

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH

Registration No. **28983**
Date

Expansion of an existing aerated static pile (ASP) and windrow/mass bed composting facility from an incoming feedstock limit of 75,000 wet tons per year to an incoming feedstock limit of 150,000 wet tons per year of agricultural organics (cow manure, bedding, and paunch); pre and post-consumer food waste; and yard waste. Substantial alteration of control equipment on existing ASPs to be negatively aerated at all times. The facility includes one existing tipping and feedstock preparation building (5,000 cfm exhaust), eight existing ASP cells (17,000 ft² floor area total), five new ASP cells (22,000 ft² floor area total), windrow composting area, and final product storage and curing area. Emissions from the tipping building and the existing eight ASPs will be controlled by two existing biofilters (4,256 ft² area total) and the five new ASP cells will be controlled by two new biofilters (9,800 ft² area total). All ASPs are negatively aerated.

OWNER

Jason Lenz
Lenz Enterprises Inc
PO Box 868
Stanwood, WA 98292

INSTALLATION ADDRESS

Lenz Enterprises Inc
5210 SR 532
Stanwood, WA 98292

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

EMISSION LIMITS

3. The aeration systems for the both the new and existing aerated static piles shall always be operated in the negative aeration mode, excluding active pile construction and deconstruction during which the aeration system can be run in positive mode. The aeration system must:
 - a) Capture at least 98% of the volatile organic compound emissions generated by the aerated static piles. The owner or operator shall demonstrate compliance with this specification by the method given in Condition 30.
 - b) Capture at least 98% of the ammonia emissions generated by the aerated static piles. The owner or operator shall demonstrate compliance with this specification by the method given in Condition 30.
4. All emissions captured by the negative aeration systems must be routed to a biofilter. Each new and existing biofilter shall:
 - a) Provide a minimum removal efficiency of 95.0% for volatile organic compounds
 - b) Provide a minimum removal efficiency of 80% for ammonia
5. No detectable odor associated with the Lenz composting facility is allowed at or beyond the facility's boundary.

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6. Visible emissions from grinding and screening shall not exceed 5% opacity for any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour as measured by WDOE Method 9A.

FEEDSTOCK AND TIPPING BUILDING REQUIREMENTS

7. Acceptable feedstock shall be limited to “organic material”, meaning any solid waste that is a biological substance of plant or animal origin capable of microbial degradation. Acceptable organic materials include but are not limited to the following:
 - a) Agricultural wastes, including herbivorous animal manure, paunch waste, shells, marijuana waste which complies with WAC 314-55-097;
 - b) ASTM compostable films and containers;
 - c) Yard debris;
 - d) Food waste;
 - e) Food processing wastes; and
 - f) Wood waste as defined by WAC 173-350-100, which does not contain paint or stain, laminates, bonding agents, or chemically treated wood.
8. Incoming feedstock shall be visually inspected for contaminants prior to being accepted into the facility. The following types of feedstock are unacceptable and shall be turned away as soon as possible:
 - a) Feedstock types that are not an acceptable feedstock as defined in Condition 7;
 - b) Acceptable feedstock as defined in Condition 7 contaminated with material that is not acceptable for composting. Visible non-acceptable material as defined in Condition 7 observed during the inspection may render a load as contaminated unless it can be removed from the feedstock during pre-processing or can be screened from the finished compost at the end of the process;
 - c) Approved feedstock decomposed or putrefied to a degree that could cause an immediate odor problem in the receiving area that cannot be mitigated by mixing and/or bulking with other materials; and
 - d) Any load that is determined to have the potential to cause an immediate, unreasonable nuisance that cannot be mitigated by mixing and/or bulking with other materials.
9. For each load of feedstock received, the owner or operator shall record the following information:
 - a) Feedstock type;
 - b) Weight of load;
 - c) Results from inspection of the load;
 - d) Date and time of receipt of the load; and
 - e) Name(s) of employee(s) who performed the inspection.
10. The owner or operator shall calculate and record the total weight of feedstock received on a monthly and 12-month rolling basis. The total weight of material placed into the aerated static piles, including feedstock for the composting process plus all other material (including bulking agent), shall not exceed 150,000 tons during any consecutive 12-month period. For the purposes of compliance with this condition, any finished compost that is added to the surface of the aerated static piles to act as a biofilter for emission control is not counted toward the limit.
11. With the exception of stumps, brush, and clean wood, all feedstock brought on site shall be deposited completely into the tipping building, where it shall be stored under negative ventilation until processed and removed from the building to be placed in an aerated static pile. The tipping building ventilation system must be routed to a biofilter. All feedstock, with the exception of bulking agents (which consists of stumps, brush, and clean wood), shall be premixed for composting prior to removal from the tipping building.

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12. With the exception of stumps, brush, and clean wood, all feedstock shall be processed and placed in an aerated static pile within 12 hours of receipt, and no material may be stored in the tipping building overnight, except in the event of primary and back-up equipment failure. If feedstock cannot be processed within 12 hours of receipt or by the end of the workday due to primary and back-up equipment failure, the owner or operator shall perform the following actions:

- a) All remaining material shall be stored in the southeast corner of the tipping building and covered with at least 12 inches of biofilter media;
- b) The owner or operator shall notify the Agency in writing prior to the end of the workday, including the amount of material that is being stored in the tipping building and the reason(s) why the material could not be processed within the required timeframe; and
- c) The owner or operator shall maintain records of the days that feedstock could not be processed within the required timeframe, including the amount of material stored, the reason(s) why the material could not be processed within the required timeframe, and the date and time that the material was able to be processed and placed in an aerated static pile.

OPERATIONAL LIMITS

13. The owner or operator shall install and properly operate a fine water mist system on all wood grinders to control fugitive dust. With the exception of stumps, brush, and clean wood, all grinding of feedstock must occur within the tipping building.

14. The owner or operator shall route standing water and water runoff from the tipping building and the compost pads to the leachate collection and treatment system. Leachate (treated or untreated) from the compost facility shall not be used for dust suppression, but may be used for moisture addition during feedstock preparation or moisture addition during the composting process.

15. The new and existing aerated static piles shall be constructed within the following parameter ranges:

- a) Each pile shall contain no more than 14.0% food waste by weight.
- b) Carbon to nitrogen ratio shall be between 20:1 and 40:1.
- c) Bulk density shall be no greater than 950 lbs/yd³.

16. Each new and existing aerated static pile shall be operated within the following operational limits at all times, except as described in a) through e):

- a) After the first 48 hours of initial construction of the pile, the moisture content throughout the entire pile shall be maintained between 35% and 65%.
- b) After the first 48 hours of initial construction of the pile, the temperature throughout the entire pile shall be maintained between 45°C (113°F) and 70°C (160°F), based on an hourly average.
- c) After the first 72 hours of operation, the average pH of the pile shall be maintained between 6 and 8.5.
- d) At all times, the oxygen content throughout the entire pile shall be maintained at or above 10% .
- e) At all times, each aerated static pile shall be covered with at least 12 inches of biofilter media and shall be negatively aerated, such that the ventilation system continuously vents emissions to a biofilter in accordance with Conditions 3 and 4.

17. Each new and existing biofilter shall be operated within the following operational limits at all times:

- a) The oxygen content throughout each biofilter shall be maintained at or above 10%.
- b) Each biofilter shall have a depth of at least 4 feet throughout the entire biofilter.
- c) Residence time in each biofilter shall be no less than 40 seconds.
- d) Static pressure in each duct between the fan and each biofilter shall within the manufacturer's specified range. Documentation of the range from the manufacturer shall be kept on site.

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- e) There shall be no vegetation growing on the surface of any biofilter.
- 18. The average moisture content of each windrow shall be maintained between 40% and 65% at all times.

AERATED STATIC PILE and FEEDSTOCK MONITORING

- 19. Within the same calendar day that each new and existing aerated static pile is constructed, the owner or operator shall record the bulk density of the pile and the estimated carbon to nitrogen ratio based on the feedstock used to construct the pile.
- 20. To demonstrate compliance with Condition 15.a, during each of the first 12 calendar months of operation of the new aerated static piles approved in this Order, the owner or operator shall determine the percentage of food waste by weight by verifying the food waste content is 14 percent or less of overall weight of each new and existing pile based on the Initial compost mix composition. The owner or operator shall submit to the Agency for approval a proposed method for making this determination within 14 days of the issuance date of this Order of Approval.
- 21. To demonstrate compliance with condition 16.b, the temperature of each new and existing aerated static pile shall be monitored and recorded hourly. At least two temperature averaging probes shall be used per ASP, and each probe shall be capable of measuring temperatures in both the core and outer layer of the compost pile. The first probe shall be placed at approximately one-third of the pile length, and the second probe shall be placed at approximately two-thirds of the pile length. The components of the temperature monitoring system shall be calibrated and maintained in accordance with manufacturer instructions and operating manuals. If any temperature reading is outside the range identified in Condition 16.b), the system must provide both an audible and visual alarm to alert the operators.
- 22. To show compliance with condition 16.d, percent oxygen of each new and existing aerated static pile shall be measured and recorded each calendar day. Multiple measurements shall be made each calendar day to obtain a value representative of the overall pile.
- 23. All material put into the composting process shall remain within an aerated static pile until the organic material has a Solvita Maturity Index of 3.5 or greater as measured using the TMECC Method 05-08-E – Solvita® Maturity Test.
- 24. Once an aerated static pile has met the criterion in Condition 23, the material may remain in the aerated static pile or be moved to a windrow. For each batch of material moved from an aerated static pile to a windrow, the owner or operator shall record the results of the Solvita® Maturity Test performed to meet condition 23., which pile was moved, and the date it was moved.

BIOFILTER MONITORING

- 25. Starting after the first full month of operation of the aerated static piles approved under this Order, each calendar month and for each new and existing biofilter, the owner or operator shall measure the static pressure in the duct between the fan and the biofilter. Each measurement for each biofilter and each test must be conducted while operating each system at manufacturer's recommended set points, including constant fan speed and all dampers in fixed and predetermined positions. The fan speed and damper positions for each test must be the same as all previous tests. The pressure monitoring equipment shall be calibrated and maintained in accordance with manufacturer instructions and operating manuals. The biofilters shall always be operated within the manufacturer's specified pressure range. After 12 consecutive months of testing if the static pressure is within the manufacturer's recommended pressure range for all measurements, the owner or operator may reduce the test frequency to quarterly. If any quarterly reading is outside the manufacturers pressure range, the test frequency immediately reverts to monthly.
- 26. Oxygen content of each biofilter shall be measured and recorded each calendar month, no less than 21 days apart and no more than 31 days apart, using a properly calibrated oxygen probe.
- 27. The depth of each biofilter shall be measured and recorded each calendar month, with no less than 21

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days apart and no more than 31 days apart.

28. The residence time for each biofilter shall be determined and recorded once each calendar quarter concurrently with the testing required in condition 30.

29. The owner or operator shall submit for Agency approval a biofilter monitoring plan providing the details of how the facility will perform the required static pressure, oxygen content, biofilter depth and residence time monitoring for each biofilter, including but not limited to, locations of the monitoring equipment, procedures for determining when the biofilter media needs to be replaced, and the number of samples, sampling locations, and procedures for measuring all required parameters. The plan must be submitted at least 60 calendar days prior to completion of construction of the new composting process area. The owner or operator must comply with the plan at all times. All changes to the plan required by the Agency shall be made to the plan within 7 calendar days of receipt by the owner or operator.

PERFORMANCE TESTING

30. The owner or operator shall have emissions tested for compliance with the capture efficiency requirements established in Condition 3 and removal efficiency requirements in Condition 4 of this Order within 180 days of the completion of construction of the new composting process areas. The emission tests described in this requirement shall be repeated at least once every calendar quarter for both the new and existing aerated static piles and associated biofilters. The testing shall be performed in accordance with the following:

- a) To demonstrate capture of ammonia and VOC by the negative aeration system serving the aerated static piles, the owner or operator shall demonstrate that all air flow through each aerated static pile is definitively flowing into the pile or by other methods required or approved by the Agency prior to the testing.
- b) To demonstrate removal efficiency, the concentrations of total VOC and ammonia, shall be measured as close to the inlet of the aeration systems as possible of each biofilter while maintaining good sampling technique to obtain a representative sample.
- c) Total VOC and ammonia concentrations shall be measured at the surface or at the subsurface of each biofilter. Sampling can be performed using calorimetric tubes, hand held organic vapor analyzer, other hand held methods, evacuated canisters, or other method approved by the Agency. The resulting measurements must be representative of the concentrations being emitted by the biofilter. Sample locations shall be distributed to provide measurements that are representative of the removal efficiency of the entirety of each biofilter. The location and method of the sampling must be in the test plan required by Condition 31.
- d) Sampling at the inlet of each biofilter shall be conducted within four hours of the sampling at the surface/subsurface of each of the corresponding biofilters.
- e) The average concentrations of VOC and ammonia in the inlet and surface/ subsurface shall be used to determine removal efficiency of each biofilter for VOC and ammonia.
- f) The total weight of material in each of the aerated static piles and the initial construction date of each aerated static pile shall be recorded each sampling day.

31. For testing conducted pursuant to Condition 30, the owner or operator shall submit a compliance test plan with the test notification submitted under Regulation I, Section 3.07(b) at least 60 days prior to the compliance test. The test plan must include a detailed description of the methods proposed for determining capture and removal efficiency as required by condition 30. The test plan must be approved before conducting the source test, and the owner or operator must follow the approved test plan. Changes to the approved test plan are acceptable as long as the owner or operator has obtained approval from the Agency prior to the start of the test. The Agency may require different test methods if needed to accurately determine the capture and control efficiencies of the biofilters.

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FACILITY-WIDE REQUIREMENTS

32. The owner or operator shall inspect the entire facility for visible emissions of fugitive dust at least once per calendar day, including an evaluation of whether dust control equipment (e.g. water spray bars, water truck) is being operated in good working order. If visible emissions are observed, the owner or operator shall investigate the cause and take immediate corrective action to minimize emissions. The owner or operator shall record the date, time, and results of each inspection. If visible fugitive dust emissions were observed during any inspection, the owner or operator shall record the cause and what precautions were taken to minimize emissions.
33. The owner or operator shall conduct an inspection of its entire facility at least once per calendar day to monitor along and outside the property line for detectable odors from the facility. If odors from the facility are detected at or outside the property line during the monitoring or at any other time, the owner or operator shall take immediate corrective action to eliminate the odors. The daily inspection shall also include a visual inspection of the tipping building, each aerated static pile, and each biofilter to evaluate whether these activities are being maintained and operated in good working order. The owner or operator shall record the date, time, and results of each inspection, including any corrective actions taken to eliminate odors or maintenance performed on the biofilters.
34. Pursuant to the State Environmental Policy Act, RCW 43.21C.060, WAC 197-11-660, and Puget Sound Clean Air Agency Regulation I, Section 2.12:
 - a) There shall be no stormwater discharges or discharges to ground water or surface water from the areas of the facility related to compost activities, including but not limited to the tipping building, aerated static piles, composting pads, leachate treatment system, and leachate pond.
 - b) The total number of truck trips for incoming feedstock delivery and outgoing compost delivery for the compost facility shall not exceed 77 truck trips per day and 7,118 truck trips during any consecutive 12-month period. The owner or operator shall calculate and record the total number of truck trips on a daily, monthly, and 12-month rolling basis to demonstrate compliance with these limits.

COMPLAINTS

35. The owner or operator shall establish a complaint response program for complaints received regarding air quality, including but not limited to odors and/or fugitive dust, as part of an Operation and Maintenance (O&M) Plan. The program shall include a complaint phone line, criteria and methods for establishing whether the Lenz facility may be the source of the air emissions related to the complaint, and a format for communicating results of investigation and advising complainants of Lenz's corrective actions.
 - a) The owner or operator shall record and investigate complaints received regarding air quality as soon as possible, but no later than one working day after receipt.
 - b) The owner or operator shall correct any problems identified by these complaint investigations within 24 hours of identification or cease operation of the equipment until the problem is resolved;
 - c) Records of all complaints received regarding air quality issues shall include information regarding date and time of complaint; name and address of complainant (if known); nature of the complaint; investigation efforts completed and basis for conclusion reached; and date, time, and nature of any corrective action taken.
 - d) The owner or operator shall operate and maintain a meteorology station capable of measuring and recording temperature, wind speed, and wind direction.

OPERATION & MAINTENANCE

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36. The owner or operator shall develop an O&M Plan consistent with the requirements of Regulation I, Section 5.05(c). The plan must address procedures for determining when the composting systems, tipping building, and biofilters are operating properly and the corrective actions that will be taken when they are not.
37. The owner or operator shall have the operations and performance of the tipping building overall, including the air handling system and the performance of the biofilter to which the tipping building is vented, reviewed and evaluated by an independent third party at least once every 12 months. The first review required by this condition shall be conducted within 90 days of the completion of construction of the new composting process areas. The independent third party in conjunction with Lenz shall develop a proposed evaluation plan and proposed report format and submit these to the Agency for approval at least 90 days prior to the first evaluation. A copy of each written evaluation report shall be submitted to the Agency no later than 45 days after the evaluation date. The evaluation shall include, but is not limited to:
 - a) Operational condition and integrity of the tipping building exhaust/capture system extending from the entrance to the tipping building to the point at which the exhaust enters the biofilter, including an evaluation of whether additional fan capacity is needed to adequately capture emissions.
 - b) Operational condition and integrity of the biofilter to which the tipping building is vented.
 - c) Adequacy and effectiveness of the system maintenance program and practices, including repair history and troubleshooting efforts.
 - d) An assessment showing that the existing biofilters are adequately draining to ensure that the beds are not becoming waterlogged.
 - e) Actions taken to address any issues or concerns found
 - f) Recommendations for continuous improvement of the integrated system operation.

RECORDS AND OTHER REQUIREMENTS

38. All records of observations and supporting documentation required by this Order of Approval shall be completed contemporaneously and no later than the end of each day. Each inspection and observation required on a daily basis by this Order shall be completed for each operational day for the site. An operational day is defined as any day that feedstock, actively composting material, or finished compost is located onsite.
39. The owner or operator shall maintain records required by this Order of Approval for five years and make them available to Puget Sound Clean Air Agency personnel upon request.
40. For the purposes of this Order of Approval, “new” refers to the operations and equipment covered by this Order of Approval and added to the facility after February 2021 and “existing” refers to the operations and equipment temporarily approved by OA 10494 and permanently approved with this Order of Approval.
41. Upon issuance of this Order of Approval, this Order supersedes and cancels Order of Approval No. 10494, dated April 1, 2014, and cancels NOC application 11053 submitted November 12, 2015.

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APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

Carole Cenci
Reviewing Engineer

John Dawson
Engineering Manager