



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** January 24, 2024

From: Peter Russell **File:** 10-6125-07-04/2024-
Director, Sustainability and District Energy Vol 01

Suzanne Bycraft
Director, Public Works Operations

Re: **Swift Eco-Waste Management Inc. Solid Waste Licence Application - Composting Facility**

Staff Recommendation

That, as outlined in the staff report titled “Swift Eco-Waste Management Inc. Solid Waste Licence Application - Composting Facility” dated January 24, 2024, from the Director, Sustainability and District Energy, and the Director, Public Works Operations, Metro Vancouver be advised that the City of Richmond does not approve the issuance of a Solid Waste Facility Licence application to Swift Eco-Waste Management Inc., and that the preliminary solid waste and air quality comments be forwarded to Metro Vancouver.

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REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
SENIOR STAFF REPORT REVIEW	INITIALS:
APPROVED BY CAO	

Staff Report

Origin

The purpose of this report is to provide an update on a Swift Eco-Waste Management Inc. Solid Waste Licence application for a composting facility on Mitchell Island located at 163 – 11280 Twigg Place, Richmond, BC.

This report supports Council's Strategic Plan 2022-2026 Focus Area #1 Proactive in Stakeholder and Civic Engagement:

1.2 Advocate for the needs of Richmond in collaboration with partners and stakeholders.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

3.2 Leverage strategic partnerships and community-based approaches for comprehensive safety services.

Analysis

Facility Application Summary

Swift is proposing to construct and operate a waste-to-energy recycling and composting facility (Facility) located at 163 – 11280 Twigg Place, Richmond, BC. The application indicates that the Facility would be designed to convert organic waste into pellet fuel and compost fertilizers. The feedstock material will consist of food/yard waste and untreated wood waste in the form of chips. The composition may vary but will typically be approximately 90% yard/food waste and 10% untreated wood waste. Swift indicates in the application that the compost fertilizer produced will conform to the requirements of a "class A" compost as defined in the *BC Organic Matter Recycling Regulation (OMRR)*.

Composting Facility Licencing Process

Metro Vancouver has received an application for a Composting Facility Licence under the *Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181* from Swift Eco-Waste Management Inc. (Swift). Article 3 of the Bylaw requires the Metro Vancouver Solid Waste Manager to forward all applications to the municipality in which the Facility is proposed to be located. Metro Vancouver is relying on the City to consult through this process with all relevant departments as necessary to complete its review. Metro Vancouver requires the City to complete a Municipal Referral Form, indicating approval or non-approval of the application. Metro Vancouver also requires the City to provide a report containing comments or recommendations regarding the application.

Odour Management

Managing odours has become an important priority for the region, as odours can negatively affect a community if a composting facility is not designed and operated correctly. The *BC Environmental Management Act* authorizes Metro Vancouver to establish prohibitions, regulations, fees, conditions, requirements and exemptions for operations, activities, industries, trades, businesses generating air contaminants through operations or works. Metro Vancouver currently has an *Odour Management Framework* and an *Odour Management Policy Development Plan* that includes plans

such as *Integrated Air Quality and Greenhouse Gas Management Plan (Clean Air Plan)*, *Air Quality Dispersion Modeling Guideline BC* and *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008*. As part of their review process, Metro Vancouver's staff is currently conducting a technical review of the Air Quality Permit application submitted by Swift Eco-Waste Management Inc., to assess whether best available control technology is being proposed and whether the requested emissions are advisable for the protection of the environment.

City Staff Review

Staff undertook a detailed technical analysis of Swift's application and have highlighted potential technical issues, as below, that if not properly addressed could impact the community:

- **Inconsistent Facility Description:** Swift's application variably describes the Facility as a waste-to-energy recycling and/or a composting site, leading to confusion about operational processes. The specific technologies and environmental management practices for each type of operation require clear delineation to assess impact;
- **Technical Document Ambiguities:** The technical document attached to the application provides conflicting information, creating challenges in assessing the Facility's operations. Detailed process flow diagrams and technology descriptions will be required for clarity;
- **Inaccurate Waste Calculations:** The waste processing calculations do not adhere to technical standards, affecting composting efficiency. Precise waste characterization data and process capacity metrics are needed for accurate planning and environmental management of the Facility to avoid potential impacts in Richmond;
- **Inadequate Deodorizer Technology:** The effectiveness of the deodorizers in the proposed system is unclear, especially given that their technology description is not technically adequate for efficiently breaking down and neutralizing the complex mix of odorous gases generated during the composting process;
- **Leachate Treatment Specification Gap:** The absence of detailed plans for leachate treatment poses environmental risks. Specifications for leachate treatment systems, including capacity and treatment efficiency, should be provided;
- **Incomplete Odour Management Approach:** The methods for odour control are not aligned with standard practices or are inconsistent. Detailed descriptions of the odour control technologies, including their operational parameters and efficiency rates, are needed. The Air Quality Permit should address these issues;
- **Non-compliance with OMRR:** Missing details required to verify OMRR compliance which poses questions regarding the Facility's ability to adhere to standards. To classify the compost as "class A," OMRR requires a comprehensive list of compliance checkpoints and corresponding measures in the Facility;
- **Patented Technology Validation Issues:** The patented technology (CA 3130325) cited in the application lacks independent validation, raising doubts about its effectiveness. It is unclear in the application whether the applicant intends to apply for a permit to conduct a pilot project to test the technology feasibility or if the application is intended to be a permanent facility.
- **Discrepancy in Patent Application and Facility Use:** The patent discusses disposal of organic or sewage sludge waste, which is not stated in the Facility application. Clarification

on the specific types of waste to be processed, along with corresponding treatment technologies, is required;

- **Unclear Pellet Production Process:** Lack of detail on the pellet production process raises safety concerns. Information on the pelletizing technology, including the mechanisms for contaminant removal (i.e. plastics, small batteries and other common materials present in the composting facilities in the region) and quality control measures, should be detailed; and,
- **Non-Pellet Storage Details:** The lack of pellet storage information is a significant oversight. Specifications for storage facilities, including containment measures and environmental safeguards, are critical.

These technology and operational planning concerns would need to be addressed before staff could give further consideration to other municipal requirements.

Preliminary Solid Waste and Air Quality Comments

After evaluating the application, it is recommended that the following comments be forwarded to Metro Vancouver. Staff also recommend that the City not approve the application as submitted and request that Metro Vancouver require Swift to:

- a. Provide a definitive statement clarifying whether the Facility operates primarily as a waste-to-energy or composting site.
- b. Address and resolve discrepancies in their technical documentation to ensure a clear and unified understanding of the Facility's purpose.
- c. Present an independent validation of their deodorant system technology to confirm its effectiveness and environmental compatibility.
- d. Develop and present a detailed odour management plan, including efficacy data and an analysis of environmental impact. This review is ongoing at Metro Vancouver.
- e. Provide accurate waste processing data that adheres to established technical standards.
- f. Submit a detailed plan for leachate management, with a focus on environmental protection.
- g. Demonstrate compliance with OMRR through the provision of detailed operational plans.
- h. Provide detailed information regarding the types of waste processed and the methodologies employed for each.
- i. Offer an in-depth outline of their pellet production process, emphasizing environmental, health and safety considerations.
- j. Detail their pellet storage methods to mitigate potential environmental risks.
- k. Submit a comprehensive reporting plan and complaint management strategy, ensuring effective response to community concerns and environmental issues.
- l. Submit the Air Quality Permit application to a public consultation process as part of the application review.

Metro Vancouver has informed staff that the applicant has submitted an Air Quality Permit Application, which is currently under review by Metro Vancouver. As part of the review process, Metro Vancouver will conduct public notification, which includes referrals to the City, the health

authority and other relevant agencies. Considering the Facility's potential odour generation and its impact, staff will prepare and present an updated report to Council with detailed information regarding the proposed Air Quality Permit conditions.

Financial Impact

None.

Conclusion

The application from Swift is lacking critical information relating to the technology and operational details, as such, staff recommend that the application not be approved at this time. While organics facilities are a need in the region and well-managed facilities contribute towards important waste reduction objectives, the management of odours is a critical concern to residents. Due diligence is required to ensure these types of concerns do not materialize in considering applications of this nature.

The City will remain engaged in the application process to ensure the City's odour and air quality concerns are addressed.



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