

## APPENDIX A

October 19, 2017

To whom it may concern,

The purpose of this letter is to clarify contract agreement terms between VanSoelen Landscaping Ltd. and Astoria Organic Matters Ltd. for work completed at the Phillipston Road project after October 4, 2016.

After reviewing the time and job sheets for the work completed after October 4<sup>th</sup> it is clear that because stone was brought that VanSoelen was still adding to the sub-surfaces in preparation for asphalt installation. I do not recall seeing these previously when discussion this lien issue. The granular supply and installation work completed after October 4<sup>th</sup> was an extension of the original scope of work, in which the only time obligation was to complete preparation of the granular base prior to asphalt paving. I remember discussion this suggestion with VanSoelen but thought originally the work had been completed to the state ready for asphalt. The granular base was left purposely low due to seasonal elements as this base could be easily raised as opposed to removal of compacted frozen material.

Therefore, the work completed after October 4, 2016 was for project site work and preparation. This work was consistent with the standard time & material contract terms and was not maintenance work under contract.

Sincerely,



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Allan Hamilton  
Former President & CEO  
Astoria Organic Matters Ltd.

Oct 19/17

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Date

## APPENDIX B

Notification of New Waste

<p><b>i) Generator name and location</b> Sonoco Paper Sludge. Hauled by Scaletta Group to our plant.</p>
<p><b>ii) Proposed date of acceptance</b> September 12, 2016</p>
<p><b>iii) Constituent Components of the Organic Waste</b> Biosolids(paper sludge) from recycled paper making process. Typical waste for paper mill. We have ordered metal testing as per ECA requirements</p>
<p><b>iv) Incidental or Inadvertent Waste components</b> None</p>
<p><b>v) Handling and Storage of Organic Waste prior to delivery</b> Loaded directly into dump trailers delivered and stored in Tipping Building at Astoria for blending</p>
<p><b>vi) Operational plans for processing/integrating new Waste</b> Blended into compost mixture.</p>
<p><b>vii) Additional Comments</b> This is typical recycled paper mill paper biosolids. Very clean material.</p>

## APPENDIX C

## Karen Parkinson

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**From:** Al Hamilton <ahamilton@astoriaorganics.com>  
**Sent:** September-21-16 3:55 PM  
**To:** 'Camilla Dumbeck'; 'Douglas kemp-welch'  
**Cc:** 'Randy Uens'; 'Brock Evans'  
**Subject:** RE: MOECC visit today

Well written Camilla.

The tour went extremely well. They met Brock and him and I took them on a tour. Three young ladies relatively new to the MOECC. Katie is our regular officer, Emma deals with compost quality related issues, and Sarah is our off hours officer (she would be the one we never want to hear from as that would mean a complaint came in after hours).

They most certainly liked what they saw, like what they DIDN'T smell and appreciated us already being open, but only operating under the portion of the system that is up and running and conforms to our ECA. This was intended to be a meet and greet, but got into a fairly lengthy meeting.

We can now hit the media trail. We are on Facebook and Twitter so I can handle that. I am on LinkedIn but Randy your contact list is probably much more extensive.

Doug that sounds great if you can write the press release for our review.

Thanks

Al

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**From:** Camilla Dumbeck [mailto:camilla.dumbeck@astoria-invest.de]  
**Sent:** September 21, 2016 10:50 AM  
**To:** Douglas kemp-welch; Al Hamilton  
**Cc:** Randy Uens  
**Subject:** AW: MOECC visit today

Hi Doug,

we were approved once the ECA came through however this is now a check that we have built it accordingly and an inspection that there are no issues. Strictly speaking, probably the whole site would have to be built in order to be officially opened however, with this meeting today, we think that the MOE will see what we are doing and that we are supposed to be doing and doing it well and that the process works even if not all the windrows are build. That is how we left it with "our" MOE enforcement officer. However he moved elsewhere a couple of months ago so now it is building a new relationship with this lady and showing her how our operations work. It is possibly more of a courtesy as well, we do not want to get onto the wrong side of these guys. Also, our main issue at the moment, is that not all the parts of the odour management system are built to spec because we are now in month 3 of the delay for the supply of the fans for the buildings. We have provisional ones installed but will now see if the ministry accepts them and we can go full speed.

So no, no certificate, fireworks or champagne from the MOECC.... Just building a new relationship and getting into their good books. But once they have been and have seen everything and are in agreement, we can publicly

declare we are open. If the neighbours then complain, the MOECC can say they know and have been to the site and have inspected it.

I hope that helps you.

Thanks,  
Camilla

**ASTORIA**  
organic matters

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Amtsgericht Mannheim HRB 715885  
Vorstand: Camilla Dumbeck  
Aufsichtsratsvorsitzender: Prof. Dr. iur. Hartmut Mohr

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**Von:** Douglas kemp-welch [<mailto:doug.kempwelch@gmail.com>]

**Gesendet:** Mittwoch, 21. September 2016 16:17

**An:** Al Hamilton

**Cc:** Randy Uens; Camilla Dumbeck

**Betreff:** Re: MOECC visit today

My question is: As a result of this visit are you formally and officially approved to operate? Does MOEE provide with a certificate of operation ?

Sorry for the simple questions but I want to be clear and factual in the Press Release>

I will handle the press release and dissemination in social media.

Doug

On Wed, Sep 21, 2016 at 10:04 AM, Al Hamilton <[ahamilton@astoriaorganics.com](mailto:ahamilton@astoriaorganics.com)> wrote:

Camilla and I were talking... As you are aware I have an MOECC visit today. This visit is so that the "new" abatement officers can introduce themselves and I to them. I will be introducing Brock Evans our Operations Manager to them as well as he is the one responsible for the day to day operations.

So my reason for this email is explain that once the tour is completed, providing it goes well, we should consider Astoria officially open. We should do a press release as well as plaster any social media avenues that we have either individually or corporate. I've learned that press releases are written by us and we should review it as a group before sending it to the "media zoo". I do know that much. My question is... Is this something you can take on Doug? Or Randy? I'm just not sure. I would like to have Doug writing it as he is just sitting behind a desk crunching numbers anyway and poor Randy will be on the road filling the plant. JUST KIDDING - ITS MY BAD HUMOUR!!!!!!!.

Your thoughts.



Allan Hamilton, MBA

President & CEO

Astoria Organic Matters Ltd.

cellular: [613 449-6214](tel:6134496214)

email: [ahamilton@astoriaorganics.com](mailto:ahamilton@astoriaorganics.com)



# ASTORIA

organic matters

## APPENDIX D

## Karen Parkinson

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**From:** Potter, Katy (MOECC) <Katy.Potter@ontario.ca>  
**Sent:** March-16-17 11:56 AM  
**To:** Al Hamilton  
**Cc:** bevans@astoriaorganics.com  
**Subject:** Air Inspection Report  
**Attachments:** Astoria Air Facility Inspection.pdf; Astoria Memo January 2017.pdf

Good Morning Al,

Attached is the air inspection report for the air inspection conducted on December 2, 2016, along with the numerous communications we had in follow-up.

All required actions will be found in Section 5.0 of the report. You will notice that they have fairly tight timelines, but from our discussions I believe most documents or reports required should be relatively available to you.

Please note that in Section 6.0 I have also requested a response to the attached Memo, generated by Nancy Orpana from our site visit in January. A few of her questions can also be answered through the inspection action items. There is no immediate timeline on a response to this memo, but as soon as possible is always appreciated.

I have not addressed the Acoustic Audit in this report, although it is now outstanding. Please provide an update on this report as well.

I'm happy to discuss the details of anything in this report that you may have questions about. Many of the actions required are addressing the monitoring and reporting requirements found in the Facility's Air ECA.

Regards,

Katy Potter B.ESS  
Senior Environmental Officer #1702  
Belleville Area Office  
Ministry of the Environment and Climate Change  
**T: (613) 962-7769**  
**Spills Action Centre: (800) 268-6060**  
[www.ontario.ca/ministry-environment](http://www.ontario.ca/ministry-environment)

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## Air Facility Inspection Report

<b>Client:</b>	Astoria Organic Matters Ltd., Business/Facility Name: Astoria Organic Matters Canada LP Mailing Address: 704 Phillipston Rd, Belleville, Ontario, Canada, K0K 2Y0 Physical Address: 704 Phillipston Rd, Belleville, City, County of Hastings, Ontario, Canada, K0K 2Y0 Telephone: (613)449-6214, email: ahamilton@astoriaorganics.com Client #: 5385-9K4JNK, Client Type: Corporation, NAICS: 56221		
<b>Inspection Site Address:</b>	704 Phillipston Road Address: Lot: 21, Concession: 8, 704 Phillipston Rd Part of Lot 20 Concession 8, Geographic Township: THURLOW, Belleville, City, County of Hastings District Office: Belleville GeoReference: Map Datum: NAD83, Zone: 18, UTM Easting: 310422, UTM Northing: 4909695, UTM Location Description: SW corner of property, LIO GeoReference: Zone: , UTM Easting: , UTM Northing: , Latitude: 44.3173, Longitude: -77.3707 Site #: 3013-5PSH4T		
<b>Contact Name:</b>	Al Hamilton	<b>Title:</b>	President/CEO
<b>Contact Telephone:</b>	613 449-6214 ext	<b>Contact Fax:</b>	
<b>Last Inspection Date:</b>			
<b>Inspection Start Date:</b>	2016/12/02	<b>Inspection Finish Date:</b>	2016/12/02
<b>Region:</b>	Eastern		
<b>Status:</b>	Final Signed-Off		

### 1.0 INTRODUCTION

Clean, safe air is essential to protecting the health of Ontarians and the communities in which they live. Improving air quality and combating air pollution is a top priority for the Ministry of the Environment and Climate Change (Ministry).

In Ontario, industries are required under the Environmental Protection Act to obtain authorization from the Ministry for the emission of air contaminants from facilities and certain equipment. The Ministry grants this authorization through Environmental Compliance Approvals, which in turn impose site specific requirements, which the facilities are required to meet. Ontario's local air quality regulation Ontario Regulation 419/05 (O. Reg. 419) further regulates air contaminants released by industrial and commercial facilities to protect local communities and the environment from the effects of air pollution.

On December 2, 2016, Senior Environmental Officer, Katy Potter, conducted an air facility inspection at the Astoria Organic Matters Ltd. (Company) waste transfer and composting facility, located at 704 Phillipston Road, Belleville, Ontario (Facility). Although the land is owned by 1684567 Ontario Inc. (o/a David N. Moore & Son Environmental), it has been reported by the Company that the land owner has no current dealings in the Facility operations. Company President, Al Hamilton, and Operations Manager, Brock Evans, were present during the inspection. The Facility currently operates as an organic waste processing facility, receiving and processing organic waste streams into compost and compost-like materials for sale. Facility operations officially began in September 2016. The inspection was undertaken to assess the Facility's compliance with all applicable legislation and guidelines, including, but not limited to the following:

- The Environmental Protection Act (EPA);

- Ontario Regulation 419/05 - Air Pollution - Local Air Quality;
- Environmental Compliance Approvals (ECA);
- Environmental Noise Guideline - Stationary and Transportation Sources- (NPC-300)
- Orders (Provincial Officer's Orders and / or Director's Orders); and
- Any other applicable regulations and/or guidelines.

The following report details the findings of this inspection, as well as observations made on multiple prior site visits.

## 1.1 FOCUS OF THE AIR INSPECTION

Is the inspection for the entire facility or is it scoped to part of the facility?

- Entire Facility     Part of the Facility

**Specifics:**

This inspection encompassed all air emissions from the Facility, with the exception of the mobile grinder, which is approved to operate under a separate ECA, and was not operating at the time of the inspection.

## 1.2 TARGET SECTOR IN ONTARIO REGULATION 419/05, AIR POLLUTION - LOCAL AIR QUALITY

Is the facility in a targeted sector identified in Schedule 4 or Schedule 5 of O. Reg. 419/05?

No, the facility is not in a target sector identified in Schedule 4 or Schedule 5.

**Specifics:**

325314- Mixed Fertilizer Manufacturing

This Canadian industry comprises establishments primarily engaged in mixing ingredients produced elsewhere into fertilizers. This includes the production of compost from organic waste.

## 2.0 INSPECTION OBSERVATIONS

**Specifics:**

Currently, the Facility is operating mainly as an organic waste transfer/processing facility, receiving organic wastes and other approved materials, and processing them into various qualities of compost, for sale. The Facility is also approved under a separate ECA for the receiving and transfer of solid non-hazardous waste, recyclable material, wood waste, clean wood, white goods, bricks, concrete, asphalt shingles and waste electronics and electrical equipment.

Emissions from the Facility can be categorized into the following three main areas/activities:

- Organics management;
- Material storage;
- Recycling/waste transfer.

**Organics Management:**

The Facility can receive up to 800 tonnes per day of organic wastes, with a maximum volume of 70,000 tonnes per year. It is approved to receive the following waste streams to be incorporated into the composting process:

- Municipal source-separated organics;
- Organic waste (as defined in Waste ECA);
- Biosolids;
- Leaf and yard waste;
- Drywall; and
- Inert powders, limited to clean gypsum and carbon powders.

All of the above wastes, with the exception of the leaf and yard waste, must be received within the tipping

building, which is a fully enclosed building equipped with a negative air pressure control system. In this building, all waste mixing and sorting occurs before the waste is used to build windrows in one of two (2) enclosed compost buildings. Air from the tipping building is drawn through an organic media biofilter building, before being discharged out of a stack which extends twenty-five (25) metres above grade. The two (2) fully enclosed compost buildings each contain four (4) Gore covered windrows, and are used for Phase I composting. Each building exhausts directly through the same stack as the tipping building, bypassing the biofilter completely. As the Facility was not operating at full capacity at the time of the inspection, all phases of composting were occurring within the two (2) enclosed compost buildings. Once fully operational, Phase II and Phase III of the composting process will occur in eight (8) outdoor windrows, with an additional two (2) windrows for polishing.

After being screened, the completed compost is stockpiled behind the main office area, awaiting sale. No odours were detected from these stockpiles during the inspection. The organics management portion of the operations is considered to be the largest potential odour source at the Facility. No complaints have been received to date, and no odours have been detected off-site by the Ministry during multiple site visits. However, it is acknowledged that outdoor operations have not yet begun at the Facility. A Best Management Practices assessment was conducted at the Facility with the aid of the Ministry's Technical Support staff. Comments on the assessment have been provided to the Company with this inspection, and are further discussed in Section 2.7 of this report.

**Material Storage:**

Material storage activities at the Facility refers to the outdoor storage of leaf and yard waste, as well as clean wood and wood waste. It is possible that a slight musty or earthy odour will be generated from the storage of this material outside, due to natural decomposition. It is not anticipated that strong objectionable odours will be generated from this area. However, it is possible to have odours if the waste is stored in a manner to permit decomposition, and/or it takes too long for the waste to be incorporated into the composting process. The Company must be diligent in completing odour checks of this area, as the area is located within 75-100 metres of the closest sensitive receptor (a residential home) and there are three (3) receptors within approximately 200 metres. No odours have been noted by the Ministry during several site visits and odour checks.

**Recycling/waste transfer:**

The Company has explained that there are currently no plans to establish the full recycling and waste transfer station beyond the composting operation, and the management of waste electronics and electrical equipment (WEEE) at the Facility. This activity is not anticipated to be a generator of malodours, but it is being monitored.

**2.1 SITE CONDITIONS**

Operating

**Specifics:**

The Facility was operating normally at the time of the inspection, except the tipping building door had been torn off previously and it had not been replaced (see Section 2.0 for details). The Company president reported the tipping building was still under a weak negative air pressure, maintained by the fans running continuously. The tipping building door was missing for approximately two (2) months and it had been replaced by the time this report was written.

Slight odours were observed on-site, around the door entrance, mainly on the southern side of the building. Wind was intermittently from the north, blowing away from sensitive odour receptors. It was approximately -7 degrees Celsius with the wind chill. There were no visible emissions or dust from the site, and noise generated from the Facility was not differentiated from background noises off-site.

All operations were being conducted within the tipping building and two (2) covered Gore buildings. No active composting operations were being conducted outside, other than the storage of finished compost, and leaf and yard waste. No odours have been noted by the Ministry from the finished compost piles or the

leaf and yard waste to date.

**2.2 AUTHORIZING, CONTROL AND REGISTRATION DOCUMENTATION FOR AIR/NOISE EMISSIONS**

**Does the facility have authorizing, control and/or registration documents applicable to this inspection?**

Yes  No

**Specifics:**

Type of Document	Number	Date	Limit*	Notes
Environmental Compliance Approval	0565-9WXGBY	2015/08/07	No	Air & Noise ECA
Environmental Compliance Approval	0031-7UTRSS	2015/08/07	No	Waste Transfer/Processing ECA

\* Limit in Document

**2.3 EQUIPMENT REQUIRING AUTHORIZING DOCUMENT**

**Does the facility have the required Environmental Compliance Approval(s)?**

If you own, manage or operate a facility with an operation or equipment that emits one or more contaminants into the air as noted under section 9 of the Environmental Protection Act, you are required to have and operate under an Environmental Compliance Approval unless the activity is exempted from the approval process or is eligible for the Environmental Activity and Sector Registry (EASR).

The Environmental Compliance Approval (ECA) replaces the previous Certificate of Approval (Air) commencing October 31, 2011. All existing Certificates of Approval (Air) and their conditions continue to apply. Application for a new Environmental Compliance Approval is needed when you intend to make a change that requires an amendment to the approval.

- The facility does not have any required approval(s) for discharge of contaminants to air.
- The facility requires an amendment or additional approval for discharge of contaminants to air.
- The facility requires an amendment or additional approval for activity(s) other than for discharge of contaminants to air.
- The facility has the required approval (s) for discharge of contaminants to air (or is not required to obtain them).

**Specifics:**

All air emissions at the Facility are reflected in the current ECAs. The Facility also has approval for two (2) mobile grinders under ECA 1876-A8RKAC. Operations of grinders were not included in the scope of this inspection, however no concerns with their general operation were noted.

**2.4 LEGISLATIVE NOTIFICATION REQUIREMENTS**

**Has the facility met all applicable legislative notification requirements for air emissions?**

Yes  No  Not Required

**Specifics:**

The Facility's notification obligations under sections 13(1), 15(1) and 92(1) of the EPA are outlined below:

- 13. (1) Every person,
  - (a) who discharges into the natural environment; or
  - (b) who is the person responsible for a source of contaminant that discharges into the natural environment, any contaminant in an amount, concentration or level in excess of that prescribed by the regulations shall forthwith notify the Ministry of the discharge.

- 15. (1) Every person who discharges a contaminant or causes or permits the discharge of a contaminant

into the natural environment shall forthwith notify the Ministry if the discharge is out of the normal course of events, the discharge causes or is likely to cause an adverse effect and the person is not otherwise required to notify the Ministry under section 92. 2005, c. 12, s. 1 (6).

92. (1) Every person having control of a pollutant that is spilled and every person who spills or causes or permits a spill of a pollutant shall forthwith notify the following persons of the spill, of the circumstances thereof, and of the action that the person has taken or intends to take with respect thereto,

(a) the Ministry;

(b) any municipality within the boundaries of which the spill occurred or, if the spill occurred within the boundaries of a regional municipality, the regional municipality;

(c) where the person is not the owner of the pollutant and knows or is able to ascertain readily the identity of the owner of the pollutant, the owner of the pollutant; and

(d) where the person is not the person having control of the pollutant and knows or is able to ascertain readily the identity of the person having control of the pollutant, the person having control of the pollutant. R.S.O. 1990, c. E.19, s. 92 (1); 2002, c. 17, Sched. F, Table; 2005, c. 12, s. 1 (15)."

As the Facility has not had a spill to date, nor an exceedance of any prescribed limits, there have been no notifications under these requirements.

## 2.5 MONITORING AND REPORTING

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### Has the facility met its assessment requirements?

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Yes       No       Not Required

#### Specifics:

The Company's ECA conditions require various monitoring, modelling and reporting to be conducted at the Facility. These include the continuous monitoring of the Biofilter and tipping building, source testing of the large emissions stack at the Facility, as well as an acoustic audit.

#### Biofilter

Condition 3(1) of the ECA requires the following monitoring to be conducted on the Biofilter:

- (a) process air flow through each cell;
- (b) differential pressure across media bed in each cell;
- (c) media temperature in each cell;
- (d) inlet air temperature;
- (e) process air relative humidity; and
- (f) water flow of the media irrigation water;
- (g) moisture content of media in each cell (once every three (3) months as a minimum)
- (h) ammonium ions and nitrates in the media (once every three (3) months as a minimum)

The monitoring for these parameters is done electronically, with the real-time data available and monitored. All biofilter monitoring data was requested for the following dates:

- a. October 12, 2016.
- b. November 22, 2016
- c. December 6, 2016
- d. December 30, 2016

Due to technical issues, this information will be provided to the Ministry separately from the inspection report. It was explained that as this is the first time this information has been attempted to be rolled up, there have been difficulties in pulling the data and showing it in an acceptable format to the Ministry.

Condition 15(6) requires that a quarterly review of operational data of the Biofilter be conducted,



including an analysis of parameter trends (including but not limited to all of the parameters identified in this Approval) and their comparison to the design levels, and submit a report to the District Manager, not later than four (4) weeks after end of the previous quarter.

Limited information on the biofilter has been submitted to the Ministry when requested for this inspection. No quarterly reports have been submitted on the Biofilter trends to date.

**See Section 5.0 for Actions Required.**

Condition 3(2) requires that the negative air pressure in the tipping building and the compost buildings are continuously monitored. This is discussed further in Section 2.7 of this report.

The Company is further required by Condition 3(3), to conduct twice daily monitoring and recording of ammonia at the inlet and outlet of the Biofilter, for every day that Organic Waste is received at the Facility. At the time of the inspection, the ammonia sampling at these ports was not occurring due to concerns with sampling locations. The sampling access points are located inside manholes, requiring confined space entry. The possible use of in-line sensors was considered and dismissed due to the fail rate of the sensors, and the cost. The Company has noted that it is looking at installing sampling ports that extend to the top of the manhole for sampling access.

**See Section 5.0 (Actions Required) for details.**

**Source Testing**

Condition 20 of the ECA requires that the Company conduct source testing to determine the actual rate of odour emissions from the Facility. Conditions 21-31 detail the steps required prior to and during the source testing. Pre-test information must be submitted to the Manager of the Technology Standards Section, Standards Development Branch, no later than two (2) months after the Facility start-up date. At the time of the inspection, the Facility had been operational for four (4) months, with no source pre-testing plans submitted. As such, compliance with conditions 20-31 of the ECA was not attained.

During the time this report was being written, the Company's consultants, Pinchin Environmental, have submitted a Source Testing Pre-Test plan to the Ministry for review, attaining partial compliance with Condition 21 of the ECA, disregarding the date of compliance. Given this information, compliance with the remaining conditions pertaining to Source Testing will be assessed separately from this inspection report.

**Acoustic Audit**

Condition 37 of the ECA requires the Company to complete an Acoustic Audit Report and submit it to the Ministry within six (6) months of operations. As the Facility has been officially operating since September 2016, the Company has until the end of February 2017 to submit the Acoustic Audit Report. The Company has confirmed that this is being addressed. Compliance with NPC-300 and Condition 1 of the ECA will be assessed once the Acoustic Audit Report has been submitted. This assessment will occur separately from this inspection report.

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**Has the facility met its reporting requirements?**

Yes       No       Not Required

**Specifics:**

The Facility is currently out of compliance with Conditions 20-31 of the ECA, regarding the source testing which must be conducted at the Facility on an annual basis, beginning no more than two (2) months after start-up of operations. Steps have been taken during the writing of this report to address this non-compliance.

**2.6 EXCEEDANCE OF A LEGAL LIMIT AND/OR GUIDELINE**

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**Is there information that demonstrates an exceedance of a legal limit and/or guideline for air emissions?**

Yes  No

**Specifics:**

There was no information at the time of the inspection to indicate that the Facility has exceeded any legal limits or guidelines for air emissions. The Ministry is still awaiting source testing results and the results of an acoustic audit to assess the Facility's compliance with all applicable limits and guidelines.

## 2.7 OPERATIONAL AND MAINTENANCE REQUIREMENTS

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**Has the facility met its operating/maintenance requirements?**

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Yes  No  Not Required

**Specifics:**

**Operating Procedures Manual**

Condition 4 of the Facility's ECA requires that an Operating Procedures Manual outlining the procedures and maintenance program for the Facility's operations and equipment be submitted to the District Manager by no later than October 31, 2015. During the inspection, a copy of the Facility Operations Manual, dated October 15, 2015, was provided to the inspecting officer, however it was determined that no copy had been submitted to the District Manager, as required. It was observed that an electronic folder is maintained and available to all staff with all of the manuals and documents required for Condition 4 of the ECA. This electronic folder is considered to be the full Operations and Maintenance manual. Equipment maintenance manuals are also maintained as hard copies and kept within the equipment itself. It was recommended that the document entitled Operations Manual include references to where the other documents are contained, and to ensure that all documents include a version date and a record of any updates to each document.

**Odour Management Plan**

Condition 4(2) requires that an Odour Management Plan (OMP) be prepared and submitted to the District Manager for approval by no later than October 31, 2015. An OMP was provided during the inspection and is dated March 18, 2015, however no record was found indicating that it had been submitted to the District Manager, as required. The OMP includes all locations and procedures which may cause odours on-site, as well as the procedures for mitigating these odour sources. It is recommended that the OMP be updated on an annual basis, or more frequently, as required. This will ensure that any issues are addressed adequately that may arise from changes in operation.

The OMP for the Facility states that a few practices will be instated, but during the inspection they were not observed. Condition 4(3) of the ECA requires that the accepted OMP and Operating Procedures Manual be implemented. The practices in question are included in the following:

- In the Facility's OMP, the use of air flow ribbons is expected to be incorporated at all door frames and louvres in each building. No air flow ribbons have been installed at the Facility to date. It is highly recommended that these air flow ribbons be installed as designed. Alternatively the OMP will have to be updated to reflect these changes.
- A windsock is discussed in the OMP, to be used as a visual indicator for on-site staff to determine whether certain operations can be carried out, depending upon the wind direction. The Facility does have it's own weather station, however this is electronically monitored. There is currently no visual cue as to the wind direction for staff working outside in the composting operation. This could lead to off-site odour impacts if certain operational activities are performed during an unfavourable wind direction.

**See Section 5.0 for Actions Required.**

**Tipping Building**

The Company is required under Condition 7 of the ECA to keep all tipping building doors and compost building doors closed, unless the door must be open for building access or ongoing work. These buildings are further required to only have one door open at a time while work is being performed. This requirement

has also been incorporated into the Facility's OMP. At the time of a Ministry visit shortly after the inspection, it was observed by Ministry staff that both tipping building doors were open at the same time, with the front door not being in immediate use, and the rear door being used by loaders for the movement of material. As the tipping building is considered to be the likeliest source of objectionable odours, it is imperative that all best management practices are followed to prevent odours from travelling off-site. The ECA describes the tipping building doors as being interlocked to the negative air pressure fans in the building. Confirmation of the doors being interlocked to the negative air pressure system is required from the Company, to ensure compliance with Condition 8 of the ECA.

**See Section 5.0 for Actions Required.**

#### **Negative Air Pressure**

Condition 12 of the ECA requires that the Company develop a terms of reference in consultation with the Ministry for performing a negative air pressure assessment on the tipping building and the covered compost buildings at the Facility, at least one (1) month prior to start-up. To date, this Condition has not been addressed by the Company.

**See Section 5.0 for Actions Required.**

Negative air pressure in the tipping and compost buildings is to be maintained at all times, and monitored electronically. On October 28, 2016, the inspecting Officer was notified by the Company that a truck delivering biosolids had damaged the front door of the tipping building with its box, effectively removing the front door. It was confirmed through regular site visits by the Ministry that no off-site odours were caused as a result. The Company also confirmed through their electronic monitoring that negative air pressure (though slight) has been maintained, despite the damage. The Company is aware of the requirements under Condition 13 to provide notifications in the event that negative air pressure is lost. The door has since been repaired. No complaints were received by the Company or the Ministry.

The Ministry is waiting on a roll-up of negative air pressure data from the Company for the Site for the following dates:

- a. October 28, 2016
- b. November 18, 2016
- c. December 2, 2016
- d. December 28, 2016

It was reported that due to technical issues some information was lost by the company hired to oversee the monitoring, and resolutions to this are being sought.

The negative air pressure data will be reviewed by the Ministry's Technical Support staff once the data is submitted and compliance with this item will be addressed at that time.

#### **Fugitive Dust**

Condition 16 of the ECA requires the Company to prepare and submit for review and acceptance a Fugitive Dust-Best Management Practices Plan to the District Manager by October 31, 2015.

Although not submitted by the appropriate date, the plan was submitted to the area office prior to the inspection and upon review, satisfies the requirements of the ECA. The plan contains a list of potential fugitive dust emissions sources, as well as a list of potential preventative and control measures for the fugitive dust. It is the Ministry's understanding that fugitive dust emissions checks are included on the daily inspection list at the Facility, and that training on housekeeping and best management practices, is provided to the employees on an annual basis.

It is noted to the Company to ensure that that the plan is updated annually as required, to continue to address the ongoing operations at the Facility.

## **2.8 RECORD KEEPING REQUIREMENTS**

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**Has the facility met its record keeping requirements?**

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Yes       No       Not Required

**Specifics:**

The Company is required under Condition 35 of the ECA, to retain all records pertaining to the operation, maintenance and monitoring activities at the Facility, for a minimum of five (5) years. These records are to include, but are not limited to:

- all maintenance, repair and inspection records;
- all records on the amounts of incoming Organic Waste, and finished compost;
- all records of Biofilter failure;
- all source testing records;
- all dust control measures;
- all environmental complaints and the details surrounding them.

All records are maintained electronically at the site. Examples of the inspection records and environmental complaint forms were reviewed at the time of the inspection, as well as the record system used for tracking all compost stages and incoming wastes. No environmental complaints have been made to the Company or the Ministry since operations began.

Problems have arisen from requests for monitoring data going back to specific dates. It has been requested of the Company to address the issue and provide the required information separately from this inspection report.

Source testing has not been completed to date (see Section 2.5 and 5.0 for details).

**See Section 5.0 for Actions Required.**

**2.9 SPILLS PREVENTION AND CONTINGENCY PLAN**

**Is the facility required to have a Spill Prevention Contingency Plan (SPCP) under Ontario Regulation 224/07, Spill Prevention and Contingency Plans?**

Yes  No

**Specifics:**

The Facility is not required under Ontario Regulation 224/07 to have an SPCP plan. At the time of the inspection there was no indication that a SPCP plan is required.

It is recommended that the Facility have a spills kit for liquid spills and Emergency numbers posted, including the Spills Action Centre 1-800-268-6060 (for spills reporting, including spills to air).

**2.10 BEYOND COMPLIANCE**

**Are there any Beyond Compliance Projects being implemented at the facility?**

Yes  No

**Specifics:**

The Facility recirculates the leachate generated from the compost, and re-uses it for irrigation purposes.

**3.0 REVIEW OF PREVIOUS NON-COMPLIANCE ISSUES**

This is the first air facility inspection conducted by the Ministry at this Facility.

**4.0 SUMMARY OF INSPECTION FINDINGS (HEALTH/ENVIRONMENTAL IMPACT)**

Was there any indication of a known or anticipated human health impact during the inspection and/or review of relevant material, related to this Ministry's mandate?

Yes  No

Specifics:

Was there any indication of a known or anticipated environmental impact during the inspection and/or review of relevant material ?

Yes  No

Specifics:

Was there any indication of a known or suspected violation of a legal requirement during the inspection and/or review of relevant material which could cause a human health impact or environmental impairment ?

Yes  No

Specifics:

**Source Testing**

As required by Conditions 20-31 of the Facility's air ECA, no Source Pre-testing plan has been submitted within the first two (2) months of operations. The Pre-test plan was submitted on February 6, 2017 for review.

**Negative Air Pressure**

Condition 12 of the ECA requires that the Company develop a terms of reference in consultation with the Ministry for performing a negative air pressure assessment on the tipping building and covered compost buildings at the Facility, at least one (1) month prior to start-up. To date, this Condition has not been addressed by the Company.

**Tipping and Compost Buildings**

Condition 7 of the ECA, and the OMP for the Facility require that doors be shut at all times when they are not in use, and the ECA states that at no time shall both bay doors be opened at the same time. Both doors were observed to be open during a Ministry visit after the inspection.

Condition 8 of the ECA requires that the opening and closing of all bay doors in the tipping and composting buildings be interlocked with respective fans and a negative pressure control system. Confirmation of this practice is required.

Condition 15(6) requires that a quarterly report be prepared, detailing the trends for all parameters listed in the Air ECA for the site, and submitted to the District Manager, no later than four (4) weeks after the previous quarter.

Was there any indication of a potential for environmental impairment during the inspection and/or the review of relevant material ?

Yes  No

Specifics:

**Ammonia Sampling**

As required by Condition 3(3) of the ECA, ammonia sampling of the inlet and outlet to the biofilter has not been completed, due to the potential health and safety concerns of entering confined spaces (down a manhole). This sampling is important for the Company to track the efficacy of the biofilter and can indicate potential odour sources.

**Was there any indication of minor administrative non-compliance?**

Yes  No

**Specifics:****Operating Procedures Manual**

An updated and complete copy of the Operating Procedures Manual, containing all documents required by Condition 4 of the ECA, is required to be submitted to the District Manager forthwith for review.

**Monitoring Information:**

Due to reported technical difficulties, monitoring data for the biofilter and negative air pressure units could not be supplied for the inspection.

**Odour Management Plan:**

Condition 4(3) of the ECA requires that an Odour Management Plan (OMP) be prepared and submitted to the District Manager for review, and upon acceptance, implemented. An OMP dated March 31, 2015, was submitted to the inspecting Officer during the inspection. After review, it was found that not all measures were being implemented, including, but not limited to:

- the use of a windsock to provide visual cues of wind direction to employees;
- the use of ribbons on all doorways to provide visual cues that the negative air pressure system is working.

**5.0 ACTION(S) REQUIRED**

The following actions are required as a result of this inspection:

1. By no later than March 29, 2017, submit to the undersigned Provincial Officer and the Kingston District Manager, complete and updated hardcopies of the Operating Procedures Manual, and the Odour Management Plan for the Facility.
2. By no later than March 29, 2017, submit to the undersigned Provincial Officer a written action plan detailing the steps the Company will take to implement the recommendations of the Odour Management Plan, and to ensure compliance with Conditions 7 and 8 of the ECA.
3. By no later than March 29, 2017, submit to the undersigned Provincial Officer a written procedure outlining the sampling procedure for ammonia at the Facility's biofilter inlet and outlet, as required by Condition 3(3) of the ECA.
4. By no later than April 5, 2017, submit to the undersigned Provincial Officer all biofilter monitoring data required by Condition 3(1) of the ECA, for the following dates:
  - a. October 12, 2016
  - b. November 22, 2016
  - c. December 6, 2016
  - d. December 30, 2016

If the Company is unable to submit this information, then a detailed written explanation providing the reasoning for the missing information, and what steps will be taken going forward to ensure that this information is available, is required to be submitted by the same date.

5. By no later than April 5, 2017, submit to the undersigned Provincial Officer Terms of Reference for performing a negative air pressure assessment on the tipping building and the covered compost buildings at the Facility. The Company is also required to submit negative air pressure data for the above mentioned buildings in the format detailed in the Facility's Air ECA, for the following dates:
  - a. October 28, 2016
  - b. November 18, 2016
  - c. December 2, 2016
  - d. December 28, 2016

If the Company is unable to submit this information, then a detailed written explanation providing the reasoning

for the missing information, and what steps will be taken going forward to ensure that this information is available, is required to be submitted by the same date.

6. By no later than April 12, 2017, submit to the undersigned Provincial Officer and the Kingston District Manager, a written report detailing the trends for all of the biofilter monitoring parameters listed in the Air ECA for the site, for all quarters since operations began at the Facility.

**6.0 OTHER INSPECTION FINDINGS**

A site visit with a Ministry Air Engineer was conducted as a follow-up to the initial inspection and is described briefly in the above report. A technical memorandum was generated as a result of this site visit and provides recommendations and some questions to be addressed by the Company.


**7.0 INCIDENT REPORT**

Applicable     Not Applicable  
 6860-AJZQZG 

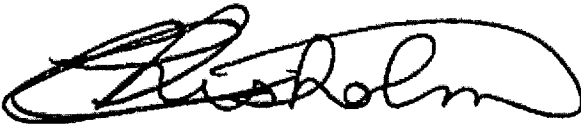
**8.0 ATTACHMENTS**

Astoria Memo January 2017.pdf

**PREPARED BY:**

<b>Environmental Officer:</b>	
<b>Name:</b>	Katy Potter
<b>District Office:</b>	Belleville Area Office
<b>Date:</b>	2017/02/28
<b>Signature:</b>	

**REVIEWED BY:**

<b>District Supervisor:</b>	
<b>Name:</b>	Cathy Chisholm
<b>District Office:</b>	Belleville Area Office
<b>Date:</b>	2017/03/14
<b>Signature:</b>	

<b>File Storage Number:</b>	704 PHILLIPSTON ROAD, BELLEVILLE, ASTORIA ORGANIC MATTERS LTD.
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**Note:**

**"This inspection report does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they may apply to this facility. It is, and remains, the responsibility of the owner and/or the operating authority to ensure compliance with all applicable legislative and regulatory requirements"**



Ministry of the Environment  
And Climate Change

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Fax: 613/548-6920

Ministère de l'Environnement  
en matière de Changement Climatique

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## MEMORANDUM

TO: Katy Potter  
Senior Environmental Officer  
Belleville Area Office

FROM: Nancy Orpana  
Air Compliance Engineer  
Technical Support Section Eastern Region

DATE: January 24, 2017

RE: Astoria Organic Matters Canada LP Composting Facility Review and Site  
Visit on January 13, 2017

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The following is an evaluation of the findings of a site visit and reports review of the Astoria Organic Matters Canada LP (Astoria) composting facility conducted on January 13, 2017.

### **1.0 Site Visit**

A site visit of the Astoria composting facility was performed by ministry staff on January 13, 2017.

### **2.0 Document Review**

The following relevant documentation for the facility was reviewed:

- Environmental Compliance Approval (ECA) No.0565-9WXGBY dated August 7, 2015;
- Astoria's Odour Management Plan dated November 11, 2014 and
- Astoria's Updated Design and Operations Report dated December 18, 2014.

#### **2.0.1 Environmental Compliance Approval Air No. 0565-9WXGBY**

**Condition 3** of the ECA states that Astoria shall monitor the following parameters for the biofilter:

- a) process air flow through each cell;
- b) differential pressure across media bed in each cell;
- c) media temperature in each cell;
- d) inlet air temperature;
- e) process air relative humidity;
- f) Water flow of the media irrigation water;
- g) Moisture content of media in each cell and

h) Ammonia ions and nitrates in the media

Some of the parameters listed above can affect the biofilter performance in the following ways:

Temperature Monitoring

- Temperature can change rapidly and can have severe impacts on microbial activity
- Typical Range -10 to 40 °C after humidification

Humidity

- Low humidity will dry the media
- Typical Range >98% depending on media

Moisture Level

- Moisture levels typically change slowly – low levels have a detrimental impact on microbial activity, high levels can lead to poor airflow distribution; biofilters frequently fail because they are allowed to become too dry. The lack of water inhibits microbial activity, so that degradation of the contaminant is slowed and treatment efficiency declines.
- Typical Range- 30 to 70% depends on media and design of system

Irrigation Pressure & Volume

- Volume of water applied is critical for media moisture content
- Spray pattern is important to ensure good distribution – pressure provides an indication that sprinklers/nozzles are operating properly
- Typical Range – should be established during commissioning and adjusted as needed

Pressure Drop (Differential Pressure)

- High pressure drop is an indicator of clogging, compaction
- Typical Range – specified by designer

Media pH

- Changes in pH can have detrimental impacts on the microbial activity
- Typical Range – 6 to 8 could be lower depends on system design
- Typical Measurement Technique – grab sampling of media and subsequent analysis
- Typical Frequency – quarterly to 6 months possibly annually once stable operation is demonstrated
- Typical Locations – each media cell, 2 to 3 depths with the media

**Condition 3 Ammonia Monitoring** The Company shall monitor, record and keep in a log the concentration of ammonia manually at the inlet and outlet of the biofilter, twice per day, minimum of 8 hours apart, for every day that the facility is receiving organic waste in the tipping building.

This condition has been included in other composting facility's ECAs. The most common form of monitoring ammonia is by gas detector tubes.

**Condition 7** of the ECA states that the company shall keep all doors in the tipping building and two compost buildings fully closed at all times, except when used for necessary personnel or vehicle entrance and exit. Also, the companies shall ensure that the two bay doors within an individual building are not open at the same time.

It was noted during the site visit that both bay doors in the tipping building were open at the same time. The facility may wish to consider having these doors interlocked so that this cannot occur in future.

**Condition 15 6)** of the ECA states that the company perform a quarterly review of operational data of the biofilter after its successful commissioning including an analysis of parameter trends and their comparison to the design levels and submit a report to the District Manager, no later than four weeks after the end of the previous quarter.

It is recommended that these quarterly reports be reviewed for trends in monitoring data that may indicate the decline in treatment efficiency of the biofilter (e.g. a slow rise in pressure drop is an indicator of clogging of the biofilter).

## **2.0.2 Astoria's Odour Management Plan**

The purpose of this plan is to outline areas of operation of the facility that have a potential to release odour including fugitive odours. It outlines the physical and procedural controls; policies and standard operating procedures; corrective actions and communication and management reviews to manage odour to prevent or mitigate any odour impacts on sensitive receptors.

I offer the following comments on this plan:

Area of Operation – Tipping Building This section states that it will be within the Site Manager's power to reject any loads (i.e. wastes that have been stored too long) that could lead to unacceptable odours. Is there a system in place to record un-expected loads and why?

Operations & Maintenance – Tipping Building Bay Doors This section states that only one bay door at either end of the tipping building will be open at any one time. As mentioned above during the ministry site visit, both overhead doors in the tipping building were open. If odour complaints become an issue at the facility it would be recommended that an interlock system be installed on these doors so that only one door at a time can be opened.

Operations & Maintenance – Air Flow Ribbons The plan indicates that air flow ribbons will be installed on all door frames and louvers in each building. During the ministry site visit it was not evident if there were air flow ribbons on all door frames and louvers in each building.

Operations & Maintenance – Air Velocity Monitors The plan states that a computer system alarms if system monitoring points fall below a lower control limit as well as when the system exceeds an upper control limit. Are these alarms data logged and recorded somewhere with an explanation as to the cause and how it was fixed?

Biofilter & Biofilter Building – Sections of Biofilter Shutdown The plan states that it is expected that a maximum of one quarter of the laterals will be shutdown at any given time (i.e. maximum of seven laterals). How long will each section be shut off since load fluctuations can be problematic? Rapid increase in load can result in insufficient microorganism population to consume the pollutant, while decrease in load can result in insufficient food supply, so some microorganisms die or become dormant and are not available when load returns to higher levels.

Outdoor Composting Area – Windsock The plan indicates that an onsite windsock will be used to establish wind direction. It was not clear during the ministry site visit if this windsock had been installed.

Leaf & Yard Waste Pad – Potential Odours Material This section states that where a load is received to the leaf and yard waste pad that may have the potential for rapid decomposition it will be moved to the tipping building and stored in the bunker for immediate blending. Is there a protocol for how will this be determined?

Communication, Management Reviews and Complaints Prevention & Protocol – Annual Review

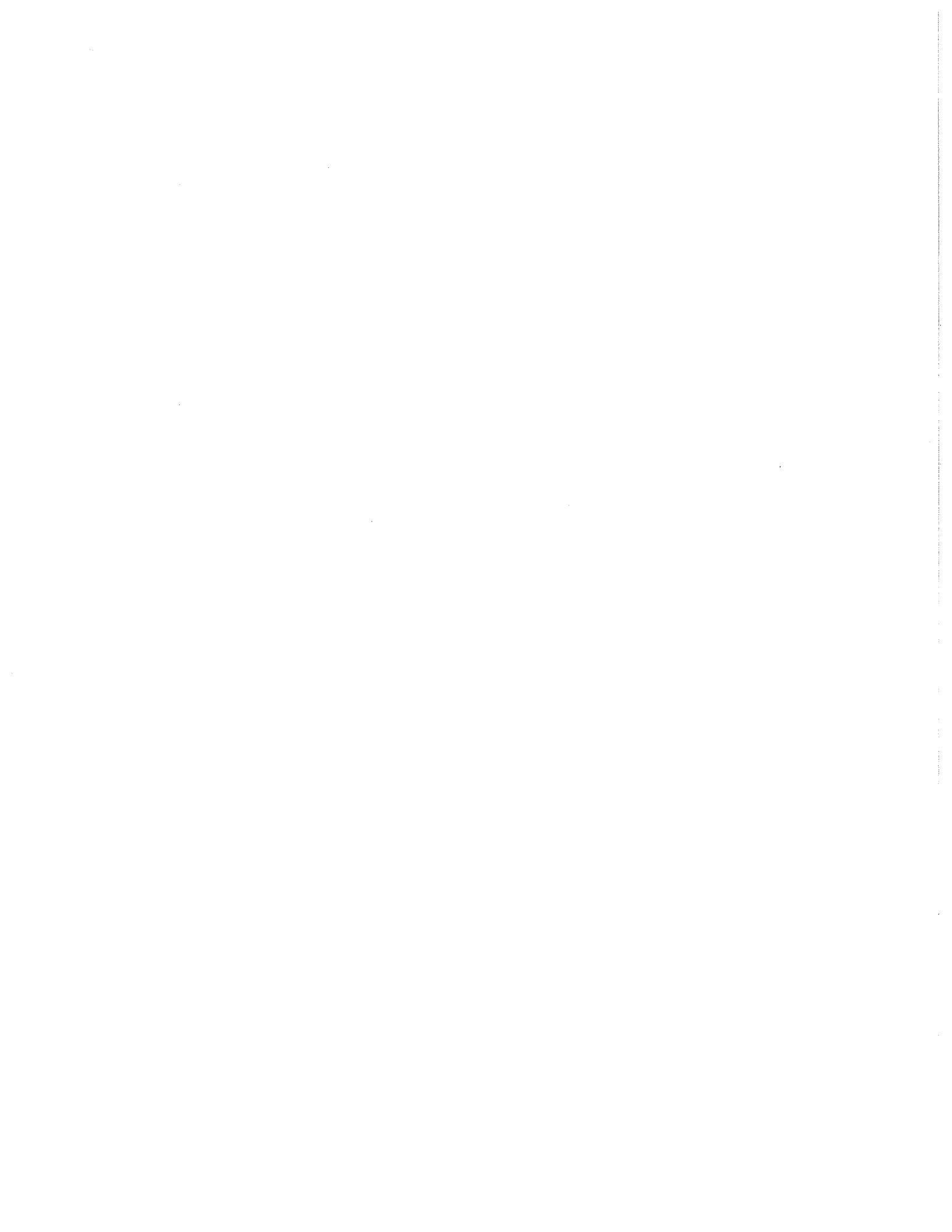
This section states that this procedure is reviewed on an annual basis by each employee as a year-end review and as a proactive measure to help set key performance goals for improvement for the upcoming year. There is no discussion and there should be of some kind of review of the Odour Management Plan on a regular basis to ensure it is relevant and effective.

Should you have any questions concerning the above, please contact me at (613) 540-6897.

Sincerely

A handwritten signature in black ink that reads "Nancy Orpana". The signature is written in a cursive style with a large initial 'N'.

Nancy Orpana (REE Nancy Dyck) P. Eng.  
Air Compliance Engineer  
Technical Support Section Eastern Region



## APPENDIX E

**Karen Parkinson**

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**From:** Al Hamilton <ahamilton@astoriaorganics.com>  
**Sent:** March-22-17 11:20 AM  
**To:** 'Patrice Harnois'  
**Cc:** 'Brock Evans'; ktcltd@xplornet.ca  
**Subject:** RE: Spring start up

Excellent Patrice. We will be here.

Al

---

**From:** Patrice Harnois [mailto:p.harnois@harnois.com]  
**Sent:** March 22, 2017 11:12 AM  
**To:** Al Hamilton (ahamilton@astoriaorganics.com)  
**Cc:** Brock Evans (bevans@astoriaorganics.com); ktcltd@xplornet.ca  
**Subject:** Spring start up

AL,

Just to inform you, I'm planning to walk around the site next Monday (march 27) in order to see what's the actual status and to make a "job to do list", part list and work schedule.

For any comments feel free to contact me

Regards

**Patrice Harnois**  
*Président, directeur général*  
*President & Chief Executive Officer*



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