

Southgate OMRC

Public Advisory Committee

Minutes from PAC Meeting #20

LYSTEK SOUTHGATE ORGANIC MATERIALS RECOVERY CENTRE

Tuesday, February 17, 2015

TIME: 7 pm

LOCATION: Southgate OMRC Facility – Eco Park

ATTENDEES:

Steve Redmond (Chair), Karen Cheeseman

Mike Dougherty, Kevin Litwiller, Simon Meulendyk, David Rea – Lystek

Guests: Township of Southgate Mayor Anna-Marie Fosbrooke, Mary Fowler,

Deb Campbell (Agronomy Advantage), Keith Cressman (OFA Rep for Egremont & Southgate)

Regrets: David Hiscock (by email, delayed at work)

Absent: Glen Irwin

AGENDA TOPICS:

Item	Description	Action By
1.	Review of previous meeting minutes	Accepted by consent via email within two weeks of last meeting
2.	Approval of Agenda	Moved by Karen Cheeseman Seconded by Mike Dougherty
3.	Review of Terms of Reference (ToR) Steve reviewed the Terms of Reference to ensure that new attendees understood the recent changes to the frequency of meetings (that have been approved by the MOE), the importance of members being impartial and objective and the goal of working with the consensus model to conduct the business of the PAC. The ToR states that ALL members must sign the Code of Conduct. Honourable Anna-Marie Fosbrooke (the appointed new representative of the Township of Southgate) stated that she was unprepared to sign the Code of Conduct as she felt that she had not received the Terms of Reference in time to thoroughly review the contents.	Steve

	<p>Chairs note:</p> <p><i>The refusal to sign the Code of Conduct resulted in this PAC meeting only having four official members; Steve Redmond, Karen Cheeseman, Mike Dougherty and Simon Meulendyk.</i></p> <p><i>An email record indicated that the CAO was sent a copy of the revised ToR on November 23, 2014. After the Clerk notified the Chair of the decision that the Mayor was to be the representative for the PAC, the Chair forwarded a copy of the ToR to the Mayor on January 27, 2015. It is understandable that the Mayor has been busy adjusting to all of the responsibilities of the Mayor's role and that reviewing the ToR was not a high priority.</i></p> <p>In this meeting, the Chair accepted the Mayor's request for additional time to review the ToR and will allow the Mayor to sign the Code of Conduct at the next PAC meeting in May 2015.</p> <p><i>The Chair looks forward to including an official representative of the Township of Southgate as a member at the next PAC meeting.</i></p> <p>The Mayor raised the question of the Township having an alternate representative to the PAC. This was discussed under New Business.</p>	
3.	Public and Media Attendance – Re: Question Period and Code of Conduct	Steve
4.	<p>Operations Update</p> <p>The facility continues to operate up to 24 hours per day, 5-6 days per week, with three shifts of operators. An additional day is added as required. This represents no change in operating hours since the October PAC meeting.</p> <p>The facility has been receiving incoming material from eight (8) municipalities (see summary at the end of the minutes). The sources continue to be similar to other periods.</p>	Mike Dougherty

	<p>Lystek has hired one additional employee, Abe Bauman, as a Senior Operator.</p> <p>Currently there are 11 full time employees at the OMRC.</p> <p>The second lagoon was commissioned in February, following an accepted protocol.</p> <p>Processed material is currently being transferred from the original lagoon to the new lagoon. The facility has the option of sending material directly to either lagoon.</p> <p>The wet fall of 2014 limited the amount of material that could be applied to agricultural land. The demand from farmers remains high due to the increasing cost of commercial fertilizer.</p>	
5.	<p>Community Concerns</p> <p>Odour Complaints: (see detailed notes on odour complaints)</p>	<p>Mike Dougherty, Steve Redmond David Rea</p>
6.	<p>Monitoring Reports</p> <p>The PAC reviewed the 2014 fourth quarter monitoring report. The consistency of the material and constituent levels is consistent with previous reports and is well below regulated limits in all monitored metals and pathogens.</p> <p>Due to the length of the minutes, the Chair chose not to include a copy of the monitoring report. However a copy will be made available in the future as an appendix to the May minutes.</p>	<p>Mike</p>
7.	<p>New Business:</p> <p><i>Additional Southgate Council Representative</i></p> <p>The ability of the Township to appoint an alternate member to the PAC was discussed.</p> <p>The ToR allows for an alternate member to be appointed. The concern from the PAC members who created, and have amended the ToR, is that the PAC will only operate effectively if there is continuity with members at successive meetings. The fact that the PAC will now meet only 4 times per year is a concern.</p> <p>The PAC members feel that the rotation of two members for any one position is acceptable. The alternate must also sign the Code of Conduct and ensure that they have read the previous minutes of the PAC to become familiar with the operation of</p>	

	<p>the Lystek facility and any current issues that have already been addressed by the PAC.</p> <p><i>Six Nations Consultation with Lystek:</i> Due to the waste water experience that Lystek has “in-house”, the company had been asked by Six Nations Council for assistance with waste water issues. The Six Nations Council members have toured the Lystek facilities in Dundalk on two separate dates (most recent visit was Sept. 2014) Lystek has offered to help Six Nations and currently Six Nations are considering their options. Kevin Litwiller explained that the continuing problem for First Nation communities, in general, is the lack of funding for projects such as waste water management.</p> <p>Crop Response to LysteGro Field Applications: Deb Campbell provided a presentation detailing her company’s evaluation of crop responses to the addition of LysteGro in Fall 2013 and Spring 2014. (see full notes below)</p>	Deb Campbell CCA ON – (Agronomy Advantage)
8.	<p>Action Items:</p> <ol style="list-style-type: none"> 1. Contact MOE personnel responsible for the OMRC facility to discuss odour issues in Dundalk 2. Request that the Township of Southgate place the dates of PAC meetings on the Southgate calendar. 	Steve
	Next meeting is planned for Tuesday, May 26, 2015 at 7 pm in the Southgate Organic Materials Recovery Centre boardroom.	
	Adjourn Meeting	Moved by Karen Cheeseman Seconded by Mike Dougherty

Incoming Material Summary		
Type	Volume (trucks) per day	Municipality
Cake (solid)	6-8	Toronto, Halton, Guelph, Short term contracts with Niagara & Brantford
Liquid	3-4	Orangeville, Owen Sound and Tay Township

Odour Complaints:

The Chair received two emails regarding odours on January 29, 2015. The first email was a copy of the email, regarding an odour complaint, sent to the MOE on September 29, 2014. A second resident also sent an email to the Chair on January 29, 2015, stating that “Dundalk is often subjected to the smells from the Waste Park”. This resident stated that when walking “from Victoria Street East, south along “the tracks” ... it’s usually the compost smell that hits your lungs first, then the sewage smell shortly after”.

The odour issues were then discussed by the PAC. It was shared that odour is a subjective and personal measurement and does not need to be pleasant or offensive rather simply the detection of an odour. What one person may find acceptable could be deemed offensive by another person. The question arose regarding the definition of an odour unit.

Odour Unit:

Under Ontario Regulation 267/03; made under the Nutrient Management Act 2002, an odour unit is defined as follows;

One odour unit is the amount of odourant(s) present in one cubic meter of neutral gas (measurements are room temperature (20° C) and normal atmospheric pressure (101.3 kPa) calculated on a wet weight basis) at the odour detection threshold determined by the odour evaluation panel and for the purposes of this Guide are the equivalent of one European Odour Unit.

Discussion:

- The Chair explained that he is familiar with the Odour Assessment protocol whereby a panel of odour experts are exposed to air that has been captured from a material that requires an odour assessment. The panel is exposed to increasing concentrations of the material in air until the odour is detected.
- The Chair stated that he is familiar with a situation in London where there is a “complex of odours” that comes from three different sources. The odour to residents in the vicinity of the three commercial facilities changes due to the direction of the winds making it difficult to confirm which facility is contributing to the odour.
- The Chair communicated to the attendees that he is familiar with the “process” that is used by MOE to address ongoing odour issues and that there is history in London of an operation being suspended until their odour issues could be resolved.
- The fact that the Gro-Bark compost facility to the west of the Lystek property continues to have ongoing issues is a concern to the Chair as this will complicate any potential odour complaints in the future.
- PAC members discussed that the operators of the Gro-Bark compost facility have taken some measures to address the odour issue.
- The MOE takes legitimate odour complaints by residents seriously as odour is considered an Adverse Effect under the Environmental Protection Act (defined under Section 1.(1)(a) as the:

“impairment of the quality of the natural environment for any use that can be made of it,”
- Residents of Dundalk need to follow the MOE’s process whenever a legitimate complaint is found in Dundalk or surrounding area.

- Complaints forwarded to the PAC members are reported at each meeting.
- The Lystek personnel explained that when the Township receives an odour complaint, the Township then contacts the Lystek facility and subsequently this leads to a verification process.

Action Item:

The Chair will contact the MOE in Owen Sound, to discuss odours in Dundalk and report at the next PAC meeting.

Crop Yield Response of Representative LysteGro Farm Fields:

The following is a brief summary of Deb Cambell's (Agronomy Advantage) presentation.

The study was conducted with 4 producers on 5 fields. In general, LysteGro provided an excellent response on low testing (low fertility) soils compared to commercial fertilizer.

Effect Measured	LysteGro Application	Commercial Fertilizer Standard "Fertilizer"
Soybean Yield	Higher than Fertilizer (likely due to micro nutrients in LysteGro)	Lower than LysteGro
Soybean Lodging	Lodging occurred (due to higher nitrogen content)	Normal standability (soybeans "fix" their own nitrogen)
Soil Quality	No negative soil quality issues	
Nitrate Loss in Soil	Rapid loss of nitrate-N due to high rainfall in 2014 growing season (This effect is a result of the higher organic nitrogen content of LysteGro that provides more mineralization of nitrogen over time)	Lower nitrate loss than LysteGro (however lower nitrogen content compared to LysteGro)
Corn Yield	Higher than Fertilizer in some plots	Lower than LysteGro in some plots
Corn Test Weight (see definition below)	Lower than Fertilizer (due to better late season health)	Higher than LysteGro (due to premature plant death in 2014)
Late Season Corn Health	Better than Fertilizer	Plants dried down faster due to lack of nutrients at the end of the grain fill period

Notes from Agronomy Advantage Presentation:

- Spring applications prior to planting soybeans were shown to have too much nitrogen for the soybean crop since soybeans will “fix” their own nitrogen. (Deb Campbell commented that there is an opportunity to create a “soybean blend” with higher potassium levels that would be very beneficial to soybeans).
- Soil testing prior to application of LysteGro is critical due to the requirement to know the base level of potassium. Soybeans are a large user of potassium.
- There appeared to be no negative soil quality issues from this study
- Rapid nitrate loss from soils was measured in the study. The above average rainfall in 2014, and subsequent nitrate leaching, is attributed to this rapid nitrate loss.
- *Lystek recommends using the product in conjunction with a cover crop when possible, to reduce potential N losses and to assist with soil health improvements*
- *Loss of nitrogen from Fall applications of LysteGro is a concern as nitrogen is an important nutrient for corn production and losses can occur into the environment through the fall and early spring.*
- *The opportunity for side-dressing corn in June, when the crop would utilize the nitrogen more efficiently, was discussed. Equipment is available however the process is very slow and damage to the corn crop is a problem when the equipment is turning on the field headlands.*
- *A question was raised about the possible use of a “drag hose” system for applying LysteGro to farmers’ fields. This system would allow operation on soils in the spring with lower soil compaction. The equipment is more expensive due to the requirement for pumps in the field to move material to the applicator from a fixed tank near the field entrance. The viscosity of the LysteGro product may require a second pump to ensure that the material flows properly through the drag hose.*
- *A picture of the drag hose equipment that could be used can be found below:*



Future Studies:

LysteGro when applied at 4,000 gallons/acre supplies 120 lbs of available nitrogen and 60-64 lbs of sulphur. The sulphur and nitrogen content are both nutrients required by canola and further crop yield analysis should be conducted on canola.

What is Test Weight? "Test weight" is simply a measure of grain bulk density. An official test weight measurement uses standardized equipment to determine the mass (weight) of a sample quart of grain, and then converts this to a pounds per volumetric bushel basis. Because transporting and storing lower density grain is more costly (on a weight basis), buyers discount grain if test weight is below the minimum standard set by the USDA (**Table 1**). In addition to density, test weight is affected by how kernels pack in a container, which is influenced by kernel shape and surface friction.

According to corn extension specialists, low test weight grain may be due to any number of causes that reduce kernel fill: lower temperatures, leaf diseases or drought stress during the grain fill period, premature frost damage to late-developing fields and ear rots. Hybrid genetics also has a large influence on test weight.

Chair's note: the low test corn may be attributed to the fact that the LysteGro treated corn had better late season plant health and therefore was less mature when the corn plants were shut down by cold fall weather. This phenomenon has been observed in other crops and fields when an application of fungicide or fertilizer keeps the plant healthier for a longer period of time and then a frost event stops all further movement of carbohydrate into the grain.

The Southgate OMRC PAC is a condition of the MOE's Environmental Compliance Approval to create an open flow of information to local residents about the biosolids processing centre in Dundalk.

Members of the PAC meet four times per year, or more often if deemed necessary. Currently, there are four volunteer community members and a chairperson on the committee. Members of the PAC include:

- *Glen Irwin, a local business person and former Southgate Twp. Councillor*
- *Karen Cheeseman, a local graphic artist*
- *David Hiscock, a resident of Dundalk*
- *An elected representative of the Township of Southgate.*
- *The committee is chaired by Stephen Redmond. He is a certified crop advisor, a former Environmental Specialist with OMAFRA and former resident of Dundalk.*