

Southgate OMRC

Public Advisory Committee

Minutes from PAC Meeting #27

LYSTEK SOUTHGATE ORGANIC MATERIALS RECOVERY CENTRE

Thursday, December 7, 2017

TIME: 7 pm

LOCATION: Southgate OMRC Facility – Eco Park

ATTENDEES:

Steve Redmond (Chair), Glen Irwin, David Hiscock
Simon Meulendyk, Mike Dougherty – Lystek,
John Woodbury - Township of Southgate Councillor
Guest: Barbara Dobreen - Township of Southgate Councillor
Guest: Connie Hiscock – Dundalk resident
Regrets (Due to weather) - Karen Cheeseman

AGENDA TOPICS:

Item	Description	Action By
1.	Welcome	Steve
2.	Review of previous meeting minutes Steve provided a review of the minutes from the May 2017 PAC meeting.	Accepted by consent via email within two weeks of last meeting
3.	Approval of Agenda	Moved by David Hiscock Seconded by John W..
4.	Public and Media Attendance – Re: Question Period and Code of Conduct	Steve
5.	Operations Update The OMRC continues to operate with 2-3 shifts per day with consistent numbers for production and volume of material. A summary of incoming material can be found at the end of the minutes. Organizational Changes Lystek continues to have 10 full time positions at the facility in Dundalk. Since May 2017, one person has left the company and one new person was hired.	Simon Meulendyk

Land Application:

The wet summer of 2017 reduced material applications on hay fields to approximately ½ of the amount applied in the summer of 2016.

However, the weather and field conditions for fall applications, after soybean and corn harvest, were good and approximately 42, 000 – 45,000 cubic metres were land applied.

2017 Field Studies

This was the third year for LysteGro field trials. The Georgian Central Soil & Crop Improvement Association conducted three trials comparing LysteGro versus commercial fertilizer in field corn at rates of 3,000 and 4,500 gallons per acre. LysteGro demonstrated a 2-3 bushel/acre increase in corn yield compared to commercial fertilizer.

The study to evaluate LysteGro, commercial fertilizer and digestate, from Elmira, at side-dress timing in corn was conducted for a second year. Results are currently being compiled and will be available in the spring of 2018.

MOECC Odour Assessment

Simon provided a summary of the Odour Assessment conducted by the engineering firm GHD Limited. A copy of the summary is attached to the minutes.

- There was no pattern between truck traffic/plant operations at the facility and odour complaints.
- The two reservoir pumping stations were identified as potential sources for offsite odour. Each pump station has been redesigned with upgraded ventilations systems.
- Repairs to the cover on reservoir #1 were completed as a proactive measure to reduce potential for odour. Upgraded cover features were incorporated to address issues of water, ice and snow build up as well as more efficient venting controls. The repair or upgrade was started and completed in September 2017.

Use of Nasal Ranger - GHD uses this technology to qualitatively & quantitatively detect odour. A few staff members were selected and trained by GHD in the proper use of the equipment. Lystek plans to use the Nasal Ranger to identify any future performance issues at the plant and will help to ensure that the odour

	mitigation for the site is maintained in a proactive manner.	
6.	<p>Community Concerns</p> <p>Connie Hiscock shared her experience attempting to call the MOECC during the summer months when unidentified odours were detected at her residence in Dundalk. The odour was often detected at 4:00 pm when returning home from work. Connie found it difficult to reach the appropriate MOECC phone number to register a complaint. Connie was provided the MOECC Spill Action Centre phone number and the Lystek site phone number in case of need in future circumstances.</p> <p>Councillor Dobreen received a series of calls in the summer months regarding odour in Dundalk and forwarded these calls onto Rick Chapell at the MOECC.</p> <p>The PAC members discussed the complaints concerning their potential linkage to not only the Eco Park, but also surrounding area practices. For example, there were several canola fields near Dundalk in 2017. Canola is in the brassica family (also referred to as cruciferous vegetables or cole crops). Other plants in this family include: turnip, cabbage, broccoli, mustard, etc. These plants contain compounds that give off a sulphur-like odour when cooked. In the field, canola, during it's mature growth stage can have a strong distinctive sulfur-like odour.</p>	
7.	<p>Monitoring Reports</p> <p>The PAC reviewed the 2nd and 3rd quarter 2017 monitoring reports (<i>attached to PAC minutes</i>). The consistency of the material and constituent levels are similar to previous reports and are well below regulated limits in all monitored metals and pathogens.</p>	Simon
8.	<p>Action Items:</p> <p>The PAC will plan a site visit to a LysteGro application site in 2018.</p> <p>The purpose of the workshop is for interested PAC members to experience and understand the field application of LysteGro fertilizer on hay fields.</p>	Steve & Simon to coordinate site visit for a Saturday in late June or July 2018.

	Note: <i>the wet weather during the summer of 2017 prevented the coordination of a site visit to a hay field.</i>	
	Next meeting is planned for Thursday, May 31 st , 2018 at 7 pm in the Southgate Organic Materials Recovery Centre boardroom.	
	Adjourn Meeting	Moved by David Hiscock

Incoming Material Summary		
Type	Volume (trucks) per day	Municipality
Cake (solid)	5-6	Toronto (Ashbridges Bay & Highland Creek WWTPs), Guelph, Muskoka (Huntsville and Gravenhurst)
Liquid	2-3	Orangeville, Durham, Mono and Tay Township and Biox Ltd.

Attachments:

-) *Monitoring Reports for 2nd and 3rd quarter 2017*
-) *Odour Assessment Summary*

The Southgate OMRC PAC is a condition of the MOE's Environmental Compliance Approval to create an open flow of information to 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*
-) *John Woodbury, a Township of Southgate Councillor*
-) *The committee is chaired by Stephen Redmond. He is a certified crop advisor, a former Environmental Specialist with OMAFRA and former resident of Dundalk.*

Processed Product Analysis Form
 Quarter 2 - 2017 Apr May June

Lystek Southgate Organic Materials Recovery Centre (OMRC)
 191 Eco Park Way, Dundalk, Ontario

Constituent	April 3 - 7	April 10 - 14	April 17 - 21	April 24 - 28	May 1 - 5	May 8 - 12	May 15 - 19	May 22 - 26	May 29 - June 2	June 5 - 9	June 12 - 16	June 19 - 23	June 26 - 30	Quarterly Average	Maximum Allowable Metal Concentration ^a	Units
Metals																
Arsenic	2.06	2.37	2.98	2.69	2.78	3.35	3.38	2.94	2.99	3.27	3.19	2.61	2.18	2.83	170	mg/kg
Cadmium	0.97	1.72	1.72	3.06	2.03	1.49	1.78	1.86	2.50	2.61	2.75	2.03	3.12	2.13	34	mg/kg
Cobalt	1.72	4.17	3.60	4.83	4.10	4.30	3.43	3.47	4.26	4.38	3.22	2.08	4.87	3.73	340	mg/kg
Chromium	37.28	66.10	57.25	65.60	61.60	59.30	48.60	47.07	54.65	52.90	47.42	40.60	130.50	59.14	2,800	mg/kg
Copper	344.45	511.00	543.50	529.50	506.50	539.50	437.50	418.70	420.95	443.50	341.75	324.50	423.00	444.95	1,700	mg/kg
Mercury	BDL	0.50	0.70	0.70	0.70	0.50	0.60	1.20	0.50	0.50	0.50	0.50	0.40	0.61	11	mg/kg
Molybdenum	5.00	7.60	6.80	7.60	7.20	7.70	7.30	5.90	6.40	6.40	5.60	5.30	7.00	6.60	94	mg/kg
Nickel	11.78	23.55	18.32	22.33	19.71	24.26	18.24	17.45	20.26	18.42	17.41	14.96	20.00	18.98	420	mg/kg
Lead	16.52	29.75	38.23	68.45	43.61	38.67	29.93	22.65	57.00	71.90	61.45	68.20	73.35	47.67	1,100	mg/kg
Selenium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3.77	5.73	4.34	3.41	2.66	3.98	34	mg/kg
Zinc	343.95	667.50	620.50	715.00	630.50	647.50	516.00	513.50	565.00	558.50	451.35	350.10	523.00	546.34	4,200	mg/kg
Nutrients and Physical Properties																
Ammonium - N	6,155	2,096	14,848	14,270	9,527	14,736	11,562	9,140	15,469	9,855	146	14,568	7,215	9,968	n/a	%
Total Moisture	85.07	85.26	84.28	83.99	84.88	83.82	81.95	81.87	88.58	79.36	81.28	82.59	83.33	83.56	n/a	mg/kg
Total Organic Carbon	398,500	323,500	322,900	315,400	319,900	323,400	338,400	334,300	315,600	305,600	338,600	373,500	315,200	332,677	n/a	mg/kg
Total Kjeldahl Nitrogen	43,300	36,200	34,300	36,600	35,600	36,200	31,200	27,400	42,900	29,700	28,100	39,900	36,800	35,246	n/a	mg/kg
Nitrate and Nitrite-N	43.80	52.60	115.60	106.60	22.40	4.44	2.48	13.20	5.04	10.58	4.54	6.74	6.60	30.36	n/a	mg/kg
Total Potassium	10,200	8,600	9,900	14,800	13,400	8,700	8,200	8,800	16,700	21,300	20,500	19,600	17,000	13,669	n/a	mg/kg
Total Phosphorus	16,700	26,300	32,200	25,100	20,600	23,800	19,800	20,300	21,700	22,000	17,600	14,400	19,700	21,554	n/a	mg/kg
Pathogens																
Fecal Coliforms	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	n/a	<1000	MPN/g
Salmonella	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	n/a	<1	CFU/25g

^a As per Section 14.2 of Environmental Compliance Approval No. 8850-8V6S7Z

Note - Analysis completed by A&L Canada Laboratories Inc.

Note - Each sample represents a composite of a minimum of 5 grab samples collected directly from the discharge point of the process reactor on a daily basis.

BDL- Below Detectable Level

n/a - not available

NEG - negative

Processed Product Analysis Form
 Quarter 3 - 2017 Jul Aug Sept

Lystek Southgate Organic Materials Recovery Centre (OMRC)
 191 Eco Park Way, Dundalk, Ontario

Constituent	July 3 - 7	July 10 - 14	July 17 - 21	July 24 - 28	July 31 - Aug 4	Aug 7 - 11	Aug 14 - 18	Aug 21 - 25	Aug 28 - Sept 1	Sept 4 - 8	Sept 11 - 15	Sept 18 - 22	Sept 25 - 29	Quarterly Average	Maximum Allowable Metal Concentration ^a	Units
Metals																
Arsenic	3.16	2.27	3.38	2.00	2.18	3.00	2.33	3.12	3.12	2.62	1.42	3.59	2.95	2.70	170	mg/kg
Cadmium	2.17	2.13	1.89	0.85	2.25	1.51	1.48	2.11	1.48	1.93	1.87	2.54	2.33	1.89	34	mg/kg
Cobalt	2.20	3.42	4.37	1.53	3.45	2.52	2.52	3.27	2.57	2.98	2.35	2.92	2.28	2.80	340	mg/kg
Chromium	34.55	43.73	55.45	22.35	50.25	48.05	37.55	71.85	48.24	2.95	28.96	50.15	42.53	41.28	2,800	mg/kg
Copper	319.55	284.70	421.30	193.30	343.00	295.70	307.65	503.50	344.55	372.10	244.85	406.35	365.95	338.65	1,700	mg/kg
Mercury	0.40	BDL	0.70	0.30	0.30	0.30	0.30	BDL	0.40	0.20	0.20	0.40	0.40	0.35	11	mg/kg
Molybdenum	5.60	5.30	8.40	3.80	7.50	4.90	5.40	7.20	6.10	7.30	4.90	7.70	7.40	6.27	94	mg/kg
Nickel	11.28	12.72	16.95	6.52	18.00	16.23	12.88	30.36	16.77	16.59	9.92	17.47	11.64	15.18	420	mg/kg
Lead	60.85	58.35	45.33	30.46	53.40	66.00	64.50	70.70	58.10	78.65	39.36	54.45	49.59	56.13	1,100	mg/kg
Selenium	3.36	3.26	1.03	2.38	2.21	4.86	3.06	4.51	2.14	5.29	1.57	1.20	1.56	2.80	34	mg/kg
Zinc	376.25	434.30	605.00	247.95	475.40	318.60	398.50	565.50	394.75	431.35	308.55	449.10	420.40	417.36	4,200	mg/kg
Nutrients and Physical Properties																
Ammonium - N	7,486	7,145	10,429	3,529	4,344	10,577	7,133	12,088	6,588	5,249	3,892	9,757	6,724	7,303	n/a	%
Total Moisture	83.13	76.50	81.37	72.89	79.55	77.50	81.25	82.03	83.80	84.42	77.70	84.43	83.76	80.64	n/a	mg/kg
Total Organic Carbon	373,700	331,100	325,400	315,800	345,900	353,800	357,400	292,300	342,800	334,600	365,700	341,300	352,100	340,915	n/a	mg/kg
Total Kjeldahl Nitrogen	42,100	23,100	31,500	25,100	33,000	39,400	34,000	28,200	37,300	38,000	23,800	35,300	39,600	33,108	n/a	mg/kg
Nitrate and Nitrite-N	6.12	10.56	6.04	9.32	11.84	5.58	13.26	6.92	8.72	9.36	8.08	6.38	4.14	8.18	n/a	mg/kg
Total Potassium	17,100	15,100	16,200	10,200	18,400	20,700	21,700	20,400	22,600	28,000	15,500	17,000	16,100	18,385	n/a	mg/kg
Total Phosphorus	16,100	13,400	22,400	9,900	15,900	14,100	14,700	21,800	17,200	18,500	12,600	19,500	15,900	16,308	n/a	mg/kg
Pathogens																
Fecal Coliforms	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	n/a	<1000	MPN/g
Salmonella	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	NEG	n/a	<1	CFU/25g

^a As per Section 14.2 of Environmental Compliance Approval No. 8850-8V657Z

^b Due to inferences in the sample, accurate results were unattainable. Dilutions were below detection limits.

NOTE: Analysis completed by A&L Canada Laboratories Inc.

NOTE: Each sample represents a composite of a minimum of 1 grab sample collected directly from the discharge point of the process reactor on a daily basis.

n/a - not available

NEG - negative



125 McGovern Drive Unit 1, Cambridge, Ontario N3H 4R7
T. 226.444.0186 TF. 888.501.6508 E. info@lystek.com

December 7, 2017

Public Advisory Committee (PAC)
Southgate OMRC Board Room
191 Eco Parkway
Dundalk, ON N0C 1B0

PAC,

Re: Status Update to the Lystek Southgate OMRC Odour Assessment

We have prepared this letter to provide a summary of the formal and comprehensive, third-party assessment to the PAC.

Overview of Assessment

Based on community concerns regarding odours emanating from the Eco Park development in Southgate, the MOECC requested that Lystek undertake a formal and comprehensive, third party Odour Assessment of the Southgate OMRC. A well-known and qualified engineering firm, GHD Limited (Canada) was commissioned to conduct the study, which included the identification of possible sources of odour emanating from the Southgate OMRC as well as any potential for off-site impact to the surrounding community. The assessment consisted of a review of previous odour complaints (desktop study) and an on-site assessment.

Desktop Study

The desktop study consisted of reviewing historical odour complaints to determine if there was a meteorological or operating condition that could be traced to the complaint. Upon this review, there was no consistent meteorological or operating conditions when compared to the complaints. Therefore, no further action was necessary or completed.

On & Off Site Assessments

The tasks listed below were completed by GHD during the on & off-site assessments.

- Identify potential sources for odours emanating from the centre (facilities and site)
- Qualitatively and Quantitatively characterize any related odours
- Identify potential off-site locations for impact from odours
- Identify potential odour sources in the surrounding area

The on-site assessment identified two locations to have the potential for off-site odours; Pump Station 1 & Pump Station 2. As part of the recommended solutions, Lystek undertook a work plan to provide modifications to each Pump Station as well as an upgrade to the cover on product Reservoir 1. Note that this was not identified as a source of odour by GHD but as having the potential to be, by Lystek, so these upgrades were completed by us on a voluntary/proactive basis.



Nothing wasted. Everything to gain.
www.lystek.com



Product Storage Reservoir 1 Upgrade

Reservoir 1 was Lystek's initial Product Storage Reservoir. Based on the knowledge and experience gained with Reservoir 1, Reservoir 2 was furnished with a number of upgrades. Lystek then carried through with the process of upgrading the cover for Product Storage Reservoir 1 to incorporate the measures and features that were successfully incorporated into Reservoir 2 to address issues related to snow and ice, as well as more efficient venting controls. The upgrades commenced in September and were completed ahead of schedule. Since the installation, effective improvement in regards to water drainage, collection, and removal as well as efficient venting and removal of odorous air underneath the cover has been observed.

Pump Stations Upgrades

In a similar manner to that noted above for the Product Storage Cover, Lystek has further planned, designed and implemented upgrades to each of the Pump Stations to address any potential, odour related issues and to enhance operational efficiencies. The measures for each of these programs involved a redesign of the ventilations systems for each respective pump station and reservoir. This included blowers with upgraded seals and vacuum, and creating two separate rooms within each Pump Station (an Electrical Room and a Pump Room) to have accurate control for ventilation in each area.

Summary

The various measures and activities noted have provided both enhanced controls for potential odour emissions and overall operations at the OMRC. Further, Lystek staff have been fully trained on the use of the Nasal Ranger. The Nasal Ranger is a portable odour detecting and measuring device that was used by GHD in the on & off site odour assessment. The addition of the Nasal Ranger for site assessment and to use for assessing baseline conditions and identifying any future performance issues at the plant will help to ensure that the odour mitigation for the site is maintained in a proactive manner.

Sincerely,

Simon Meulendyk B.E.S., P.Ag.
Plant Manager, Lystek International Inc.

