

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: October 16, 2023
TO: Mayor and Council
FROM: Jim Gordon, P.Eng., Director, Engineering & Municipal Operations
SUBJECT: Andion Biogas Project

RECOMMENDATIONS

THAT Council receive the corporate report dated October 16, 2023, from the Director of Engineering and Municipal Operations, titled “Andion Biogas Project” for consideration; and request that:

1. Metro Vancouver thoroughly investigate and advise the City of the potential for odours from the proposed Andion biogas facility being carried by prevailing winds to White Rock and negatively affecting quality of life of White Rock residents and,
 2. Metro Vancouver thoroughly investigate and advise the City of the potential for gases emitted or wastewater effluents or discharge from the proposed Andion biogas facility being carried by prevailing winds to White Rock and negatively affecting the health of White Rock residents and,
 3. Metro Vancouver advise what regulatory tools it has available should design deficiencies, production challenges or poor feedstock management result in emissions of malodorous or unhealthy gases or wastewater effluents or discharge and,
 4. Council provide comment to Metro Vancouver after Metro Vancouver responds in detail to the concerns about potential odours, unhealthy gases or wastewater effluents or discharge potentially affecting White Rock residents as noted above.
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EXECUTIVE SUMMARY

Under the *Environmental Management Act*, Metro Vancouver (Metro) has been delegated authority from the Province to manage air quality within its boundaries. It administers laws that regulate emissions from industrial, commercial and industrial sources, through permits, compliance promotion and enforcement. A key role is establishing ambient air quality criteria that may be different but no less stringent (or more stringent) than requirements established by the province.

Semiahmoo RNG GP Corp. (Andion) applied to Metro for a permit pursuant to the *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008*. This permit application is for its proposed biogas facility that will be located at 16535 & 16565 Beach Road, Semiahmoo First Nation. The site is adjacent to Highway 99 and south of the City of Surrey and

beyond White Rock boundaries and jurisdiction, although prevailing winds could potentially carry odours or unhealthy gases westward to the City or from wastewater effluents or discharge.

Metro asked for White Rock comments on the permit application (Appendix A). Given that White Rock does not have technical experts on staff in air quality matters, this report is a simple overview of the proposed project and proposes a response to Metro.

INTRODUCTION/BACKGROUND

Organic waste typically used in biogas facilities includes manure, food waste, and green waste. Early treatments included simple land application, disposal in moving water, and drying and burning. More recently, co-mingling with garbage and landfill disposal was common for food waste and green waste. Currently, separated food waste or green waste is usually composted or digested anaerobically while a significant amount of manure is spread on farmland.

Composting

Composting is an aerobic process whereby green waste decomposes to form useful materials for soil amendment. Well-designed composting facilities blow air through the feedstock, regularly turn the feedstock, and have means to contain and manage odours. Composting failures occur when the feedstock is not properly aerated and turns anaerobic.

Examples of composting failures that cause significant community odour concern have occurred with mishandled farm composts and in some cases commercial facilities located close to residential areas.

Anerobic Digestion

Anaerobic digestion is used in secondary sewage treatment and in biogas facilities. Key to the success of these facilities is the containment and scrubbing of off gases. Useful byproducts include renewable natural gas (RNG), fertilizer and biosolids that can be composted and used as a soil amendment.

There are biogas facilities on farms in the Fraser Valley and Delta as well as a facility in Port Kells, North Surrey. Facilities are located in an industrial park in Lethbridge and in various locations in Ontario. Some of these facilities had significant air quality issues in their initial stages but seem to have modified their processes to the point where complaints are relatively low. An example is a biogas plant in Elmira Ontario that is presently in the process of applying to double capacity.

Odour and gas emission or potential wastewater effluents or discharge problems can occur in biogas facilities due to poor design, poor production methods or mismanagement of feedstocks. It appears as if these do get rectified over time at most facilities but have caused considerable early concern in communities adjacent to biogas plants.

ANDION PROPOSAL

Andion requested authorization from Metro to discharge air contaminants from a commercial scale food waste and organic feed stocks to renewable natural gas facility located on the eastern edge of the Semiahmoo First Nation (SFN) reserve adjacent to Highway 99 (Appendix B). This is beyond White Rock boundaries and jurisdiction, although emissions could potentially affect surrounding communities including White Rock residents. Attached as Exhibit C is an update from Metro to the City of White Rock on the status of the Semiahmoo RNG GP Corp. permit application and process dated October 12, 2023.

The proponent states that this is an organic material resource recovery facility, comprised of;

1. an anaerobic digestion plant for the treatment of packaged and post-consumer food waste, fat, oil, grease and other organic feed stock and;
2. a biogas cleaning and upgrading facility to produce renewable natural gas and components for soil amendment.

To mitigate odour, it is proposed that the facility will operate under negative pressure and will treat odorous air with a multi-stage biofiltration and wet scrubbing system.

Benefits/Concerns for White Rock

Biogas facilities provide environmental benefits as they produce RNG, reduce greenhouse gases, and provide fertilizer and other resource recoveries. The Andion plant could possibly take White Rock green waste, thereby reducing the current trucking of this waste to a composting facility in Delta near Boundary Bay Airport. The plant also provides an opportunity for Council to support its SFN neighbour in economic development.

The primary concerns for White Rock would be potential odours and health effects from the discharged gases listed in the permit application (Appendix B) or from wastewater effluents. Staff do not have the air quality expertise to evaluate whether these are legitimate concerns. These concerns need to be thoroughly addressed by Metro with a response to the City before Council can provide informed comment on the application.

Next Steps

Staff corresponded with Metro about the permit application and are assured that Metro will await Council comments before taking the next steps in reviewing the application. Metro permit review steps are outlined in Appendix C.

COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS

The proposed biogas facility is beyond City boundaries and jurisdiction and located on Semiahmoo First Nation land. Council feedback to Metro is planned to be by resolution in a public meeting. As a governmental body with jurisdiction, Metro has its own consultation processes (Appendix D).

CLIMATE CHANGE IMPLICATIONS

Biogas facilities are known to have environmental benefits through the production of RNG, reduction in greenhouse gases, and recovery of fertilizer and other resources.

OPTIONS / RISKS / ALTERNATIVES

Council could decide not to respond to Metro's request for comments; however, this is an important issue potentially affecting the community, so informed feedback to Metro as it considers the permit is warranted.

CONCLUSION

Andion requested authorization from Metro Vancouver to discharge air contaminants from a commercial scale food waste and organic feed stocks to renewable natural gas facility located on the eastern edge of the Semiahmoo First Nation (SFN) reserve adjacent to Highway 99. Although this proposed facility is beyond City boundaries and jurisdiction and located on Semiahmoo First Nation land, prevailing winds or wastewater effluents could potentially carry odours or unhealthy gases westward to the City.

It is requested that Metro respond in detail to concerns about potential odours and unhealthy gases potentially affecting White Rock residents so Council can provide Metro with informed comment about the project.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jim Gordon', written over a light grey rectangular background.

Jim Gordon, P.Eng.,
Director of Engineering and Municipal Operations

Comments from the Chief Administrative Officer

I concur with the recommendations of this corporate report.

A handwritten signature in black ink, appearing to read 'Guillermo Ferrero', written over a light grey rectangular background.

Guillermo Ferrero
Chief Administrative Officer

- Appendix A: Letter from Metro Vancouver to City of White Rock dated August 31, 2023 with attached Environmental Protection Notice and Seeking Feedback from the City
- Appendix B: Metro Vancouver Environmental Protection Notice
- Appendix C: Metro Vancouver Response dated October 12, 2023 to City of White Rock Semiahmoo RNG GP Corp. Application Update and Process
- Appendix D: Metro Vancouver Environmental Regulation & Enforcement Division Air Quality Permit Application Comment Form

Parks and Environment Department
Tel. 604.432.6200 or via email at
regulationenforcement@metrovancouver.org

August 31, 2023

File: AQ-10-01-1202

City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6
VIA EMAIL: aberry@whiterockcity.ca

Attention: Anne Berry, Director, Planning & Development Services

**Re: Application for a Permit under the Greater Vancouver Regional District Air Quality Management
Bylaw 1082, 2008**

Dear Anne Berry:

Enclosed is a copy of an Environmental Protection Notice (EPN) for a Permit under the *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008* from Semiahmoo RNG GP Corp.

Kindly review the attached EPN and provide your comments to the Metro Vancouver, Environmental Regulation and Enforcement Division at the email address below or by email to AndionComments@metrovancouver.org by September 30, 2023.

If you require further information regarding this application, please contact Trevor Scofield at 604-451-6518 or by email at Trevor.Scofield@metrovancouver.org.

Thank you for taking time to review this notice.

Sincerely,



Rachel Ebbett
Assistant Officer
Environmental Regulation and Enforcement Division

RE/KEP/re

Attachments: (1) Semiahmoo RNG GP Corp. Environmental Protection Notice
(2) Metro Vancouver air quality permit application comment form

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ENVIRONMENTAL PROTECTION NOTICE

TAKE NOTICE THAT Semiahmoo RNG GP Corp. of Suite 2500 Park Place, 666 Burrard Street, Vancouver, BC V6C 2X8 applies to the Metro Vancouver Regional District (“Metro Vancouver”) pursuant to the *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008* for a Permit.

1. The purpose of this application is to request authorization to discharge air contaminants from a commercial scale food waste and organic feed stocks to renewable natural gas facility located at 16535 & 16565 Beach Road, Semiahmoo First Nation (Surrey), BC V3S 9R6.

Semiahmoo RNG GP Corp. (“Andion”) is an organic material resource recovery facility, comprised of 1) an anaerobic digestion plant for the treatment of packaged and post-consumer food waste, fat, oil, grease and other organic feed stock and; 2) a biogas cleaning and upgrading facility to produce renewable natural gas and components for a soil amendment. To mitigate odour the facility will operate under negative pressure and will treat odorous air with a multi-stage biofiltration and wet scrubbing system.

Website for more information: <https://www.andionglobal.com/public-notification-of-permit-application-semiahmoo-rng/>

2. The legal description of the land or premises where the plant, operation or source and treatment works are or will be located is Lot 74, Semiahmoo Indian Reserve, New Westminster District, BC.
3. A summary of the emission characteristics for the entire facility is as follows:
 - a. Combustion processes: Primary fuel – Natural Gas; Secondary fuel – N/A;
 - b. Maximum Opacity: 5 Percent;
 - c. Maximum total number of sources: 5
 - d. Maximum duration of discharge of air contaminants: 8760 hours/year
 - e. Authorization term requested: 20 years
4. The mass of material to be discharged, emitted or stored (per specific time period) is as follows:

Total Emissions from All Sources Based on Requested Limits and or Estimates*

Contaminant	Emissions (tonnes/year)*
Nitrogen Oxides (NO _x)	2.79
Sulphur Dioxide (SO ₂)	0.523
Volatile Organic Compounds (VOC)	0.78
Ammonia (NH ₃)	0.410
Methane (CH ₄)	35.80
Hydrogen Sulphide (H ₂ S)	0.108
Total	40.41

*Detailed methods for calculating emissions are contained in the full application document.

This Notice is published pursuant to the *Environmental Management Act*, the *Public Notification Regulation*, and the *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008*. A person who may be adversely affected by the granting or amending of the permit described in this notice may, within 30 days of its publication, notify Metro Vancouver’s District Director in writing stating how that person is affected. When making a decision on the permit or approval application, the District Director will consider the application, comments submitted and any responses provided by the applicant. Information collected during the comment period and the time following until a decision on the permit application has been made is collected under the authority of the ***Freedom of Information and Protection of Privacy Act***. Your personal information and comment will be forwarded to the permit applicant for response to the District Director. By submitting a public comment, you consent to such disclosure.

Please note that submissions in response to this notice may be made available to the public as part of the public record, subject to the provisions of the *Freedom of Information and Protection of Privacy Act*.

Metro Vancouver
Attention: District Director
4515 Central Boulevard, Burnaby BC V5H 0C6

Phone: (604) 432-6200
Email: AndionComments@metrovancover.org

From: @metrovancover.org>

Sent: Thursday, October 12, 2023 9:07 AM

To: Jim Gordon <JGordon@whiterockcity.ca>

Subject: RE: 2023-08-31 Air Quality Permit Application for Semiahmoo RNG GP Corp - 1202

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jim,

Sorry for the delay in responding.

Thanks for the questions you submitted regarding the air quality application submitted by Semiahmoo RNG GP Corp. and Metro Vancouver's air quality regulatory process.

Right now, the Semiahmoo RNG GP Corp. application for a permit under Bylaw 1082 is partway through our air quality authorization process – we are currently at Step 5 in the process, as shown in diagram below (found in our Guidance Document (<https://metrovancover.org/services/air-quality-climate-action/Documents/air-permit-application-guide.pdf>)). Step 6 is where a draft permit is prepared for applicant review and ultimately, consideration by the District Director, who is the statutory decision-maker and who may impose requirements that they consider advisable for the protection of the environment. The comments received during the public notification period are considered when drafting the permit.

Permit restrictions may include what the applicant applied for, but staff could also potentially recommend different restrictions (e.g. lower emission limits). Requirements typically would include things like works and procedures, which describe the emission source and procedures employed by the operator, and reports that are required to be submitted to Metro Vancouver to provide us with information. The reports for this type of facility typically include stack emissions testing, complaint and odour management plans, and maintenance activities.

Metro Vancouver, Semiahmoo First Nation, Indigenous Services Canada (ISC), and Natural Resources Canada (NRCan) are engaged in ongoing discussions to ensure an appropriate framework for environmental and regulatory oversight for the project.

After a permit is issued for a facility under Bylaw 1082 (if that is recommended and the statutory decision-maker agrees), it is assigned to an Officer for regular inspections, report reviews and administrative activities. Metro Vancouver is sometimes made aware of concerns from the public about on-going issues at permitted facilities via our complaint process. I've included two links below that might be helpful. Ultimately, Metro Vancouver Officers who are in receipt of complaints try to identify the source and take action as necessary to ensure impacts are minimized in the receiving environment. We have a range of compliance and enforcement tools, including ticketing, that may be contemplated when there has been a contravention of a permit. In addition, the District Director can require operators to repair, modify or add works if they consider it to be necessary for the protection of the environment.

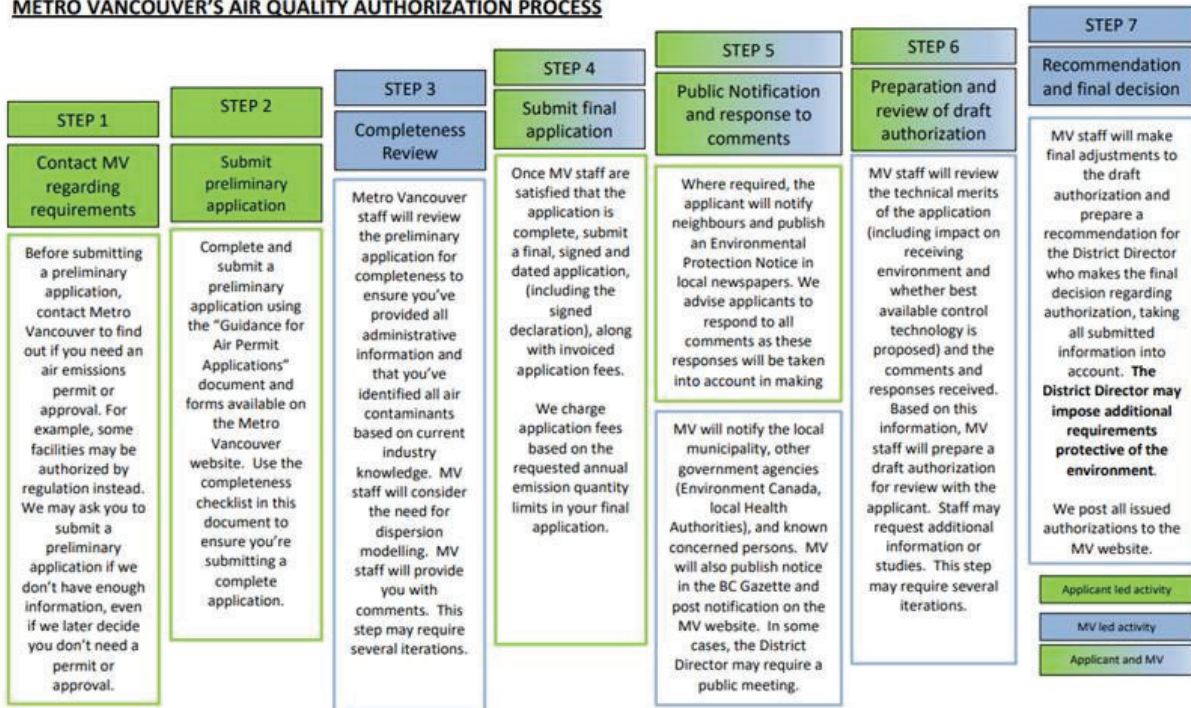
[What Happens to a Complaint? | Metro Vancouver](#)

[Tips on Making an Odour Complaint | Metro Vancouver](#)

Decisions made under Bylaw 1082 are appealable to the Environmental Appeal Board.

I hope that information is helpful. If you would like to discuss further, my contact information is below.

METRO VANCOUVER'S AIR QUALITY AUTHORIZATION PROCESS



Environmental Regulation & Enforcement Division
Air Quality Permit Application Comment Form

Table with contact information: Attn: District Director, Metro Vancouver, 4515 Central Boulevard, Burnaby, BC V5H 0C6; Telephone: 604-432-6200; Fax: ; Email: AndionComments@metrovancouver.org; Re: Semiahmoo RNG GP Corp.; File No.: AQ-10-01-1202

We have reviewed the Environmental Protection Notice (EPN), and

- [] confirm that the EPN has been circulated through all appropriate departments within the municipality for comment, and that any comments/concerns arising from this review are listed below.
[] have comments/concerns as follows:

- [] the following would satisfy our concerns:

Form with fields: Would you like a copy of the final permit, should a permit be issued? [] Yes [] No; Date; Signature; Telephone; Print Name; Email; Agency