

Public Advisory Committee

Minutes from PAC Meeting #33

LYSTEK SOUTHGATE ORGANIC MATERIALS RECOVERY CENTRE

Tuesday, January 31, 2022

TIME: 7:30 pm

LOCATION: Teams Video Conference Call

ATTENDEES:

Interim Chairs: Merv Mcleod

Members: Sherifa Carmicheal, Christina Rittwage, Michael Sherson (Southgate Councillor)

Lystek: Simon Meulendyk, Adrienne Van Dyk

Regrets: David Hiscock, Connie Hiscock.

AGENDA TOPICS:

Item	Description	Action By
1.	Welcome The planned meeting for 2021 which was scheduled for December 21, 2021, was not held due to lack of quorum. As per last year due to COVID-19 protocol this meeting was also held in a video conference format.	Merv
2.	Review of previous meeting minutes Simon provided a review of the minutes from last meeting on December 17, 2020. As minutes were passed by consensus via email, the review was for information purposes. No questions or comments regarding previous minutes	
3.	Approval of Agenda	Moved by. Christina R. Seconded by Michael S.
4.	Public and Media Attendance – Re: Question Period and Code of Conduct Interim Chair for clarification/reminder reviewed Question Period and code of conduct as per Terms of Reference <ul style="list-style-type: none">• <i>two weeks' notice for public for decision to allow presentation</i><ul style="list-style-type: none">○ <i>2 days for written copy of submission to chair</i>• <i>10 minutes allowed for presentation</i>• <i>PAC members only allowed questions of clarifications</i>	No media/public attendance

5.	<p>Operations Update – Simon Meulendyk</p> <p>Simon presented the following which is very similar in content to the 2020 update.</p> <p>The OMRC continues to operate with 2-3 shifts per day. 2021 has been another consistent year of operation for the facility. Reliably maintained contracts signed with various new municipalities & customers has created a consistent incoming stream of material for processing. The facility typically receives larger incoming volumes in the winter months. The summer months, although less busy with incoming volume, is occupied by the LysteGro fertilizer land application program. This allows for the maintenance of year-round regular work hours for the 12 employees. Lystek added 2 additional staff in 2021, one to accommodate additional work load and second to fill in as another operator will be off for surgery.</p> <p>Outgoing volumes was approximately 110,000 cubic meters (m3), making for the third straight year of >100,000 m3 for the application season. Approximately 8,000 acres of farmland were applied to. 2021 had an earlier spring compared to previous years allowing for consistent land application to begin in the first week of April (other years have seen as late as first week of May). There continues to be reliable demand for hay ground applications and abundant interest for application after crops are harvested. The program ceased in December due to inclement weather. It is anticipated the program will resume in April 2022, weather permitting.</p> <p>With the uncertainty of COVID-19, no field trials were completed in 2021, there are hopes to start trials again in 2022, including one in Michigan where a new deployment is being commissioned.</p> <p>Sherifa asked about how and why trials were conducted? Lystek conducts trials to check the efficacy of their product to determine that their product is equal to or better than commercially available fertilizer. The trials are held with local farmers who are also the main market for the Lystek products. The fertilizer is provided free of charge and participating farmers also receive an honorarium.</p>	

6.	<p>Community Concerns</p> <p>Odour Observations:</p> <p>Simon provided background regarding comments. Public concerns tend to be seasonal, Jan to March there a few concerns; spring to fall generally low to no concerns; a few concerns in the fall. The concern usually relates to, what has been termed a “Lystek smell”. Regarding concerns from previous years, in 2021 the plant replaced the media in both biofilters and Iron Oxide Adsorption System. This action seems to have reduced the number of concerns reported. Further, as part of their ongoing diligence they continue to identify when and how odour is released outside of the plant, when found they have had success in remedying specific causes. Work is planned for this summer to further upgrade the air treatment process to which further information will be provided once finalized.</p> <p>Michael Sherson commented that the smell comes and goes and seems stronger during cold weather. When he notices the smell he usually informs Simon of the odour.</p> <p>Most reports from the public regarding Lystek comes from the Ontario Ministry of Environment (MOE). These reports are generally reported to Lystek from MOE in a timely manner. Lystek has advertised a number of methods that the public can report directly, however, there seems to be a preference to report directly to the MOE.</p>
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7.	<p>Product Monitoring Reports - Simon</p> <p>The PAC reviewed the monthly stored product monitoring reports as well as the fertilizer composition sheet provided to customers. <i>(attached to PAC minutes)</i>.</p> <ul style="list-style-type: none"> - The monitoring reports continue to demonstrate pathogen counts that are consistently below detection limits in the processed biosolids. - Heavy Metal concentrations are reliably below the regulatory Maximum Allowable Concentration levels. - <p>The product is also laboratory tested every weeks or month, depending on the material, to ensure that product meets the guidelines for heavy metals and other pathogens and fertilizer elements to ensure that the product can be used for the growing of crops for animal and human consumption. It was noted that the soil in Grey County is low in phosphorus, and the Lystek product has very good phosphorus content.</p>
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<p>8.</p>	<p>New Business/Action Items</p> <p>Christina Rittwage term of 2 years has come to completion, she has agreed to renewal of her term for another two years.</p> <p>Interim Chair Merv McLeod was asked to allow his name to stand to be Chair of the PAC for 2022. Accepted</p> <p>A fixed annual meeting date was set to be the 3rd Tuesday of every November.</p> <p>The geographic definition for community representative will be upgraded to include they must live within the counties of Southgate and Melancthon. Currently it states, “in the community“ which can have an ambiguous interpretation.</p> <p>Simon will contact David Hiscock and Connie Hiscock to determine their continued interest/ability to continue as PAC members. If they choose to not participate, they will need to formally resign with a letter addressed to the Chair, and the PAC will initiate a search for new members as per Terms of Reference of the PAC.</p> <p>Michael Sherson informed the committee that the Municipal election is to be held on October 24, 2022, therefore, participation after that date is dependent on whether he is returned to Council and Council directs that the committee will be part of his mandate. If he is not returned by his constituents, he can still participate, non-voting, until the representative changeover in January 2023.</p>		
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The Southgate OMRC PAC is a condition of the MECP’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 once each year, or more often if deemed necessary. Currently, there are four volunteer community members, a Township representative and a chairperson on the committee. Members of the PAC include:

- David & Connie Hiscock, residents of Dundalk*
- Christina Rittwage, resident of Dundalk*
- Sherifa Carmicheal, resident of Dundalk*
- Michael Sherson, a Township of Southgate Councillor*
- The committee is chaired by Merv Mcleod of Wood Mcleod Associates Inc.*

Incoming Material Summary		
Type	Volume (trucks) per day	Municipality
Cake (solid)	5-6	Toronto, Guelph, Muskoka (Huntsville and Gravenhurst), Hamilton, Halton, Kitchener/Waterloo, Peel
Liquid	2-3	Orangeville, Durham, Arthur, LCBO, Mono, Shelburne

Attachments:

- *Monitoring Report for 2021 LysteGro fertilizer and LysteGro fertilizer Composition Sheet*



LysteGro Fertilizer Composition

	LysteGro Average ^a	Maximum Allowable Concentration ^b	Units
Organic Matter Content	6.58		% on a wet weight basis
Total Organic Carbon	3.83		% on a wet weight basis
Total Nutrient Content			
Total Nitrogen (TKN)	5.32		% on a dry weight basis
Total Available Nitrogen (Ammonium + Nitrate)	2.29		% on a dry weight basis
Total Phosphorus (P ₂ O ₅)	8.31		% on a dry weight basis
Total Potassium (K ₂ O)	2.02		% on a dry weight basis
Metals Regulated by MOE			
Arsenic	BDL	170	mg/kg
Cadmium	2.63	34	mg/kg
Cobalt	5.59	340	mg/kg
Chromium	79.84	2,800	mg/kg
Copper	708.67	1,700	mg/kg
Mercury	0.38	11	mg/kg
Molybdenum	13.78	94	mg/kg
Nickel	34.02	420	mg/kg
Lead	23.83	1,100	mg/kg
Selenium	BDL	34	mg/kg
Zinc	836.00	4,200	mg/kg
Relevant Micronutrients			
Calcium	36.28		lbs/1,000 gallons
Copper	0.82		lbs/1,000 gallons
Iron	108.72		lbs/1,000 gallons
Magnesium	6.38		lbs/1,000 gallons
Manganese	0.54		lbs/1,000 gallons
Selenium	BDL		lbs/1,000 gallons
Sulphur	18.56		lbs/1,000 gallons
Zinc	0.97		lbs/1,000 gallons
Total and Available Nutrients (during 1st growing season) - Imperial			
Total Nitrogen	61.55		lbs/1,000 gallons
Total Available Nitrogen ^c	40.51		lbs/1,000 gallons
Total Phosphorus (P ₂ O ₅)	96.21		lbs/1,000 gallons
Total Available Phosphorus (P ₂ O ₅) ^d	38.48		lbs/1,000 gallons
Total Potassium (K ₂ O)	22.86		lbs/1,000 gallons
Total Available Potassium (K ₂ O) ^e	20.58		lbs/1,000 gallons
Pathogens			
Fecal coliform	<1.8 ^f		MPN/g(mL)
Salmonella spp.	NEG ^f		P-A/25g(mL)

^a Values represent the mean of samples collected on a monthly basis throughout 2021

^b As per Ontario Regulation 338/09, Schedule 5

^c The sum of Ammonium + Nitrate + assume 40% mineralization of Organic Nitrogen during first growing season

^d Assume 40 % availability of Phosphorus

^e Assume 90% availability of Potassium during first growing season

^f Results were consistent for all sampling events

BDL - Below Detectable Limit

Stored Product Analysis
2021



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

Constituent	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Average	Maximum Allowable Concentration ^a	Units	
Metals																
Arsenic	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.00	BDL	BDL	170	mg/kg	
Cadmium	2.73	0.84	0.68	2.55	2.91	1.75	2.79	3.15	4.43	3.75	3.66	2.37	2.63	34	mg/kg	
Cobalt	6.06	4.21	5.31	6.04	6.43	4.96	5.21	5.76	6.12	5.71	6.11	5.16	5.59	2,800	mg/kg	
Chromium	65.85	57.95	69.10	84.90	83.05	70.55	78.45	97.70	100.85	87.80	79.65	82.20	79.84	340	mg/kg	
Copper	664.50	522.00	641.50	746.00	848.00	654.50	734.00	724.50	883.50	744.50	612.00	729.00	708.67	1,700	mg/kg	
Mercury	0.40	0.30	0.70	0.30	0.30	0.50	0.40	0.30	0.20	0.40	0.50	0.20	0.38	1,100	mg/kg	
Molybdenum	14.30	12.10	12.30	17.20	15.20	11.30	14.30	13.80	15.70	13.50	12.70	12.90	13.78	11	mg/kg	
Nickel	27.95	24.08	30.94	46.30	35.44	26.51	31.01	42.16	40.65	36.95	32.72	33.56	34.02	94	mg/kg	
Lead	16.00	16.00	19.00	24.00	23.00	20.00	22.00	43.00	28.00	25.00	29.00	21.00	23.83	420	mg/kg	
Selenium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	34	mg/kg	
Zinc	786.50	648.00	762.00	897.00	876.50	699.50	825.50	967.00	966.50	925.00	887.50	791.00	836.00	4,200	mg/kg	
Nutrients and Physical Properties																
Total Solids	10.88	11.65	12.46	10.41	10.84	13.47	11.23	11.37	11.23	11.90	12.27	11.21	11.58	n/a	%	
Volatile Solids	6.44	7.85	7.69	6.08	6.19	8.62	6.58	6.56	6.43	6.97	6.80	6.58	6.90	n/a	%	
Total Organic Carbon	329,000	374,400	342,900	324,200	317,200	355,700	325,300	320,300	318,100	325,400	307,900	326,000	330,533	n/a	mg/kg	
Total Kjeldahl Nitrogen	51,200	39,400	50,700	55,600	59,600	49,600	63,000	60,600	28,900	51,900	52,400	75,200	53,175	n/a	mg/kg	
Ammonium - N	21,284	15,506	23,743	25,271	27,695	23,819	34,488	3,259	29,718	22,262	24,624	22,953	22,885	n/a	mg/kg	
Nitrate and Nitrite-N	6.28	4.68	4.80	1.34	8.18	1.86	4.82	4.82	2.78	8.28	5.70	5.38	4.91	n/a	mg/kg	
Total Potassium	15,130	10,700	15,200	15,800	18,600	14,800	17,300	20,600	21,300	15,400	16,500	15,400	16,394	n/a	mg/kg	
Total Phosphorus	35,600	32,500	37,300	46,500	47,400	36,600	45,200	33,800	44,200	29,300	12,800	34,700	36,325	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

Note - Each sample collected consists of a minimum of 1 grab sample collected directly from the discharge point of the process reactor.

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

n/a - not available

ND - Not detected

NEG - negative