



City of Richmond


Report to Committee

To: General Purposes Committee
From: John Irving, P.Eng. MPA
Director, Engineering
Re: Harvest Power Air Quality Permit Review

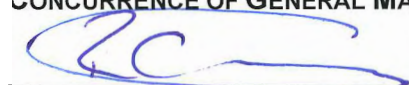
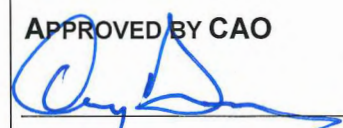
Date: October 4, 2016
File: 10-6175-02-01/2016-
Vol 01

Staff Recommendation

1. That a letter be sent to the BC Minister of Environment and Harvest Power expressing the City's expectation that measures to eliminate odours in the community be prioritized and expedited;
2. That a letter be sent to Metro Vancouver expressing the City's expectations that:
 - a. Metro Vancouver appropriately resource its enforcement program to bring the facility into compliance with permit conditions;
 - b. Metro Vancouver negotiate with Harvest Power new infrastructure and upgrades necessary to eliminate odours and present the financial implications and alternatives to the Metro Vancouver Board of Directors; and
 - c. Metro Vancouver improve opportunities for the public to share concerns about odour and implement a transparent system that publicly reports the severity and frequency of odour complaints and the measures to be undertaken to address the public's concerns;
3. That a formal response from Vancouver Coastal Health be sought in response to public health concerns relative to odours.


John Irving, P.Eng. MPA
Director, Engineering
(604-276-4140)

Att. 1

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Business Licences	<input checked="" type="checkbox"/>	
Environmental Programs	<input checked="" type="checkbox"/>	
Law	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: DW	APPROVED BY CAO 

Staff Report

Origin

The purpose of this report is to provide a summary of Harvest Fraser Richmond Organics' (Harvest Power) recently issued air quality permit. Additional information regarding Harvest Power's business license; the permit appeal process; alternative organic waste management facilities; enforcement from Metro Vancouver; public health; mechanisms to receive public concerns; and, the City's annual volume sent to the facility and associated fees are also summarized.

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.

6.1. Safe and sustainable infrastructure.

Background

The ultimate authority regulating air quality in British Columbia resides with the Province's Ministry of Environment through the *Environmental Management Act*. The Province has delegated this authority regionally to Metro Vancouver. Through utility rates, member municipalities pay Metro Vancouver for this level of service. It is important to bear this responsibility in mind given the matter at hand.

Harvest Power began an air permit renewal process with Metro Vancouver and the Province in the fall of 2015. Since this time, there have been sustained periods of odour nuisance complaints due to Harvest Power's operation in Richmond. Council have reviewed several reports regarding this issue and have sent one letter to the Province and four letters to the Metro Vancouver Board of Directors to date sharing its expectations that there be zero tolerance for odour nuisances from the Harvest Power facility. At the September 19, 2016 General Purposes Committee and Special Council meetings, Council received information regarding conditions under consideration in the draft Harvest Power air quality permit. At the time, staff noted that the City did not have access to the draft permit. Staff nonetheless shared information as it was communicated by Harvest Power and Metro Vancouver as there is a 30-day appeal period. On September 30, 2016, the City received notification that Harvest Power was issued a new air quality permit. Approximately 200 parties who participated in the consultation process were also notified.

Analysis

Permit Summary

The permit defines maximum emissions and source-specific works and procedures for ten emissions sources on the site (e.g. receiving areas, the Energy Garden, compost and storage piles, biofilters). Specific dates in which new procedures, reporting, maximum emissions and/or material handling requirements are identified; most new requirements to address odours take effect in 2017 and 2018 and new maximum emissions for known odorous compounds take effect in 2020. To meet these new requirements, Harvest Power will need to invest in infrastructure and procedural changes

immediately. In a public statement following the issuance of the permit, Harvest Power made this commitment (Attachment 1).

The following points provide an overview of key aspects of the permit:

- **Permit Duration:** The permit expires on April 30, 2020; as such, interested parties will have an opportunity to be consulted within 3 years when a permit renewal will be due.
- **Key Aspects of the Permit Intended to Reduce Odour:**
 - **Covered Aerated Static Piles:** The permit will require that all covered aerated static piles (“covered piles”) are rebuilt to significantly increase aeration; Metro Vancouver accepted that this was a costly undertaking and it will take time to complete. Harvest Power has indicated publicly that they intend to invest immediately in rebuilding the covered piles through a recent press release (Attachment 1). The permit also limits the height of covered piles to 6m through to May 2017 after which a 3m maximum height will be in effect. Metro Vancouver has advised that covered piles have reached heights of 15m at times.
 - **Pre-treatment of Digestate:** Odourous digestate, the material remaining after the anaerobic digestion of a biodegradable feedstock from the Energy Garden, must be treated before being processed on the covered piles instead of being placed directly on the covered piles.
 - **Seasonal Food Waste Restrictions:** While covered piles are being rebuilt (2016-2018), interim summer time monthly restrictions for receiving commingled waste for placement on either covered pile equal to 70% of the average monthly rate will be in place.
 - **Facility Wide Emissions Requirements:** Starting in 2017, the Director will have the authority to force the facility to immediately cease receiving any food waste for placement on any covered pile if any Metro Vancouver Officer observes malodours for 10 minutes in any hour at prescribed distances from the plant.
 - **More Frequent Biofilter Media Replacement:** New requirements will see media changed more frequently compared to past practices.
 - **New Doors:** Rapid opening and closing doors need to be installed at the Energy Garden. Metro Vancouver advises they ticketed Harvest Power for having doors open recently.

Other key points and comments related to conditions in the permit include:

- **Performance Requirements (Maximum Emissions Quality):** New requirements are in place for some emissions (e.g. sulphur oxides and particulate matter). Increases in permitted total volatile organic compounds are identified for some sources; on average, permitted maximum volatile organic compounds have increased by 90%. Metro Vancouver advises that this increase is approximately 50% of what Harvest Power requested and that volatile organic compounds are not good indicators of odour; many volatile organic compounds have no odours at all. For this reason and in the context of a phased implementation, new maximum emissions from known odourous compounds (e.g. aldehydes, ammonia, sulphur compounds, fatty acids) take effect in 2020.
- **Prescribed Material Handling Requirements:** By spring 2017, the facility must install new automatic doors and indoor material handling procedures for receiving materials at the Energy Garden. A covered receiving facility will be required if highly putrescible materials are stored for placement on the covered piles; this excludes commingled food and green waste.
- **Increased Monitoring and Reporting:** As a general note, the permit includes increased requirements for reporting, record keeping and monitoring.
- **Overall Site Odours:** No odours past the plant boundary such that the District Director determines that pollution occurs is now a general clause in the permit, as opposed to specific to the source. In addition, new ‘Facility Wide Emissions’ thresholds for odour detection identifies

that based on written reports of ‘observations’ by an Officer of malodours from the facility for 10 minutes in any hour at prescribed distances (5km in 2017 for 4 days; 4 km in 2018 for 3 days; 3 km in 2018 for 2 days) that the facility must immediately stop receiving any food waste (including co-mingled food and yard waste) for placement on piles until the Director determines that the issue has been addressed. This implies that the permit accepts that odours will continue to occur; the City previously requested that no odours from the site be deemed acceptable and that a more appropriate method of site wide odour detection be applied to the permit. What is favourable about this requirement however is that the facility will need to cease receiving materials for placement on piles immediately upon notification.

As reported previously, immediate results were not expected. The permit is based on the premise that Harvest Power will make improvements to covered piles and enhance material handling procedures as a key improvement to address odours, all of which takes time to implement. Piloting of new procedures and the introduction of new technologies are likely to result from the phased requirements as well. At the same time, new emission requirements will be phased to ensure progress is being made. If the above measures are implemented, it is expected that odour issues from the facility will significantly decrease. The City should expect to see the results of Harvest Power’s improvements starting in the spring of 2017 or sooner when the covered piles are updated.

Appeal Process

The BC Environmental Management Act (the “Act”) includes provisions for a “person aggrieved” by a decision of the District Director, including a permit or any specific requirement in a permit, to appeal that decision to the Environmental Appeal Board (the “Board”). Written notices of appeal must be received by the Board within 30 days of notification of the decision. Therefore, if the City wishes to appeal the permit it must submit a notice of appeal on or before October 31, 2016.

The test for “person aggrieved” is whether such person presents sufficient information ‘to allow the Board to reasonably conclude that the decision has or has potential to prejudicially affect that person.’ It is the obligation of the appellant to identify how it has been aggrieved. If the City is able to establish that it is an aggrieved person, it would still have the burden of convincing the Board that the permit should be overturned.

When a notice of appeal is received by the Board, the time to complete a hearing varies and depends on the format of the hearing (i.e. hearings may be in writing or oral, which may range from 1 to 6 days). At the low end, hearings will generally be completed within 5 months upon notice of appeal, but could go as long as 9 months. Release of final written decisions or written responses varies from 3 to 9 months after the closing of the hearing and receipt of all closing submissions. Therefore, if an appeal is filed by the end of October (e.g. within 30 days of the notification of the permit issuance), a final decision can be expected to be received within 8 to 18 months (May 2017 to April 2018).

Negotiate More Stringent Requirements

An appeal has the potential to be expensive and does not provide any assurance in regards to outcome of the procedure. As an alternative to an appeal, Metro Vancouver could review the terms of their contract directly with Harvest Power. For this reason, a recommendation is

included in the report to send a letter to Metro Vancouver's Board of Directors requesting a review of the contract and report back to members regarding financial implications.

Contract with Harvest Power

In 2015, the City sent approximately 18,500 metric tonnes of organic waste to Harvest Power. The projected amount of waste for 2016 is 21,500 tonnes. Harvest Power reports that it processes 240,000 tonnes of yard trimmings and food waste annually. In this context, the City's contribution is approximately 8% of the total amount.

The City's agreement with Harvest Power is valid through to June 30, 2019; the agreement identifies options for two additional terms of 60 months each. The agreement covers for green waste from single-family and duplex homes in Richmond. The City may choose to haul multi-family organics elsewhere at any time.

Business Licence

Harvest Power was last issued a City business license on January 2015 which has subsequently renewed. Business licenses are renewed annually. The holder of a business license must comply with the terms and conditions, if any, of the business license and all applicable bylaws which include City bylaws and may include Metro Vancouver bylaws. If the Chief License Inspector finds that a business license holder is in breach of a term or condition of a business license or any applicable bylaw, she can recommend to Council that the business license be suspended or canceled. Council then conducts a business license hearing. Before Council decides on the suspension or termination, submissions are made by the Chief License Inspector and the business license holder.

While she continues to investigate, the Chief License Inspector has not found Harvest Power to currently be in breach of any term of condition of its business license or any City bylaw. A business license suspension or cancellation may be complicated by the fact that Harvest Power is located on federal lands.

Alternative Organics Management Facilities

There is currently only one other financially viable option available to the City for processing organic waste. Enviro-Smart Organics Ltd, located in Delta, processes organics waste using a covered, aerated static pile method of composting. Currently, the cities of Burnaby, Delta and a portion of Vancouver's green waste is hauled to this facility. Staff will be considering hauling green waste from multi-family buildings to Enviro-Smart since waste from this source is not in the current contract scope with Harvest Power. Staff will bring forward a report with options to Council in this regard.

The City of Surrey has partnered with OrgaWorld to develop a facility similar to Harvest Power's Energy Garden. This facility will not have open air composting as seen at Harvest Power. The facility operators have indicated they expect to be completed in early 2017, although based on current status, are not expected to be able to receive material until late 2017 or even early 2018. Other facilities are operating in Langley and Abbotsford. All of these facilities could be considered for receiving waste from Richmond but it would be expected to significantly increase costs.

Health Impacts

Members of Council and the public have raised questions regarding health impacts related to emissions from Harvest Power. Vancouver Coastal Health was active in Metro Vancouver's consultation program related to Harvest Powers Permit Renewal Application. In their response Vancouver Coastal Health advised Metro Vancouver that they have been the direct recipient of public complaints regarding objectionable odor emissions attributed to Harvest Power and stated that the odors can be cause for discomfort and are cause for public concern

In their feedback, Vancouver Coastal Health recommended that parties consider a structured mechanism which would seek to engage the community in an ongoing capacity such as an odor management committee where community, industry and regulatory stakeholders could convene and work towards positive outcomes on odour issues. Furthermore, it was recommended that Metro Vancouver work with the Ministry of Environment to create a regulatory framework for odor mitigation and management.

Vancouver Coastal Health recently acknowledged that they wish to remain an active participant in ongoing discussions and activities with all stakeholders in assessing and addressing the ongoing issues related to Harvest Powers operations.

Mechanisms to Receive and Respond to Public Concerns

Currently, Metro Vancouver operates a complaint hotline and input form on their website. With respect to sharing information about complaints, Metro Vancouver will share the anonymous complaints with the facility generating the odour and after receiving more than 10 in one day, Vancouver Coastal Health will also receive a notification. On request, Metro Vancouver has shared the total number of complaints with the City but otherwise does not currently post this information publicly.

Many Richmond residents have expressed frustration with the above approaches to addressing their concerns. Residents have reported that they do not receive feedback regarding how or if their complaint has been addressed nor have a chance to see if others are complaining. Many residents have communicated that they have given up sharing their concerns with Metro Vancouver because of these frustrations. For these reasons, a recommendation is included in this report requesting that Metro Vancouver improve public input opportunities for sharing odour concerns and implementing a more transparent system that regularly reports to the public information regarding the severity and frequency of odour complaints and, most importantly, the measures undertaken to address the public's concerns.

Enforcement

Staff previously highlighted Metro Vancouver's role and approach in enforcing its bylaws and permits. In summary, Metro Vancouver's regulatory program includes both administrative (e.g. permits) and compliance promotion and enforcement tools (e.g. notices, tickets). Metro Vancouver's actions are predicated on the principle that bringing offenders into compliance, voluntarily if possible, is the goal, and that non-punitive actions should be taken in efforts to bring the permit holder into compliance without the need for enforcement.

Metro Vancouver advised that it recently created a team of three officers available to respond to Harvest Power complaints. Metro Vancouver also recently issued Harvest Power a ticket for leaving the doors to the Energy Garden open allowing odourous air to leave the facility. New conditions in the recently issued permit that would be subject to enforcement take effect in 2017. Again, Harvest Power will need to invest immediately to be compliant with these requirements when they take effect.

Financial Impact

None.

Conclusion

Harvest Power is providing a critical regional service related to waste management and reduction of greenhouse gas emissions. In order to meet the City's environmental goals, it is in the City's interest to ensure Harvest Power comes into compliance with its permit. The City also recognizes minimising or eliminating odour impacts to communities is just as critical. This report highlighted a range of options and considerations available to the City related to this issue. The recommendations focuses on sending letters to the Province, Harvest Power and Metro Vancouver to share the City's expectations that appropriate measures be taken immediately to eliminate odour issues from Harvest Power's operations in Richmond.



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PR:pr

Att. 1: Harvest Power Media release regarding the New Air Emissions Permit (Oct. 3, 2016).

Date: October 3rd, 2016

Media Contact: Stephen Bruyneel, 604 842 1971, bruyneel@telus.net



HARVEST RECEIVES NEW AIR EMISSIONS PERMIT FROM METRO VANCOUVER

*Company to initiate first phase of multi-million dollar infrastructure upgrade
at Richmond organics recycling facility*

RICHMOND, BC. (October 3rd, 2016) – Metro Vancouver has issued a new air emissions permit to Harvest Fraser Richmond Organics, Ltd. (Harvest), which operates one of the region's largest recycling facilities for food scraps and yard trimmings. The permit will require the company to invest in significant upgrades at the facility, improve its air emissions controls and submit to stringent monitoring.

"This is a very strict permit, but one that we are pleased to finally have in hand," said Chris Kasper, CEO of Harvest Power. "We can now proceed with infrastructure investments at the facility and expect to spend several millions of dollars – beginning now and over the next few years – to improve our operations."

Metro Vancouver issued the permit nearly eleven months after Harvest's initial application and following the agency's extensive consideration of public comments.

"We heard loud and clear that the public expects us to do better," added Kasper, "and we're committed to address their concerns. Now that we have the permit, we can focus our efforts and investments to deal with the issues that have been raised."

Harvest will begin work immediately to meet the terms of the new permit with a focus on actions that can address odour issues as soon as possible.

"We will be replacing our composting infrastructure in a phased approach so that we can continue to serve the local communities and not disrupt their organic recycling programs," Kasper explained. "However, we know the public wants to see results right away to address odour concerns. That's why we are implementing measures such as volume limits on our inbound material and reductions in the height of our compost piles. We will take these and additional steps to improve the performance of our operations even before the new infrastructure is in place."

He concluded by emphasizing that Harvest wants to be in Richmond – and the surrounding region – for the long term.

“Managing organic waste is an evolving societal challenge,” said Kasper. “We are proud to help the Metro Vancouver region be a leader in North America of diverting organic materials from landfills and turning it into clean renewable energy and compost: key components of thriving communities. At the same time, first and foremost, we need to do that in partnership with those who live and work around us. Harvest looks forward to working with our local Community Liaison Committee, the City of Richmond and the residents of the Metro Vancouver region to achieve these important goals.”

About Harvest Power

[Harvest Power](#) is creating a more sustainable future by turning organic materials into locally consumed products that are good for the environment. Harvest has grown rapidly since its founding in 2008, garnering awards for its business of organic recycling, energy generation and soil revitalization. The company has been named to the Global Cleantech 100 six years running, received Bloomberg’s 2013 New Energy Pioneer Award and was named one of Fast Company’s 50 Most Innovative Companies in the World.

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