Engineering Design Report Cedar Grove Organic Transfer Facility 7343 East Marginal Way South Seattle, Washington

May 26, 2022

Prepared for

Cedar Grove Composting 7343 East Marginal Way South Seattle, Washington



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FIGURES

1 Vicinity Map	
2 Site Layout	
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ATTACHMENTS

<u>Attachment</u>	<u>Title</u>
1	March 3, 1999 Zoning Letter from the City of Seattle

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LIST OF ABBREVIATIONS AND ACRONYMS

Cedar Grove	Cedar Grove Composting
EDR	engineering design report
Facility	proposed organic transfer facility
ISGP	Industrial Stormwater General Permit
KCIW	King County Industrial Wastewater
Landau	Landau Associates, Inc.
sf	square feet
WAC	Washington Administrative Code

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1.0 INTRODUCTION

This engineering design report (EDR, Report) has been prepared for Cedar Grove Composting (Cedar Grove) by Landau Associates, Inc. (Landau) to present the design of Cedar Grove's proposed organic transfer facility (Facility), located within its existing Compost Sales facility at 7343 East Marginal Way South in Seattle, Washington. Several other auxiliary operations occur at this location, including truck washing and maintenance, and administrative operations, which are not included in the solid waste handling operations. Finished compost storage and sales also occur at this location. The proposed organic transfer facility, Compost Sales facility, and other auxiliary operations altogether will be referred to as the Cedar Grove Property in this document. The Cedar Grove Property is also known as the Webster Street facility due to the name of the cross street at its location.

The Facility's proposed organic transfer operation will consist of transloading organic materials to be shipped to an offsite permitted compost facility. The engineering documentation provided herein is intended to address solid waste facility design standards for transfer stations in accordance with Washington Administrative Code (WAC) Chapter 173-350-310(4). This Report also addresses how the performance standards of WAC 173-350-040 will be met.

1.1 Facility Description

The Facility is located adjacent to (southeast of) Slip No. 4 of the Lower Duwamish Waterway. A vicinity map is shown on Figure 1. The Cedar Grove Property covers approximately 5.3 acres, which is mostly covered with buildings and paved with asphalt. The topography of the Cedar Grove Property and surrounding industrial area is relatively flat.

The Facility's parcel is zoned as General Industrial Zone 1 (IG1-U85). The zoning of the Facility parcel has not changed since 1999, and the definition of "heavy manufacturing" also has not changed (although the code section with its definition is now numbered as SMC 23.84A.025). Therefore, the proposed Facility use (as an organic transfer facility) is permitted outright under the Seattle Municipal Code as "heavy manufacturing." The proposed solid waste permit will document the change from the pre-1999 permitted use (asphalt and cement manufacturing) to the current permit use (composting facility) as referenced in the City of Seattle's March 3, 1999 letter (Attachment 1). As shown on the site map in Figure 2, the Facility will include the following features related to the proposed transfer station:

- An approximately 12,000 square-foot (sf) enclosed building for transloading organic materials. Cedar Grove plans to locate the Facility within an existing building currently used for maintenance purposes.
- Signage that identifies the Facility's name, hours during which the Facility is open, materials the Facility does not accept, and other necessary information, posted at the Facility entrance.

- Paved loading and unloading areas as well as employee parking. The Facility will not have a public drop off area. Traffic flow direction will be provided by Facility staff, signs, painted lane lines, and traffic cones.
- Drains located inside the transfer station building will direct leachate from the organic materials to the King County Industrial Wastewater (KCIW) sewer system.

Yard waste, wood waste, land clearing/vegetation, food waste, paper, sod, chipped wood, marijuana waste (per WAC 314-55-097), and herbivorous animal manure will be accepted at the Facility. A combination of these materials will be transloaded at the Facility for delivery to an offsite permitted compost facility. The Facility's design throughput capacity is 100,000 tons per year. The Facility will have no more than 500 tons of organic materials in process at any one time due to the size of the building interior and reloading equipment.

Cedar Grove will conduct all transfer operations within the 12,000-sf enclosed concrete building. The locations of the dock doors in the transfer station building are shown in Figure 3. Dock doors will be normally closed except when active unloading/reloading is occurring. Trucks will back into the transfer station using dock doors #6 and #7 to offload the incoming organic material. Dock door #8 will be used by exiting trucks, hauling the transloaded organic materials offsite to a permitted compost facility.

Typical hours of operation for the Facility will be 24 hours per day, 7 days per week. Hours will be posted at the Facility entrance and may be adjusted seasonally.

2.0 FACILITY DESIGN STANDARDS

This section provides a description of the Facility design to address the requirements for transfer stations and drop box facilities per WAC Chapter 173-350-310(4).

2.1 Facility Access and Security (WAC 173-350-310[4][a][i])

The Facility's perimeter will be secured with chain-link fencing and access gates topped with barbed wire. All transfer station operation will occur within the transfer building; dock doors will be normally closed except when active unloading/reloading is occurring. Dock doors #6 and #7 will be used by vehicles delivering the incoming organic material. Dock door #8 will be used by outgoing vehicles transferring the organic material to a permitted offsite compost facility.

The dock doors will be closed and locked during times of non-operation to prevent public access. All other Facility access doors will also be locked when the Facility is not in operation to prevent public access. Cedar Grove employees will be present during business hours to direct the incoming loads containing organic materials to the designated areas and to prevent the acceptance of prohibited waste. The operational procedures for Facility security and material screening are provided under separate cover in the *Cedar Grove Organic Transfer Facility Operations and Maintenance Plan* (Landau 2022).

2.2 Construction Material (WAC 173-350-310[4][a][ii])

The proposed transfer station will operate within an existing maintenance building that has a liquidtight, easily cleanable concrete floor. Cleaning will consist of sweeping and washing down the tipping floor. Ecology blocks will be placed around the interior perimeter walls of the building to prevent organic materials and vehicles from contacting the walls. All Ecology blocks will be sealed to ensure they are non-porous.

2.3 Vector Control (WAC 173-350-310[4][a][iii])

Vectors include a wide variety of animal species including birds (e.g., crows, seagulls, starlings), small animals such as rats and field mice, and larger animals such as racoons, coyotes, and deer. The Facility will have a multi-layer system designed to prevent vector issues, as described below:

- Control materials accepted at the Facility.
- Use a first-in/first-out methodology to minimize the time that organic materials are stored at the Facility. The goal is to transfer materials offsite within 24 hours of receiving the material. The maximum time that materials will be stored inside the Facility is 72 hours.
- Receive material indoors to reduce the attraction of vectors.

• Use a vector control contractor to manage onsite rodent bait stations and traps. Annual vector program audits and monthly activity reports will be maintained at the Facility and available for agency review upon request.

2.4 Litter Control (WAC 173-350-310[4][a][iv])

All offloading and loading of materials will be conducted inside the transfer station building. All dock doors will be closed except when actively offloading and loading trucks to ensure that materials remain inside the building. The nature of the waste stream does not produce windblown debris; however, Cedar Grove staff will inspect the perimeter of the property daily for signs of windblown debris and clean up accordingly.

2.5 Tipping Floor Construction (WAC 173-350-310[4][a][v])

The tipping floor will be located inside of the transfer station building. Water-tight, impervious concrete will cover the entire floor of the building. The concrete floor will be durable enough to withstand damage from operating equipment.

2.6 Protection of Tipping Floor from Precipitation (WAC 173-350-310[4][a][vi])

The tipping floor will be located within the interior of a covered warehouse that has a concrete floor and will be fully protected from weather.

2.7 Leachate Conveyance (WAC 173-350-310[4][a][vii])

All loading and unloading processes will occur inside the transfer station building on a concrete floor. Trench drains exist along the southwestern wall (by dock doors #6, #7, and #8) and the northwest corner of the building (by dock doors #9, #10, and #11). These trench drains will collect leachate generated from the stored organic material and direct the flow to a KCIW sanitary sewer line at the northeast side of the building. Wastewater discharge from the Facility is currently authorized under permit number 4472-01 Minor Discharge Authorization issued by the KCIW Program on March 11, 2019. The permit currently authorizes discharge of up to 24,000 gallons per day of effluent from operations, including vehicle washing, food waste container washout, and finished organics storage at the southwest corner of the Cedar Grove Property. Cedar Grove is in communication with KCIW regarding modification of its permit to account for potential wastewater characterization and volume changes from leachate generation within the proposed transfer station.

2.8 Stormwater Runoff Collection (WAC 173-350-310[4][a][viii])

All Facility activities will occur inside an enclosed warehouse on a concrete floor. This will provide protection of groundwater and stormwater from the Facility activities. The Cedar Grove Property is covered under the Industrial Stormwater General Permit (ISGP) number WAR002641 issued by the

Washington State Department of Ecology on November 20, 2019. The ISGP for this Facility covers industrial activities that are exposed to precipitation, including the outdoor finished compost handling area. Because the proposed transfer station and all associated activities will occur inside an enclosed concrete building, no additional stormwater controls are required.

2.9 Pollution Control Measures for Air Quality (WAC 173-350-310[4][a][ix])

All transfer station operations will be conducted within an enclosed concrete building, which will serve to minimize odor generation and any potential emission generation. Materials will be transloaded in the order in which they are received (i.e., first-in/first-out) to mitigate odor generation. The goal is to transfer materials offsite within 24 hours of receiving the material. The maximum time that materials will be stored inside the proposed transfer station building is 72 hours.

2.10 All-Weather Surfaces (WAC 173-350-310[4][a][x])

The Facility's outdoor areas are fully paved with asphalt, ensuring all roads and traffic routes are on all-weather surfaces. The inside of the transfer station will have a concrete floor.

2.11 Operating Plan (WAC 173-350-310[6])

The operating plan for the proposed transfer station is covered in the *Cedar Grove Organic Transfer Facility Operations and Maintenance Plan* (Landau 2022). This document includes requirements covered under WAC 173-350-310(6).

3.0 USE OF THIS REPORT

This Engineering Design Report has been prepared for the exclusive use of Cedar Grove Composting for specific application to the Cedar Grove Compost Organic Transfer Station Facility. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau makes no other warranty, either express or implied.

4.0 **REFERENCES**

Landau. 2022. Final: Operations and Closure Plan, Cedar Grove Organic Transfer Facility, 7343 East Marginal Way South, Seattle, Washington. Landau Associates, Inc. May 26.



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ATTACHMENT 1

March 3, 1999 Zoning Letter from the City of Seattle



Paul Schell, Mayor

Department of Construction and Land Use R. F. Krochalis, Director

March 3, 1999

Jerry Bartlett Cedar Grove Composting 54 - S Dawson Street Scattle, WA 98134

RE: 7343 - East Marginal Way S: Opinion Letter Cedar Grove Composting

Dear Mr. Bartlett:

By letter to this Department received February 10, 1999, you have asked for zoning information concerning the property addressed as 7343 East Marginal Way South. Specifically, you have asked whether a proposed facility for collection of organic materials on the site, for the ultimate purpose of changing these materials into compost, would be permitted under the applicable zoning. You have also asked for confirmation that establishment of the proposed use would be exempt from review under the State Environmental Policy Act (SEPA). The property addressed as 7343 East Marginal Way South was the subject of a previous letter from this Department, dated March 13, 1997, in which we determined that a food composting facility proposed for the property by Cedar Grove Composting would be classified as a heavy manufacturing use permitted outright on the property and exempt from SEPA review.

The property you have asked about is described as a portion of the Southeast 1/4 of Section 29, Township 24, Range 4. Its property tax identification number, assigned by the King County Assessor's Office, is 292404-9043. A complete legal description form King County records is enclosed with this letter. For the sake of brevity, this letter will hereafter refer to the subject property as Parcel 9043. The zoning for Parcel 9043 is IG1 U/85': General Industrial 1, with an unlimited height for most structures and an 85-foot height limit for structures containing the uses set forth in Seattle Municipal Code (SMC) Section 23.50.022 (B). The westerly 200 feet of the property is also within the UI (Urban Industrial) Shoreline Environment.

According to our permit records, Parcel 9043 has been use for a variety of manufacturing uses over the years. Most recently, it was used for manufacture of cement and asphalt, and included outdoor storage and other accessory uses associated with the principal manufacturing use. These uses, as our 1997 letter noted, are "heavy manufacturing" uses permitted outright on the site.

As described in your current letter to this Department, as well as in a personal meeting with me on February 10, 1999, you now propose a facility that will "recycle" various types of organic materials. In addition to food waste, self-haul and collection trucks will bring yard clippings, clean wood waste, branches, sod, and mixed food and yard waste to the site, where it will be unloaded inside a 12,000-square-foot building (proposed to be

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Jenry Bartlett March 3, 1999 Page 2

constructed) and subjected to a "dewatering process." The "dewatered" material will be loaded onto a conveyor line and transferred to "walking floor transfer trailers." The trailers will be located outside of the building and covered to protect from moisture. Our understanding is that the ultimate objective of this process is not the disposal of the dewatered material, but is instead the conversion of the material into compost that will be resold to consumers.

In our meeting on February 10, you indicated that your initial proposal for the site is less comprehensive than the general plan described above. The short term proposal is for a 2,000-square-foot temporary structure that would be used to contain yard waste only. Yard waste would also be placed outside in "drop boxes," prior to placement within the temporary structure. However, our understanding is that the yard waste would undergo dewatering or similar significant step in the composting process within the temporary structure.

Classification of the use that you propose, for purposes of the Seattle Land Use Code, turns upon the Code definitions of "heavy manufacturing," found in Seattle Municipal Code (SMC) Section 23.84.025, and "solid waste transfer station," found in Section 23.84.040. These definitions are set forth in part as follows:

" 'Manufacturing, heavy' means a manufacturing use, typically having the potential of creating substantial noise, smoke, dust, vibration and other environmental impacts or pollution, and including but not limited to:

10. Conversion of solid waste into useful products or preparation of solid waste for disposal at another location by processing to change its physical form or chemical composition. This includes the off-site treatment or storage of hazardous waste as regulated by the State Department of Ecology. The on-site treatment and storage of hazardous waste is considered an incidental or accessory use."

" 'Solid waste transfer station' means a utility use in which discarded materials are collected for transfer to another location for disposal by compaction, shredding or separating, but does not include processing that changes the chemical content of the material."

Based on the description of your business that you have supplied in your letter and in your personal meeting with me, it appears clear that the activities and construction proposed for Parcel 9043 fall within the "heavy manufacturing" definition. The business is not a "solid waste transfer station," since the purpose is not merely to collect discarded materials for the ultimate purpose of disposing of them at some other site, such as the Cedar Grove Composting plant in Maple Valley. So long as the purpose of the collection activity on parcel 9043 is to assemble solid waste for conversion into a useful product such as compost, either on site or by transfer to another site where it will be converted to compost, the process is within the heavy manufacturing definition. Drop boxes placed on site for collection of the yard waste or other organic waste products would be accessory to the heavy manufacturing use, since the definition specifically allows for on-site treatment or storage of hazardous waste as an accessory use. Jerry Bartlett March 3, 1999 Page 3

Since the business activity that you describe is the same general use that was described by your company in 1997, our analysis is the same as in our 1997 letter to attorney Bradley M. Marten. A facility designed to collect and/or process organic materials for compost, like the food composting operation described in 1997, is within the broad category of a heavy manufacturing use like the existing uses on the site. As we noted in our discussion on February 10, a specific permit to change the use from an asphalt and cement manufacturing operation to a composting facility is required. This is a simple permit to change one use permitted outright to another use permitted outright. Review of this change of use under the State Environmental Policy Act (SEPA) is not required, because the change is simply from one manufacturing use to another. Such a change does not trigger SEPA Review under DCLU Director's Rule (DR) 10-89, Environmental Review Requirements When Establishing. Changing or Expanding a Use, effective June 1, 1989. Shoreline review is not required, so long as the use occurs entirely outside the 200-foot limit of the Shoreline District.

Having said this, we must note that the Seattle-King County Health Department has apparently determined that your proposed activity would be a solid waste transfer station under the Health Code, as described in a letter addressed to you from Senior Environmental Health Specialist D. C. Hickok, dated February 1, 1999. This Department has no authority with regard to classification of uses for Health Code purposes. Also, while we have determined that the issuance of a city use permit to change the use on the site will not trigger SEPA review, the Health Department may well have authority to assume "lead agency" status under SEPA and impose a SEPA review as part of their process for issuing a solid waste handling permit. Please note, as well, that DR 10-89 requires SEPA review for new construction on a site in an IG1 zone, even where the use in question is established, if new construction exceeds 12,000 square feet of gross floor area. Your proposed temporary structure of 2,000 square feet will not require SEPA review, although a building permit application is required for such a structure. The proposed permanent structure also will not require SEPA review, if total new construction is limited to 12,000 square feet or less.

This letter constitutes a preliminary opinion of this Department, based on your representation to us. We have not reviewed formal plans or permit application materials in drafting this letter. The opinions expressed in this letter are therefore subject to reevaluation and possible change based on the actual proposal that you present at a permit intake appointment.

If I may be of any further assistance, please call me at 684-8738.

Sincerely,

. Milly-

William K. Mills Land Use Analyst

WKM/Bartlett

Enclosure

cc. D. C. Hickok, Seattle-King County Health Department

1999,03-03 15:55 #662 P.05/06

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