and heat energy

2.5 Hagenholz EFW Facility, Zurich Switzerland

The Hagenholz EFW Facility in Zurich is a mass burn combustion facility that services a portion of the City of Zurich. The facility processes approximately 200,000 tonnes of waste per year. Of particular note at this facility, are the residences and commercial daycare facilities that are adjacent to the property line. In fact, as shown below residential balconies overlook the facility.



Exterior View



View from the Plant



View from the Plant
Showing Nearby Residences



View from the Plant
Showing Nearby Residences

Highlights from Tour:

- Each of the two (2) combustion lines is currently being refurbished and on completion each will treat a combined total of approximately 220,000 tonnes of waste per year
- The flue gas treatment system was refurbished about eight (8) years ago to meet higher regulatory standards
- District heating in the area around the plant is supplied entirely by the plant for the summer months with augmentation from the local central heating plant during the winter months
- The facility operates in close proximity to residences without complaints of odours, noise or health related issues
- There are approximately 15,000 new apartments either under construction or planned within one (1) kilometre of the facility

2.6 VESTA Refuse Derived Fuel and EFW Facility, Italy

The delegation visited the Fusina-Venice waste processing plant owned and operated by VESTA (the municipality) and Ecoprogetto Vanezia and Idecom, two (2) private companies. This facility is considered a modern waste facility that processes approximately 145,000 tonnes of Refuse Derived Fuel (RDF) per year, 50,000 tonnes per year of mixed waste and 40,000 tonnes per year of separated compostable material. The plant has the ability to recover additional recyclable materials and convert the remaining waste into an energy product (both pellets and a loose “fluff”) material called RDF.



Exterior View



Interior Bins



Fluff



Exterior View

Highlights from Presentation and Tour:

- While on-site, there were significant litter issues noticed; primarily small pieces of plastic film, as well as significant odour issues from both the RDF and the composting plant
- The facility is located in a heavy industrial area far from any residential development and residential opposition has not traditionally been an issue
- As with RDF facilities throughout Europe and North America, there is a limited market for the product
- In Italy, the RDF plant has to pay a fee to the end user, a pulverized coal fuelled steam plant about two (2) kilometres away to receive the material
- The RDF product has an energy value approximately four (4) times higher than that of unprocessed residual solid waste, however it cannot be burned in the on-site incinerator since it is not equipped to handle the higher heating value
- This incinerator processes about 50,000 tonnes per year of mixed waste from the old historic quarter of

Venice where it is impractical to perform separate collection of organics

- This facility, as well as a number of others visited, had a full-time tour guide on site that was available to give guided tours to groups, members of the public and schools
- The current contract with the neighbouring electrical utility is a five (5) year pilot project, with no guarantee of extension, and therefore there is an uncertain market for the RDF product currently being produced

2.7 ASM Brescia EFW Facility, Brescia Italy

The ASM Brescia EFW plant in Brescia, Italy, was opened to receive waste in 1998. The plant, a mass burn combustion facility, manages approximately 800,000 tonnes of waste material annually, of which approximately thirty percent (30%) is biomass material. In 2006, this facility was awarded the '2006 Best Facility in the World Award' by the Waste to Energy Research and Technology Council based at Columbia University. The award was given on the basis of the aesthetic appearance of the facility, resource recovery, beneficial use of the ash, and the public acceptance of the facility.



Exterior View

Highlights from the Presentation:

- When comparing the emissions from ASM Brescia to the landfilling of a similar quantity of waste, accompanied by the equivalent amount of electricity generated by oil and heating by natural gas, the Brescia EFW plant creates ninety-four percent (94%) less dust, ninety-three percent (93%) less sulphur oxides, forty-seven percent (47%) less nitrogen oxides and forty-three percent (43%) less carbon dioxide
- Only two (2) plants in Europe are known to be conducting continuous sampling of dioxin, the ASM Brescia Facility in Italy and the Indaver Facility in Belgium. This is an experimental protocol that has proven to be very successful
- This technology allows the plant operators and health and environmental authorities to ensure the emissions of dioxin are well below the permitted limit; most other facilities are currently analyzing samples periodically on a weekly or monthly basis
- Authorities are on-site once per week, unscheduled and unannounced, to collect emissions samples and verify the data collection equipment calibration
- A baseline assessment of the proposed site was completed prior to construction to determine the potential increased environmental loading as a result of the addition of this facility
- It was determined that the area already experienced poor air quality conditions as a result of neighbouring industry (steel and aluminum processing) and unfavourable meteorological conditions
- Today, the plant is actually partially responsible for improving the air quality, as the air being released from the stack is actually cleaner than the air surrounding the facility which is drawn in for combustion
- According to ASM Brescia representatives, EFW is not simply the solution to the waste disposal problem, but rather a tool to be used in achieving environmental sustainability

2.8 AMSA Silla 2 EFW Facility, Milan Italy

The AMSA Silla 2 EFW Facility in the City of Milan Italy, initiated operations in January 2001. The plant, a mass

burn combustion facility, is one hundred percent (100%) the property of the City and processes some 450,000 tonnes of combustible household and industrial waste from Milan. In 2006 it produced approximately 370,000 MWh of electricity and 45,000 MWh of thermal energy.

When this facility was planned particular attention was paid to the surrounding area and what features could be incorporated into the facility's design to blend with its surroundings. The facility is located among a range of cultivated lands, industrial parks and urban parklands.

This facility does some "front-end" processing where the wet fraction of the waste is removed.



Exterior View



Sign Showing Real Time
Emissions Data



Interior View



Power Generator

Highlights from the Tour and Presentation:

- In 1995, Milan was forced to close its landfill site which received approximately sixty percent (60%) of the waste material generated in the City
- To respond to this closure, the Silla 2 Facility was constructed. Since the construction of the facility, the waste diversion rate in Milan has increased from ten percent (10%) to forty percent (40%), and landfilling of waste (other than ash) has virtually ceased
- AMSA has undertaken a number of community relations initiatives including a large sign at the front gate of the facility that provides real time emissions data to anyone passing by the facility
- This data is also available in real time on the AMSA website
- A new Selective Catalytic Reduction unit is being added to each line to lower Nitrogen Oxide emissions. This equipment is also expected to lower Hydrochlorine emissions
- Local studies have shown that the dioxin emissions from the plant are about one percent (1%) of the total

dioxin released in the City

- In comparison, vehicular traffic produces about twenty (20) times more dioxin emissions than the plant

2.9 Presentation by Agenzia Regional per la Protezione dell' Ambiente (ARPA) (Regional Environmental Protection Agency)

While visiting the ASMA Silla 2 Facility in the City of Milan, a presentation was given by the Italian Regulatory Authorities regarding EFW and the authorities' role in permitting new facilities and monitoring performance in operating facilities.

Highlights from the Presentation and Tour:

- The delegation asked a number of questions focused on health impact issues including emissions of heavy metals, nanoparticles, dioxin and furans and concerns related to increased incidences of cancer and other disease or illness
- These representatives, as well as all other facility and government representatives visited, have all concluded that health impacts are not a concern in facilities utilizing modern pollution prevention and control systems
- With the advanced flue gas cleaning systems and correct operating conditions, you can achieve immeasurable dioxin emission levels
- Health Authorities in Italy do not measure dioxin emissions because the amounts are so small that the potential inaccuracy in the dioxin measurement equipment is greater than the actual emissions themselves

3. LESSONS LEARNED

3.1 Community Acceptance

An important consideration in the siting and design of these facilities was to ensure the architectural treatment of the facility was consistent with and complimentary to surrounding land uses. In many cases, facilities visited were

designed to be 'showcase' facilities and the surrounding community has openly expressed a sense of pride in their appearance.

Openness and transparency with respect to the operations of the facility are keys to successful community relations.

3.2 Emissions and Health Impacts

Facilities throughout Europe are currently undertaking continuous emissions monitoring for a wide range of chemicals. The emissions values are being relayed in real time to the local authorities and public websites. The ASM Brescia plant visited in Italy is now one (1) of only a few facilities in Europe that are undertaking or proposing to undertake continuous dioxin sampling, a new protocol, that will likely see increased use in the next few years.

Based on the information obtained in Europe and from participating in discussions with European Health Officials, the Durham/York EA Study and technical decisions made to date are consistent with 'best practices' in Europe.

~~Clifford Curtis, P.Eng., MBA,~~
Commissioner of Works

WM1/ms/mp/ms

