

Public Notice

Public Hearing about SORT Bioenergy, LLC's Proposed Air and Solid Waste Permits

DEQ invites the public to attend a public hearing and to comment on the SORT Bioenergy, LLC proposed standard air quality permit and the proposed anaerobic digester solid waste permit.

Summary

SORT Bioenergy proposes to accept and anaerobically digest commercial and industrial liquid and solid food waste to produce biogas. The biogas will be combusted to generate electricity. Other byproducts include heat and liquid and solid residues which can be used as fertilizer and soil amendments.

How do I participate?

Attend the public hearing to learn about the permit applications, ask any questions you might have and provide oral or written comments on the proposed permits. You can also submit written comments by mail, fax or email.

Hearing details

When: 6:30 pm. Thursday
Nov. 17, 2016

Where: Wilsonville Public Library
Oak Room
8200 SW Wilsonville Rd.
Wilsonville, OR 97070

Send written comments by mail, fax or email to:

Dept. of Environmental Quality
Northwest Region Permit Coordinator
700 NE Multnomah St. Suite 600
Portland, OR 97232-4100

Fax: 503-229-6945

Email:
NWRSortFacilityDEQPermits@deq.state.or.us

Written comments are due by 5 pm., Tuesday,
Nov. 22, 2016.

About the facility

The SORT Bioenergy facility will be located at 10295 SW Ridder Road in Wilsonville adjacent to the Willamette Resources, Inc. material recovery and transfer station facility. Trucks will deliver food waste via the truck scale west of the

facility off SW Ridder Road. Food waste will be de-packaged, sorted and processed for feeding the digester process. Biogas produced will be combusted in the generator engines and the electricity produced will be transmitted to the Portland General Electric supply grid.

The digester solid byproduct will be either used as a soil amendment following pathogen reduction verification or composted at an off-site DEQ-approved composting facility. The liquid byproduct is proposed to be discharged to the sanitary system under the City's pretreatment program; however, the material could potentially be used for agricultural application as a fertilizer pending DEQ and Oregon Department of Agriculture approval.

What pollutants does the permit regulate?

The air quality permit regulates emissions of the air pollutants listed in Tables 1 & 2 at the end of this document. The solid waste permit regulates solid and liquid process streams, including raw materials and finished products.

How does DEQ determine permit requirements?

DEQ evaluates types and amounts of feedstocks and pollutants and the facility's location, in addition to the process type, and determines permit requirements according to state and federal regulations.

What special conditions are in this permit?

Air Quality: The permittee must send DEQ a copy of all notifications and reports required to be submitted to EPA for applicable New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants regulations pertaining to the generator engines. In addition, detailed engine maintenance records are required to show continuous compliance with EPA and DEQ rules. Odor controls will be monitored and results logged daily. All environmental complaints will be reported to DEQ promptly.

Solid Waste: The DEQ solid waste permit requires that SORT meet performance standards to protect surface and ground water quality,



State of Oregon
Department of
Environmental
Quality

Northwest Region
700 NE Multnomah St Ste 600
Portland, OR 97232-4100

Phone: 503-229-5263
800-452-4011
Fax: 503-229-6945

Air Quality Permit

Writer/Inspector:
Gregg Dahmen, PE
Phone: 503-229-5945

Solid Waste Permit

Writer/Inspector
Killian Condon
Phone: 503-229-5562

www.oregon.gov/DEQ

Search for "SORT Bioenergy, air quality permits, public notice, solid waste permits"

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

DEQ provides documents electronically whenever possible in order to conserve resources and reduce costs.

If you received a hard copy of this notice, please consider receiving updates via e-mail instead. Send your request to: subscriptions@deq.state.or.us

Please include your full name and mailing address so that we can remove you from our print mailing list.

control and minimize odors, achieve pathogen reduction, and control or prevent propagation, harborage or attraction of birds, rats, flies and other vectors. The permit also requires that SORT follow a DEQ approved operations plan.

How does DEQ monitor compliance with the permit requirements?

This permit would require the facility to monitor pollutants using federally-approved monitoring practices and standards. Actual emissions are reported annually along with fuel usage and byproduct production data.

Onsite inspections will be performed on a regular basis and additional inspections will be performed as needed in response to complaints.

What happens after the hearing?

DEQ considers and responds to all comments received and may modify the proposed permits based on comments. If a facility meets all legal requirements, DEQ will issue the facility's air quality permit and solid waste disposal permit.

Where can I get more information?

Find out more information about this project at: <http://www.oregon.gov/deq/Pages/publicnotice.aspx>

You can also contact the Air Quality Permit Coordinator directly using the following contact information:

Phone: 503-229-5582 or 800-452-4011

Fax: 503-229-6945

Email:

NWRSortFacilityDEQPermits@deq.state.or.us

You can also contact the Materials Management Permit Coordinator directly using the following contact information:

Phone: 503-229-5353 or 800-452-4011

Fax: 503-229-6957

Email:

NWRSortFacilityDEQPermits@deq.state.or.us

View the draft permit and related documents in person at the Northwest Region DEQ office in Portland. For a DEQ review appointment, call 503-229-6736.

Accessibility information

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills.

To make these arrangements, contact DEQ at 503-229-5696 or call toll-free in Oregon at 800-452-4011; fax to 503-229-6762; or email deqinfo@deq.state.or.us.

People with hearing impairments may call 711.



Air quality permit emissions limits

Criteria Pollutants: Table 1 below presents maximum allowable emissions of criteria pollutants for the facility. The proposed emission limit reflects maximum emissions the facility would be able to emit under the proposed air quality permit. Typically, a facility's actual emissions are less than maximum limits established in a permit; however, actual emissions can increase up to the permitted limit.

Table 1- Air Pollutants

Criteria Pollutants	Estimated Emissions (tons/yr)	Proposed Limit (tons/yr)
Particulate matter (PM ₁₀)	0.5	14
Small particulate matter (PM _{2.5})	0.5	9
Nitrogen oxides	34.3	39
Sulfur dioxide	9.12	39
Carbon monoxide	76.5	99
Volatile organic compounds	3.0	39

For more information about criteria pollutants, go to: www.epa.gov/air/urbanair/

Air quality permit hazardous air pollutant limits

SORT Bioenergy is not a major source of hazardous air pollutants; however, EPA has determined that businesses similar to this facility, as a group, emit enough hazardous air pollutants to warrant regulation. Therefore, this source is subject to the following National Emission Standard for Hazardous Air Pollutants: Part 63 Subpart ZZZZ. Table 2 summarizes the hazardous air pollutants that trigger the NESHAP. More detailed information can be found in the review report.

Table 2

Hazardous Air Pollutants	Potential Emissions ¹ (tons/yr)	Proposed Limits (tons/yr)
formaldehyde	8.76 ²	9 (Single HAP)
acetaldehyde	0.83	
acrolein	0.51	
methanol	0.25	
n-hexane	0.14	
Other HAPs (various)	0.30	
Total HAPs	10.79	24 (Combined HAPs)

1. Potential Emissions are the PTE (Potential To Emit) uncontrolled for each pollutant based on 8,760 hrs/yr operation.
2. Potential emissions (uncontrolled) for formaldehyde from the engine, boiler, and flare. Estimated emissions after controls are less than 1.0 tons/year.

For more information about hazardous air pollutants, go to: www.epa.gov/ttn/atw/hlthef/hapindex.html



State of Oregon
Department of
Environmental
Quality

STANDARD
AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region
700 NE Multnomah St., Suite 600
Portland, OR 97232

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

SORT Bioenergy, LLC
3668 N. La Fontana Way
Boise, ID 83702

INFORMATION RELIED UPON:

Application No.: 028470
Date Received: 8/4/2016

PLANT SITE LOCATION:

10295 SW Ridder Road
Wilsonville, OR 97070

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Wilsonville
Approval Date: 06/20/2016

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Michael Orman, E.I.T., Northwest Region Air Quality Manager

Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-8010):

Table 1 Code	Source Description	SIC/NAICS
Part B, 27	Electrical power generation from combustion, excluding units used exclusively as emergency generators and units less than 500 kW.	4911/221119

TABLE OF CONTENTS

1.0	GENERAL EMISSION STANDARDS AND LIMITS	3
2.0	SPECIFIC PERFORMANCE AND EMISSION STANDARDS	4
3.0	OPERATION AND MAINTENANCE REQUIREMENTS	4
4.0	PLANT SITE EMISSION LIMITS	7
5.0	COMPLIANCE DEMONSTRATION AND SOURCE TESTING	7
6.0	SPECIAL CONDITIONS	9
7.0	RECORDKEEPING REQUIREMENTS	9
8.0	REPORTING REQUIREMENTS	11
9.0	ADMINISTRATIVE REQUIREMENTS	12
10.0	FEES	13
11.0	DEQ CONTACTS / ADDRESSES	13
12.0	GENERAL CONDITIONS AND DISCLAIMERS	14
13.0	EMISSION FACTORS.....	15
14.0	PROCESS/PRODUCTION RECORDS	16
15.0	ENGINE EMISSION STANDARDS.....	16
16.0	ABBREVIATIONS, ACRONYMS, AND DEFINITIONS	17

1.0 GENERAL EMISSION STANDARDS AND LIMITS

- 1.1. Visible Emissions** The permittee must comply with the following visible emission limit, as applicable:
- a. Visible emissions from any air contaminant source must not equal or exceed an average of 20 percent opacity.
 - b. This visible emissions limit is based upon a six-minute block average of 24 consecutive observations recorded at 15-second intervals as specified in OAR 340-208-0110(2).
 - c. This visible emissions limit does not apply to fugitive emissions from the source.
- 1.2. Particulate Matter Emissions**
- a. The permittee must ensure that particulate matter emissions from any air contaminant source other than fuel burning equipment and fugitive emission sources do not exceed 0.10 grains per standard cubic foot.
 - b. The permittee must ensure that particulate matter emissions from any fuel burning equipment do not exceed 0.10 grains per standard cubic foot, corrected to 12% CO₂ or 50% excess air.
- 1.3. Fugitive Emissions** The permittee must take reasonable precautions to prevent fugitive dust emissions, as measured by EPA method 22 at the downwind property boundary, by:
- a. Using where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - b. Application of water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - c. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times by use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;;
 - d. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer;
 - e. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - f. Enclosing (full or partial) materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;
 - g. Promptly removing earth or other material that does or may become airborne from paved streets; and

- h. Developing a DEQ approved fugitive emission control plan upon request by DEQ if the above precautions are not adequate and implementing the plan whenever fugitive emissions leave the property for more than 18 seconds in a six-minute period.

1.4. Particulate Matter Fallout The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person.

1.5. Nuisance and Odors The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel. The odor control plan as required in Condition 3.2 will be implemented should any odor problems arise.

2.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

2.1. NESHAP/ NSPS Engine Standards The generator engines must comply with the emissions standards in Condition 16.0.

3.0 OPERATION AND MAINTENANCE REQUIREMENTS

3.1. Equipment Operations The permittee must ensure that the control equipment and waste gas flare are operated in a manner to maximize efficiency, as follows.

- a. All biogas to be combusted must be first passed through an H₂S treatment system resulting in no more than 25 ppm H₂S in the treated biogas.
- b. The permittee must perform a fuel sample analysis (using Draeger tube or similar method) upon start-up and once per week to determine the concentration of H₂S at the biogas outlet of the sulfur treatment system. Results of the analyses must be maintained on site. If the measured H₂S concentration is greater than 25 ppm the permittee must take corrective action within 24 hours. This may include process control changes or the replacement of the removal media. Following corrective action(s), the permittee must perform another fuel sample analysis to demonstrate ongoing compliance.
- c. The biogas flare must be operated at all times when emissions may be vented to it, in accordance with the following:
 - i. The flare must be operated with a continuous pilot flame when there is a demand to combust biogas. The pilot flame must be continuously monitored using a thermocouple or equivalent device. The flame must be monitored for on/off status and for flame failure, and the system equipped with alarms to signal such events.

If any excess emissions events occur due to pilot flame ignition malfunction then the flare must operate with a continuous pilot flame regardless of the demand to combust biogas.

- ii. The flare must be operated with supplemental fuel (natural gas, propane) to assist biogas combustion unless the heating value of the biogas is 500 Btu/scf or greater. As necessary, the net heating value is to be determined as described in 40 CFR 60.18.
 - iii. The flare must be operated with an internal combustion temperature of at least 1400° F.
 - iv. The flare must be designed for and operated with no visible emissions as determined by EPA Method 22, except for periods not to exceed a total of six minutes during any hour.
- d. The permittee must install a continuous differential pressure monitoring device at each catalyst (oxidation/SCR), and an alarm system must be installed to alert operators if the differential pressure is out of the acceptable range. The permittee must keep weekly records of the differential pressure and any excursions from the acceptable range. The acceptable range will be determined during the initial emission factor verification source testing specified in Condition 5.1.
- i. The permittee must investigate and commence corrective action measures within 24 hours of an excursion of the approved differential pressure range of any catalyst. Startup, shutdown, and malfunction conditions are excluded from this requirement provided such conditions are documented as required in OAR 340-214-300 through 340-214-0340. DEQ will review such events under the criteria in OAR 340-214-0350.
 - ii. Operating outside the design range is not a violation of the permit; however, it is a violation of this permit condition if the permittee fails to take corrective action within 24 hours following a documented excursion.
- e. The permittee must install and operate an alarm system on any urea injector in such a manner that an operator will be alerted if the urea flow is outside of the designed range. The acceptable range is defined as the manufacturers designed range.
- i. The permittee must investigate and commence corrective action measures within 24 hours if the urea flow to the injector is outside of the manufacturer's designed range.

Startup, shutdown, and malfunction conditions are excluded from this requirement provided such conditions are documented as required in OAR 340-214-300 through 340-214-0340. DEQ will review such events under the criteria in OAR 340-214-0350.

- ii. Operating outside the design range is not a violation of the permit; however, it is a violation of this permit condition if the permittee fails to take corrective action within 24 hours following a documented excursion.
- f. To ensure efficient operation of the biofilters, the permittee must adhere to the manufacturer's recommendations for maintenance, which should include the following or similar actions:
 - i. Inspect and clean the humidifier nozzle.
 - ii. Inspect the sprinkler system components.
 - iii. Inspect and remove weeds from the biofilter surface.
 - iv. Inspect and maintain the blower.
 - v. If the system includes a differential pressure monitor, record the pressure drop weekly.
 - vi. If the system includes a moisture control system, record the moisture content weekly.

- 3.2. **Odor Control Plan** The permittee must implement and maintain a DEQ approved odor control plan. The plan and all revisions to the plan must be submitted to DEQ for approval at least 30 days prior to startup of the facility. At a minimum, the following actions must be taken and performance requirements must be met:
 - a. All feedstock materials must be received in enclosed trucks or containers.
 - b. All received feedstock product must be unloaded/dumped in an enclosed area that is vented to the facility's odor control system.
 - c. Product receiving/pretreatment areas must be ventilated to the facility's odor control system in a manner that ensures the areas are under negative pressure.
 - d. Byproduct shipping and handling must use best management practices for minimizing any dust or odors.
- 3.3. **NESHAP/NSPS Engine Maintenance** The permittee must keep a maintenance plan and, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

4.0 PLANT SITE EMISSION LIMITS

4.1. Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM ₁₀ /PM _{2.5}	9	tons per year
SO ₂	39	tons per year
NO _x	39	tons per year
CO	99	tons per year
VOC	39	tons per year
Total HAPs	24	tons per year
Single HAP	9	tons per year

4.2. Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period.

5.0 COMPLIANCE DEMONSTRATION AND SOURCE TESTING

5.1. Source Testing Requirements

By no later than 180 days after startup, the permittee must verify the correctness of the generator emission factors presented in the permit application by conducting a source test for NO_x, CO, and VOC emissions using the following test methods and procedures. If the generator sets and control devices installed are identical, only one generator set needs be tested.

- a. Test methods must be taken from 40 CFR 60, Appendix A, to include Methods 1 – 4, for each pollutant, and
 - i. For NO_x, use test method 7-E
 - ii. For CO, use test method 10
 - iii. For VOC, use test method 25 or 25A
 - iv. For visible emissions, use test method 9
- b. The facility must be operating at the normal maximum rate.
- c. Emission rates must be reported in terms of lb/hr, g/bhp-hr, and lb/MMBtu.
- d. The following parameters must be monitored and recorded during the source test:
 - i. Process operating parameters; including the operating (power) level of the generator, and amount of gas combusted;

- ii. Pollution control device operating parameters including operating temperature, pressure drop across the catalysts and urea injection rate; and
 - iii. Determine and report the H₂S content (ppm) of the fuel at the generator inlet using ASTM D4084 or an approved alternate test method.
 - iv. Immediately preceding or following the H₂S determination test required in the condition above, determine and report the H₂S concentration (ppm) of the biogas fuel at the generator inlet using the facility's Draeger (or similar sampling tube method – see Condition 3.0). Testing must be performed according to the sampling system manufacturer's instructions.
- e. All tests must be conducted in accordance with the DEQ's Source Sampling Manual and the approved pretest plan. The pretest plan must be submitted at least 30 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 45 days unless otherwise approved in the pretest plan. See Condition 11.2 for the appropriate address to submit test plans/reports.
- f. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.
- 5.2. NESHAP/ NSPS Testing**
- a. To demonstrate compliance with 40 CFR part 60 subpart jjjj, source testing will be by no later than 180 days after startup and every 3 years or 8,760 hours of engine operation, whichever comes first, in accordance with 40 CFR 60.4244. The permittee must submit a copy of each performance test within 60 days after the test has been completed.
- 5.3. Monitoring Requirements**
- The permittee must monitor the operation and maintenance of the plant and associated air contaminant control devices as follows:
- a. Determine the concentration of H₂S at the biogas outlet of the sulfur removal system per Condition 3.1.(d),
 - b. Maintain pilot flame alarms for flare and monitor visible emissions using Method 22 per Condition 3.1.(c),
 - c. Operate a continuous differential pressure monitoring device at each catalyst (oxidation/SCR) system per Condition 3.1.(b),
 - d. Maintain an alarm system for urea injection flows if using urea in the oxidation/SCR system per Condition 3.1.(e),

- e. Monitor the differential pressure on the biofilter per Condition 3.1.(f)

5.4. PSEL Compliance Monitoring

The permittee must demonstrate compliance with the PSEL for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

where:

$$\begin{aligned} E &= \text{pollutant emissions (ton/yr);} \\ EF &= \text{pollutant emission factor (see Condition 13.0);} \\ P &= \text{process production (see Condition 14.0)} \end{aligned}$$

5.5. Emission Factors

The permittee must use the default emission factors provided in Condition 13.0 for calculating pollutant emissions, unless alternative emission factors are approved by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ.

6.0 SPECIAL CONDITIONS

6.1. Special Nuisance Conditions

Permittee must provide the Regional Office of DEQ with written notification within five days of all nuisance complaints received by the permittee during the operation of the facility. Documentation must include date of contact, time of observed nuisance conditions, description of nuisance condition, location of receptor, and status of plant operation during the observed period, and any actions taken to mitigate the nuisance conditions.

6.2. Odor Abatement Conditions

If any odor problems arise after startup, the odor control plan will be implemented. Should the control plan be unsuccessful, the plan will be modified as needed until the odors are successfully abated. This condition does not limit any other actions that may be taken by DEQ to enforce compliance with the nuisance regulations.

7.0 RECORDKEEPING REQUIREMENTS

7.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices. Data must be recorded monthly, unless otherwise specified.

- a. Hours of operation of each generator set.
- b. Quantity of biogas combusted in scf and MMBtu.
- c. Quantity of gas combusted in the boiler, in scf and MMBtu.
- d. Quantity of gas combusted in the flare, in scf and MMBtu.

- e. Any instance of a malfunction in the flare, dates/ times of the malfunction, and remedial actions taken.
- f. Weekly pressure readings and any excursion from the approved range of the pressure drop across the bed of each catalyst, dates/times of the occurrence and corrective actions taken.
- g. Any occurrence of an upset in the urea injection system which caused an alarm, dates/times of the occurrence and corrective actions taken.
- h. Results of each biogas analysis for H₂S content and any corrective actions taken for results above 25 ppm.
- i. Emissions calculations for each consecutive 12-month period, performed in accordance with Condition 5.3.

- 7.2. Excess Emissions** The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity as a six-minute block average. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4).
- 7.3. Complaint Log** The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.
- 7.4. NESHAP/ NSPS Recordkeeping** The permittee must keep records of the following information
- a. All notifications submitted to comply with the NESHAP/NSPS all documentation supporting any notification.
 - b. Maintenance conducted on the engine.
 - c. Documentation that the engine meets the emission standards in Condition 15.0.
- 7.5. Retention of Records** Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application and make them available to DEQ upon request. The permittee must maintain the two (2) most recent years of records onsite.

8.0 REPORTING REQUIREMENTS

- 8.1. NESHAP/
NSPS Initial
Notification** The permittee must submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the following information:
- a. Name and address of the permittee;
 - b. The address of the affected source;
 - c. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - d. Emission control equipment; and
 - e. Quantity of gas combusted
- 8.2. Excess
Emissions** The permittee must notify DEQ of excess emissions events if the excess emission is of a nature that could endanger public health.
- a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 11.0 by email, telephone, facsimile, or in person.
 - b. If the excess emissions occur during non-business hours, the permittee must notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
 - c. The permittee must also submit follow-up reports when required by DEQ.
- 8.3. Annual
Report** For each year this permit is in effect, the permittee must submit to DEQ by **February 15th**, two (2) copies of the following information for the previous calendar year:
- a. Operating parameters:
 - i. Cumulative biogas usage data for the generator engines, flare and the boiler, monthly.
 - ii. Hours of operation of each engine, monthly.
 - iii. Each excursion (operation outside normal range) of control equipment as noted in Condition 7.1.
 - b. A summary of annual pollutant emissions determined each month as required in Condition 5.3.
 - c. Records of all planned and unplanned excess emissions events.
 - d. Summary of complaints relating to air quality received by permittee during the year.
 - e. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.

- f. List major maintenance performed on pollution control equipment.
- 8.4. Greenhouse Gas Registration and Reporting** If the calendar year emission rate of greenhouse gases (CO₂e) is greater than or equal to 2,756 tons (2,500 metric tons), the permittee must register and report its greenhouse gas emissions with DEQ in accordance with OAR 340-215.
- 8.5. Initial Startup Notice** The permittee must notify DEQ in writing of the date a new facility is started up. The notification must be submitted no later than seven (7) days after startup.
- 8.6. Notice of Change of Ownership or Company Name** The permittee must notify DEQ in writing using a DEQ “Transfer Application Form” within 60 days after the following:
- Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
 - Sale or exchange of the activity or facility.
- 8.7. Construction or Modification Notices** The permittee must notify DEQ in writing using a DEQ “Notice of Intent to Construct Form,” or other permit application form and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:
- Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
 - Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
 - Constructing or modifying any air pollution control equipment.

9.0 ADMINISTRATIVE REQUIREMENTS

- 9.1. Permit Renewal Application** The permittee must submit the completed application package for renewal of this permit **180 days prior to the expiration date**. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in Condition 11.
- 9.2. Permit Modifications** Application for a modification of this permit must be submitted within **60 days** prior to the source modification. When preparing an application, the applicant should also consider submitting the application 180 days prior to allow DEQ adequate time to process the application and issue a permit before it is needed. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the DEQ Business Office.

10.0 FEES

- 10.1. Annual Compliance Fee** The permittee must pay the annual fee specified in OAR 340-216-8020, Table 2, Part 2 for a Standard ACDP on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations will be mailed prior to the above date. Late fees in accordance with Part 4 of the table will be assessed as appropriate.
- 10.2. Change of Ownership or Company Name Fee** The permittee must pay the non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 3(a) with an application for changing the ownership or the name of the company.
- 10.3. Special Activity Fees** The permittee must pay the special activity fees specified in OAR 340-216-8020, Table 2, Part 3 (b through k) with an application to modify the permit.

11.0 DEQ CONTACTS / ADDRESSES

- 11.1. Business Office** The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:
Department of Environmental Quality
Accounting / Revenue
700 NE Multnomah St., Suite 600
Portland, Oregon 97232-4100
- 11.2. Permit Coordinator** The permittee must submit all notices and applications that do not include payment to the Northwest Region's Permit Coordinator:
Department of Environmental Quality
Air Quality Permit Coordinator
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100
- 11.3. Report Submittals** Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Northwest Region. If you know the name of the Air Quality staff member responsible for your permit, please include it:
Northwest Region
Air Quality Program
700 NE Multnomah St., Suite 600
Portland, OR 97232
- 11.4. Web Site** Information about air quality permits and DEQ's regulations may be obtained from the DEQ web page at www.oregon.gov/deq

12.0 GENERAL CONDITIONS AND DISCLAIMERS

- 12.1. Permitted Activities** This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.
- 12.2. Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by DEQ.
- 12.3. Conflicting Conditions** In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
- 12.4. Masking of Emissions** The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
- 12.5. DEQ Access** The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
- 12.6. Permit Availability** The permittee must have a copy of the permit available at the facility at all times.
- 12.7. Open Burning** The permittee may not conduct any open burning except as allowed by OAR 340, division 264.
- 12.8. Asbestos** The permittee must comply with the asbestos abatement requirements in OAR 340, division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.
- 12.9. Property Rights** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

12.10. Permit Expiration

- a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:
 - i. A timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or
 - ii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.
- b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

12.11. Permit Termination, Revocation, or Modification

DEQ may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

13.0 EMISSION FACTORS

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
Caterpillar Engines	PM ₁₀ /PM _{2.5}	0.039	lb/hr operation	Mfr. Test Data
	NO _x	2.0	gm/hp-hr	Subpart JJJJ, Table 1
	CO	5.0	gm/hp-hr	Subpart JJJJ, Table 1
	SO ₂	1.04	lb/hr operation	DEQ 25 ppmv H ₂ S
	VOC	1.0	gm/hp-hr	Subpart JJJJ, Table 1
Cleaver Brooks Boiler	PM ₁₀ /PM _{2.5}	0.03	lb/MMBtu	Mfr. Test Data
	NO _x	0.117	lb/MMBtu	Mfr. Test Data
	CO	0.150	lb/MMBtu	Mfr. Test Data
	SO ₂	0.001	lb/MMBtu	Mfr. Test Data
	VOC	0.004	lb/MMBtu	Mfr. Test Data
Greenhouse Gas	GHG	53.1	kg CO ₂ e/MMBtu	40 CFR 98

14.0 PROCESS/PRODUCTION RECORDS

Emissions device or activity	Process or production parameter	Frequency
Caterpillar Engines	Fuel Consumption in cu. ft. or MMBtu for each engine	Monitor using totalizer, record monthly, report annually.
	Hours of operation for each engine	Monitor using totalizer, record monthly, report annually.
Cleaver Brooks Boiler	Fuel Consumption in cu. ft. or MMBtu	Monitor using totalizer, record monthly, report annually.
Varec Flare	Fuel Consumption in cu. ft. or MMBtu	Monitor using totalizer, record monthly, report annually.

15.0 ENGINE EMISSION STANDARDS

NO_x, CO, AND VOC EMISSION STANDARDS FOR NON-EMERGENCY ENGINES, LANDFILL/DIGESTER GAS ENGINES, AND EMERGENCY ENGINES
 40 CFR Part 60 Subpart JJJJ Table 1

Engine Type and Fuel	Maximum Engine Power	Manufacture Date	Emission Standards ^a					
			NO _x	CO	VOC ^b	NO _x	CO	VOC ^b
			(g/HP-hr)			(ppmvd at 15% O ₂)		
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350).	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350).	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80

a For non-certified engines, the permittee may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

b When calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

16.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	NSR	New Source Review
ASTM	American Society for Testing and Materials	O ₂	oxygen
AQMA	Air Quality Maintenance Area	OAR	Oregon Administrative Rules
calendar year	The 12-month period beginning January 1st and ending December 31 st	ORS	Oregon Revised Statutes
CFR	Code of Federal Regulations	O&M	operation and maintenance
CO	carbon monoxide	Pb	lead
CO _{2e}	carbon dioxide equivalent	PCD	pollution control device
DEQ	Oregon Department of Environmental Quality	PM	particulate matter
dscf	dry standard cubic foot	PM ₁₀	particulate matter less than 10 microns in size
EPA	US Environmental Protection Agency	PM _{2.5}	particulate matter less than 2.5 microns in size
FCAA	Federal Clean Air Act	ppm	part per million
Gal	gallon(s)	PSD	Prevention of Significant Deterioration
GHG	greenhouse gas	PSEL	Plant Site Emission Limit
gr/dscf	grains per dry standard cubic foot	PTE	Potential to Emit
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	RACT	Reasonably Available Control Technology
I&M	inspection and maintenance	scf	standard cubic foot
lb	pound(s)	SER	Significant Emission Rate
MMBtu	million British thermal units	SIC	Standard Industrial Code
NA	not applicable	SIP	State Implementation Plan
NESHAP	National Emissions Standards for Hazardous Air Pollutants	SO ₂	sulfur dioxide
NO _x	nitrogen oxides	Special Control Area	as defined in OAR 340-204-0070
NSPS	New Source Performance Standard	VE	visible emissions
		VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months



State of Oregon
Department of
Environmental
Quality

Standard AIR CONTAMINANT DISCHARGE PERMIT REVIEW REPORT

Department of Environmental Quality
Northwest Region

Source Information:

SIC	4911
NAICS	221119

Source Categories (Table 1 Part, code)	B 27
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

FCE	
Compliance schedule	
Unassigned emissions	
Emission credits	
Special Conditions	X

Source test [date(s)]	Within 180 days after startup
COMS	
CEMS	
PEMS	
Ambient monitoring	

Reporting Requirements

Annual report (due date)	Feb. 15th
Quarterly report (due dates)	

Monthly report (due dates)	
Excess emissions report	
Other (specify)	

Air Programs

Synthetic Minor (SM)	
SM -80	
NSPS (list subparts)	JJJJ
NESHAP (list subparts)	ZZZZ
Part 68 Risk Management	
CFC	

NSR	
PSD	
RACT	
TACT	X
Other (specify)	

TABLE OF CONTENTS

PERMITTING3
SOURCE DESCRIPTION3
COMPLIANCE.....5
SPECIAL CONDITIONS.....5
EMISSIONS5
TITLE V MAJOR SOURCE APPLICABILITY6
ADDITIONAL REQUIREMENTS7
SOURCE TESTING8
PUBLIC NOTICE.....8

PERMITTING

PERMITTEE IDENTIFICATION

1. The proposed permit is for SORT Bioenergy, LLC for a new biogas production facility which will process food waste in Wilsonville, Oregon.

PERMIT

2. The proposed permit is a new permit for a new biogas production facility to produce electricity and digester byproducts.

OTHER PERMITS

3. Other permits issued or required by the DEQ for this source include: Water Quality stormwater permits 1200Z and 1200C, and a Solid Waste Composting Permit.

ATTAINMENT STATUS

4. The source will be located in a maintenance area for CO and Ozone. NO_x and VOC are precursors to Ozone. The facility is not a major source of CO, NO_x, and VOC. The area is in attainment for all other criteria air pollutants.
5. The source is not located within 10 kilometers of the Mt. Hood Wilderness Class I Air Quality Protection Area.

SOURCE DESCRIPTION

OVERVIEW

6. The applicant proposes to operate a biogas production facility to produce electricity, with solid and liquid fertilizers as byproducts. The facility will be located at 10295 SW Ridder Road next to the Willamette Resources, Inc. transfer station. The 3 acre project site is located northeast of Wilsonville and has been annexed into the city. The property is currently occupied by a transfer station to the south and agricultural uses to the north. Startup is expected in early 2018.

Food waste (solid and liquid organic waste) from commercial producers including grocery stores, restaurants, and industrial food and beverage processors will be used as feedstock. The throughput is up to 65,000 tons/year. Biogas, biologically produced in an enclosed anaerobic digestion process, will be used to fuel biogas-fired engines that will generate approximately 2.4 Megawatts of electricity as well as usable heat. The byproduct heat will be used onsite to heat the anaerobic digester. Additional byproducts include liquid fertilizer, digestate fiber, and process water.

Primary plant components include a receiving and pretreatment building, process equipment and tanks, byproduct processing facilities, and power-generation equipment. The power generated will support frequency and voltage on the Portland General Electric distribution system and provide reliable electricity to the surrounding area.

Several large holding and processing tanks will be used for feedstock processing (buffering, hydrolysis, fermentation, and digestate treatment). Piping with related pumps will move substrate between tanks. Generators and gas handling equipment will be installed to manage the gas produced and transform the gas into electricity. The biogas will be passed through absorption media to remove H₂S prior to being combusted in the generator engines.

Food wastes will be delivered to the site via waste haulers' collection trucks. Vehicular access to the facility will be provided via SW Ridder Road. Trucks will pass through the truck scale, enter and offload within the pretreatment and process building and will exit south to SW Ridder Road. Southwest 95th Avenue and Ridder Road are designed to handle truck traffic. The facility anticipates less than 20 truck deliveries per day and less than 8 trucks hauling byproduct material off-site per day.

PROCESS AND CONTROL DEVICES

7. Air contaminant sources at the facility will consist of the following:
 - a. Two Caterpillar CG170-12 engine generator sets, rated at 1200 kilowatts (1668 bhp) each. The engines are spark ignition reciprocating engines fueled by digester biogas.
 - b. Two anaerobic digesters discharge liquefied post-digestion slurry to a centrifuge. The post digestate process tank vents will be ducted to a biofilter for odor control. The solids and the centrate byproducts are transported to offsite customers.
 - c. One boiler, 4.0 Million BTU/Hour is used to provide heat to the digesters during generator shutdowns.
 - d. One Varec 244W flare to combust biogas when a generator engine set is down for maintenance. In an emergency, the flare will be capable of combusting all the gas that would normally be combusted by the generator engines. The flare is designed such that combustion is managed in the burners by pre-mixing air and gas using venturi burner nozzles. A minimum operating temperature of 1400 degrees Fahrenheit is required in the permit, using supplemental natural gas if the biogas heat content is insufficient.
 - e. One odor control biofilter designed by Bohn Biofilter Company. The biofilter will be monitored for humidity and differential pressure. The biofilters are designed to remove odors including hydrogen sulfide that may build up in process vessels. The biofilter will receive ventilation air from the waste handling building in addition to tank venting flows.

- f. One H₂S treatment system using ferric oxide to reduce sulfur concentrations in the biogas.

CONTINUOUS MONITORING DEVICES

- 8. The facility has the following continuous monitoring devices:
 - a. The engines will have unresettable hour meters to monitor total hours of operation. Constant monitoring of the pressure drop across the selective catalytic reduction (SCR) and catalyst beds is required, and the emission control temperature must be 1400 °F minimum.
 - b. Monitoring requirements are contained in permit Condition 5.2.

COMPLIANCE

- 9. The facility will be inspected by DEQ personnel to ensure compliance with the permit conditions.

SPECIAL CONDITIONS

- 10. All nuisance complaints and the action taken to correct them must be reported to DEQ within five days.
- 11. If any nuisance or odor problems arise after startup, modification of the required odor control plan will be required, and changes must be approved by DEQ. Additional actions that may be taken by DEQ to enforce compliance with the nuisance regulations.

EMISSIONS

- 12. Proposed PSEL information:

Pollutant	Baseline ^{a.} Emission Rate (tons/yr)	Netting Basis ^{b.}		Plant Site Emission Limits (PSEL) ^{f.}		
		Previous (tons/yr)	Proposed (tons/yr)	Previous ^{c.} PSEL (tons/yr)	Proposed ^{d.} PSEL (tons/yr)	PSEL Increase (tons/yr)
PM ₁₀ /PM _{2.5} ^{e.}	0	0	0	0	9	9
SO ₂	0	0	0	0	39	39
NO _x	0	0	0	0	39	39
CO	0	0	0	0	99	99
VOC	0	0	0	0	39	39
Total HAPs	0	0	0	0	24	24

Pollutant	Baseline ^{a.} Emission Rate (tons/yr)	Netting Basis ^{b.}		Plant Site Emission Limits (PSEL) ^{f.}		
		Previous (tons/yr)	Proposed (tons/yr)	Previous ^{c.} PSEL (tons/yr)	Proposed ^{d.} PSEL (tons/yr)	PSEL Increase (tons/yr)
Single HAP	0	0	0	0	9	9

- a. The baseline emission rate is zero for this new facility.
- b. For Standard ACDPs, the netting basis is equal to the baseline emission rate minus emission reductions required by rule plus emission increases approved in accordance with OAR 340, division 224 (NSR rules). [Refer to the definition of netting basis in OAR 340-222-0046.]
- c. The previous PSEL is the PSEL in the last permit. This is a new permit.
- d. Standard ACDPs have source specific PSELs set equal to the Generic PSEL level if actual emissions will be less than the respective Generic PSEL levels.
- e. All particulate emissions are assumed to be PM_{2.5}.
- f. The PSEL is a federally enforceable limit on the potential to emit.

SIGNIFICANT EMISSION RATE ANALYSIS

- 13. For each pollutant, the proposed Plant Site Emission Limit is less than the significant emission rate, thus no further air quality analysis is required.

TITLE V MAJOR SOURCE APPLICABILITY

- 14. A major source is a facility that has the potential to emit 100 tons/yr or more of any criteria pollutant or 10 tons/yr or more of any single HAP or 25 tons/yr or more of combined HAPs. This facility is not a major source of emissions. The basis for this determination can be found in this Review Report.

CRITERIA POLLUTANTS

- 15. This facility is not a major source of criteria pollutant emissions.

HAZARDOUS AIR POLLUTANTS

- 16. This source is not a major source of hazardous air pollutants. Details of the HAP emissions are provided below.

Hazardous Air Pollutant	Potential to Emit ¹ (tons/year)
Formaldehyde	8.76 ²
acetaldehyde	0.83
acrolein	0.51

Hazardous Air Pollutant	Potential to Emit ¹ (tons/year)
methanol	0.25
n-hexane	0.14
Other HAPs (various)	0.30
Total HAPS	10.79

1. Potential Emissions are the PTE (Potential To Emit) uncontrolled for each pollutant based on 8,760 hrs/yr operation.
2. Potential emissions (uncontrolled) for formaldehyde from the engine, boiler, and flare. Estimated HAP emissions after controls are less than 1.0 tons/year.

17. The source does not have the capacity to emit above the Title V major source threshold levels. DEQ has proposed a generic HAP PSEL to assure their emissions do not increase to the major source threshold levels. The PSEL is a federally enforceable limit on PTE.

TOXICS RELEASE INVENTORY

18. The facility is not expected to be required to report to EPA under the TRI regulations.

TOXIC AND FLAMMABLE SUBSTANCE USAGE

19. The biogas produced in the anaerobic digesters is mainly methane and is flammable. Insignificant amounts of hydrogen sulfide and other toxic gases may be produced by the digestion processes, but they are treated and removed prior to combustion of the biogas.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

20. 40 CFR Part 60, Subpart JJJJ, is applicable to each engine (generator set) to be installed because they are subject to the NESHAP for Rotating Internal Combustion Engines (RICE) rules for area sources. The engines will be in compliance with Part 63 Subpart ZZZZ by complying with the New Source Performance Standards for Spark Ignition engines.

NESHAPS/MACT APPLICABILITY

21. 40 CFR Part 63, Subpart ZZZZ is applicable to each engine to be installed because they are newly manufactured. Subpart ZZZZ requires subject engines at area sources to meet the requirements in the NSPS (40 CFR 60, Subpart JJJJ).

RACT APPLICABILITY

22. The facility is located in the Portland AQMA, but it is not one of the listed source categories in OAR 340-232-0010, thus the RACT rules do not apply.

TACT APPLICABILITY

23. Biogas from the digester tanks is combusted in the engine generators. The engine generator sets are subject to NSPS and NESHAP requirements and are therefore not subject to TACT. In addition, the flare is a back-up control device for digester tank biogas combustion. The flare control device is fully enclosed and supplemental natural gas is required if the biogas BTU content is low. The proposed biofilters for odor control are subject to odor restrictions at the property lines, and the permittee will be required to follow an odor control plan approved by DEQ.

SOURCE TESTING

PROPOSED TESTING

24. The generator engines will be tested within 180 days of startup to demonstrate compliance with the RICE regulations. Testing will be done for NO_x, CO and VOC. The process, production and control device parameters will be recorded during the tests. The engines are not certified by the manufacturer and source testing will be required every 3 years or 8,760 hours of engine operation, whichever comes first.

PUBLIC NOTICE

25. Pursuant to OAR 340-216-0066(4)(a)(A), issuance of Standard Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(c), which requires DEQ to provide notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments. At the request of the applicant, a hearing is scheduled for Nov. 17, 2016 to allow interested persons to submit oral or written comments. DEQ will provide a minimum of 30 days notice for the hearing. **The public notice was emailed/mailed on Oct. 12, 2016 and the comment period will end on Nov. 22, 2016 at 5 p.m.**

gbd:ggg



State of Oregon
Department of
Environmental
Quality

SOLID WASTE DISPOSAL SITE PERMIT
ANAEROBIC DIGESTION COMPOSTING FACILITY

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland OR 97232

Telephone (Information): **503-229-5353**

Issued in accordance with the provisions of Oregon Revised Statutes (ORS) Chapter 459, Oregon Administrative Rules (OAR) 340 Divisions 93, 95, 96 and 97 and ORS Chapter 468B and subject to the Land Use Compatibility Statement referenced below.

ISSUED TO:	FACILITY NAME AND LOCATION:
Paul Woods-President SORT Bioenergy, LLC 3668 LaFontana Way Boise, Idaho, 83702 208-859-8257 paul@sortbioenergy.com	SORT Bioenergy 10295 SW Ridder Road Wilsonville, OR 97070
PROPERTY OWNER:	OPERATOR:
Republic Services 10295 SW Ridder Road Wilsonville, OR 97070 503-981-1278	Paul Woods-President SORT Bioenergy, LLC 3668 LaFontana Way Boise, Idaho, 83702 208-859-8257 paul@sortbioenergy.com

ISSUED IN RESPONSE TO:

- A solid waste disposal site, anaerobic digestion composting facility permit application and associated documents, received July 2016.
- Approved Land Use Compatibility Statement signed by Daniel Pauly, City of Wilsonville, Associate Planner dated: June 20, 2016.
- Draft Facility Operations Plan submitted July 2016.

The determination to issue this permit is based on findings and technical information included in the solid waste permit application and in the permit record.

ISSUED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Audrey O' Brien
Environmental Partnerships Program Manager
Northwest Region

Date

Permitted Activities

Until such time as this permit expires or is modified or revoked, the permittee is authorized to establish, operate, and maintain a solid waste disposal site for anaerobic digestion composting activities and to construct, install, modify or

Facility Name: SORT Bioenergy

Permit Number: 1573

Expiration Date: January 1, 2026

Page 2 of 15

operate stormwater and process water treatment and/or control facilities in conformance with the requirements, limitations, and conditions set forth in this document, including all attachments.

Unless specifically authorized by this permit, by a National Pollutant Discharge Elimination System (NPDES) or Water Pollution Control Facilities (WPCF) permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited.

DRAFT

TABLE OF CONTENTS

Introduction. This solid waste permit is issued by DEQ in accordance with Oregon Revised Statutes (ORS) 459, ORS 468B.050 and Oregon Administrative Rules (OAR), Chapter 340. This is an individual permit that is issued to owners and operators of anaerobic digestion composting facilities. Rules relating specifically to anaerobic digestion composting facilities may be found in OAR Chapter 340, Divisions 93, 95, 96 and 97.

This document contains the following sections:

	Page
Allowable Activities	4
1.0 Authorizations	4
2.0 Prohibitions	4
Operations and Design	5
3.0 Operating Conditions	5
4.0 Operations Plan	7
5.0 Recordkeeping and Reporting	8
6.0 Engineered Structures, Design and Management	10
General Conditions	11
7.0 Administration	11
8.0 Permit Modification	11
9.0 Site Operations	12
Compliance Schedule	15
10.0 Summary of Due Dates	15
11.0 When to Notify DEQ Staff	15

ALLOWABLE ACTIVITIES

1.0 AUTHORIZATIONS

- 1.1 Authorization to receive specific types of feedstocks.** This permit authorizes the facility to accept Type 3: separated mixed food waste, meat, eggs, dairy products, fats oils greases (FOG); also, digestate from Type 3 feedstocks. A detailed list of authorized feedstocks is listed in the DEQ-approved Operations Plan for this site.
- 1.2 Authorization to receive other feedstocks or amendments.** Feedstocks or amendments excluded from the above authorization may not be accepted unless DEQ has approved in writing an updated Operations Plan which describes the new feedstocks or amendments. Depending upon the requested feedstocks or amendments, DEQ may decide that a permit modification is needed before additional feedstocks or amendments can be received.
- 1.3 Authorization of other activities.** All facility activities must be conducted in accordance with the provisions of this permit. All reports and plans required by this permit become part of the permit by reference once approved by DEQ. Any conditions of report and plan approvals are also incorporated into this permit unless contested by the permittee within 30 days of the receipt of a conditional approval.
- 1.4 Water quality activities.** The permittee is allowed to construct, install, modify, operate and maintain an anaerobic digestion composting facility leachate and/or stormwater collection and/or treatment system provided these activities are done in accordance with plans and specifications approved in writing by DEQ and after obtaining any required DEQ water quality permits.

2.0 PROHIBITIONS

- 2.1 Prohibited feedstocks or wastes.** The permittee is prohibited from accepting materials for anaerobic digestion composting that are not specifically authorized in Section 1.1 of this permit, unless the materials have been approved in accordance with the requirements of Section 1.2 of this permit.

The permittee must not accept unsorted, mixed domestic solid waste as a feedstock or for disposal at the anaerobic digestion composting facility.

The permittee must not accept the following wastes:

- i. Hazardous wastes – Reference: 40 CFR 258.20 (b) and OAR 340-101;
- ii. Liquid waste other than manure. Definition: Liquid wastes are wastes that do not pass the paint filter test performed in accordance with EPA Method 9095;
- iii. Friable or non-friable asbestos-containing material as defined in OAR 340-248-0010;
- iv. Infectious wastes;
- v. Explosives;
- vi. Lead-acid batteries;
- vii. Source separated recyclable material;
- viii. Large home or industrial appliances;
- ix. Used oil;
- x. Covered electronic devices:
 - Computer monitors having a viewable area greater than four (4) inches diagonally;
 - Televisions having a viewable area greater than four (4) inches diagonally;
 - Desktop computers; or
 - Portable computers.

- xi. Discarded or abandoned vehicles;
- xii. Whole tires; or
- xiii. Any materials that are listed in OAR 340-093-0040, as prohibited from disposal at solid waste disposal sites.

2.2 Discovery of prohibited wastes. In the event that the permittee discovers prohibited feedstocks or wastes at the anaerobic digestion composting facility, the permittee must, within 48 hours, notify DEQ and initiate procedures to isolate or remove the prohibited feedstocks or waste.

- Non-putrescible, non-hazardous, prohibited waste must be transported to a disposal or recycling facility authorized to accept such waste **within 90 days**, unless otherwise approved by DEQ.
- Putrescible, non-hazardous, prohibited wastes must be removed **within 48 hours**, unless otherwise approved in writing by DEQ.
- In the event the permittee discovers wastes that are hazardous or suspected to be hazardous, the permittee must, **within 48 hours**, notify DEQ.
- Hazardous wastes must be removed **within 90 days**, unless otherwise approved by DEQ. Temporary storage and transportation must be carried out in accordance with DEQ rules.

2.3 Open burning. The permittee must not conduct any open burning at this site. Reference: OAR 340-264-0030 (defines open burning). The use of the facility's emergency flare does not constitute open burning.

2.4 Sewage sludge (biosolids). The permittee must not accept any sewage sludge for anaerobic digestion composting at this facility, except Class A exceptional quality biosolids that have been approved by DEQ in the Operations Plan. If the permittee wishes to accept sewage sludge other than Class A exceptional quality biosolids, then the permittee must obtain the applicable water quality permit, as required under ORS 468B and OAR 340-050.

OPERATIONS AND DESIGN

3.0 OPERATING CONDITIONS

3.1 Performance Standards. The anaerobic digestion composting facility must be operated in conformance with the performance standards identified in OAR 340-096-0070:

- 1) All anaerobic digestion composting facilities must be designed, constructed, and operated in a manner that does not cause a discharge of leachate, liquid digestate or stormwater from the facility to surface water, except when such discharge is in compliance with a discharge permit issued by DEQ.
- 2) All anaerobic digestion composting facilities that collect and dispose of leachate, liquid digestate or stormwater in engineered structures must comply with the applicable requirements of OAR 340-096-0130 *Special Rules Pertaining to Composting: Biogas, Liquid Digestate, Leachate Collection Design and Management Requirements*.
- 3) All anaerobic digestion composting facilities must be designed, constructed, and operated in a manner that does not cause a likely adverse impact to groundwater under OAR 340 Division 40. All composting facilities proposing to use infiltration in soil as a method for managing leachate, liquid digestate or stormwater must comply with OAR 340-096-0120 *Special Rules Pertaining to Composting: Groundwater Protection*.
- 4) All anaerobic digestion composting facilities must be designed, constructed, and operated in a manner that, to the greatest extent practicable, is consistent with proper facility design and operation, controls and minimizes odors that are likely to cause adverse impacts outside the boundaries of the facility.

- 5) All anaerobic digestion composting facilities must be designed, constructed, and operated in a manner that achieves human pathogen reduction as required by OAR 340-096-0140 *Special Rules Pertaining to Composting: Pathogen Reduction*.
- 6) All anaerobic digestion composting facilities must be designed, constructed, and operated in a manner that controls or prevents propagation, harborage, or attraction of vectors, including but not limited to rats, birds, and flies.
- 7) All anaerobic digestions composting facilities that produce, collect or store biogas must be designed, constructed, and operated to meet state and local fire regulations to address the potential for fire and explosions.
- 8) All anaerobic digestion composting facilities that collect, store and manage liquid and/or solid digestate, must demonstrate adequate capacity to store or remove the digestate. For facilities that land apply, storage must be provided for periods when the production of liquid and/or solid digestate exceeds the capacity of the soil to use the digestate at agronomic rates including during wet winter months.
- 9) All anaerobic digestion composting facilities must comply with all other applicable laws and regulations.

3.2 Pathogen reduction. The anaerobic digestion composting facility must be operated in conformance with **OAR 340-096-0140 Special Rules Pertaining to Composting: Pathogen Reduction** including the following:

- 1) Analytical limits for anaerobic digestion facilities' composted material and digestate: For composted material or digestate produced from Type 1 or **Type 3** feedstock, or a mix of Type 1 and **Type 3** feedstock with less than 50% by volume of Type 2 feedstock, analysis must be performed for salmonella or fecal coliform:

Parameter	Limitations
Fecal Coliform	Less than 1,000 Most Probable Number (MPN) per gram of total solids (dry weight)
Salmonella	Less than 3 Most Probable Number (MPN) per 4 grams of total solids (dry weight)

2. Testing frequency for anaerobic digestion facility composted material or solid digestate to determine pathogen reduction success:

a) Solid Digestate

Solid digestate (fiber) sent to a DEQ-permitted composting facility need not be tested for pathogen reduction. Solid digestate not forwarded to a permitted composting facility is subject to the following testing requirements and a sampling plan should be submitted to DEQ for approval as part of the Facility Operations Plan.

Amount and Type of Compost/Solid Digestate Produced Annually	Minimum Frequency	Type of Sample
Less than 2,500 tons of composted material or solid digestate from Type 1 and/or 2 feedstocks	Testing must be conducted once a year	Composite from finished compost or solid digestate
Greater than 2,500 tons of composted material or solid digestate from Type 1	Testing must be conducted every 5,000 tons of	Composite from finished compost

Amount and Type of Compost/Solid Digestate Produced Annually	Minimum Frequency	Type of Sample
and/or 2 feedstock are produced per year	feedstock used or a maximum of once every three months	or solid digestate

b) Liquid Digestate

SORT Bioenergy is proposing to discharge the pre-treated liquid digestate to the City of Wilsonville sanitary system to be treated at the publically-owned treatment works (POTW) and as such, sampling is not required. Per OAR 340-096-0140(1), the liquid digestate would also be exempt from sampling if the material is to be used for “on-farm use”; however, DEQ and the Oregon Department of Agriculture should be notified at least **60 days** in advance of this practice, to ensure a nutrient management plan is in place and to ensure adequate storage capacity for this material is present. If liquid digestate will be used off-farm, the following sampling plan must be followed and a sampling plan should be submitted to DEQ for approval.

Average storage time for liquid digestate	Minimum Frequency	Type of Sample
Less than 1 month	Testing must be conducted monthly	Representative sample described in DEQ approved sampling plan
1 to 6 months	Testing must be conducted quarterly	Representative sample described in DEQ approved sampling plan
More than 6 months	Testing must be conducted semi-annually	Representative sample described in DEQ approved sampling plan

4.0 OPERATIONS PLAN

4.1 Plan compliance. The permittee must conduct all operations at the facility in accordance with the approved Draft Operations Plan (*dated July 7, 2016*), including any amendments. The DEQ approved Operations Plan is incorporated into the permit by reference.

Note: The basic elements of an Operations Plan for an anaerobic digestion composting facility are listed in OAR 340-096-0090.

4.2 Land Application. Where applicable, solid and liquid digestate land application activities must be conducted according to a DEQ approved Digestate Management Plan. Storage and land application of liquid digestate must adhere to the Oregon Department of Agriculture nutrient management plan and animal waste management plan (AWMP).

4.3 Updated Operations Plan. The permittee must submit for DEQ review and approval an updated Operations Plan that incorporates any changes to operations or site conditions including those required in the final signed permit **within 180 days of permit issuance**.

4.4 Plan maintenance. The permittee must revise the Operations Plan as necessary to keep it up to date and reflective of current facility conditions and procedures.

The permittee must submit revisions of the Operations Plan to DEQ for review and written approval prior to commencing any change in operations.

4.5 Submittal address. All submittals to the DEQ under this section must be sent to:

**Oregon Department of Environmental Quality
Manager, Environmental Partnerships Program
700 Multnomah Street, Suite 600
Portland OR 97232 or email to: DEQNWR.SolidWastePermitCoordinator@deq.state.or.us
Phone: 503(229) 5353**

5.0 RECORDKEEPING AND REPORTING

5.1 Non-compliance reporting. In the event that any condition of this permit or of DEQ's rules is violated, the permittee must immediately take action to correct the violation and to notify DEQ **within 24 hours** at: DEQ's Northwestern Region Environmental Partnerships Program Office at (503)229-5353

Response: In response to a notification, DEQ may conduct an investigation to evaluate the nature and extent of the problem, and may require additional corrective actions, as necessary.

5.2 Leachate release reporting. Unauthorized leachate releases to waters of the state must be reported to DEQ **within 24 hours**.

5.3 Access to records. Upon request, the permittee must make all records and reports related to the permitted facility available to DEQ.

5.4 Recordkeeping procedures. The permittee must keep records and submit reports according to the following:

Step 1: Establish a location for document retention at the facility, or at another location mutually agreed to with DEQ.

Step 2: Collect information during facility operations on the amount of each type of feedstock received, recording "0" if none is received.

If the facility receives the following feedstock types, they must be: 1) separately identified; and 2) categorized as originating either in or out-of-state:

- A. Type 1, 2 and 3 feedstocks or amendments:
 - a. Leaves
 - b. Yard debris – compacted and uncompact
 - c. Food waste – vegetative and non-vegetative
 - d. Fats, oils and grease (animal origin)
 - e. Animal mortality/slaughter waste
 - f. Wood chips – dry
 - g. Wood chips – green
 - h. Clean wood waste
 - i. Sawdust, wet
 - j. Sawdust, bone dry
 - k. Agricultural crop residue
 - l. Industrial food processing waste and waste waters
 - m. Manure
 - n. Bedding

B. Other authorized feedstocks or amendments.

Submit the information on the **Composting Facility Report** form provided by DEQ.

Date Due: January 31 of each year for the previous calendar year.

Pay the Annual Permit Compliance Fee required by OAR 340-097. Invoice will be sent out by DEQ. **Date Due: July 31 of each year.**

Step 3: Permittees accepting non-agricultural, post-consumer recyclable materials generated in Oregon must complete a **Material Recovery Survey** on a form provided by DEQ.

Information necessary to complete this survey includes: amounts and types of recyclable materials; county of origin of the material; and, names of companies providing the material(s). The survey also asks for information about what was done with the recyclable material, such as: made compost; shipped wood waste for hogged fuel; etc. The permittee must submit this survey to the local Wasteshed Representative. The survey is then forwarded by that person to DEQ.

Date Due: January 31 of each year for the previous calendar year.

Step 4: Keep a written, ongoing log showing assessment of anaerobic digestion composting processing parameters required in OAR 340-096-0090(5)(i). This log must be placed in the facility file.

Step 5: Keep a written, ongoing log of sources and amounts of manure and feedstocks and destination and amounts of liquid digestate. If available, obtain and retain evidence that land application of liquid digestate is done at agronomic application rates and/or in compliance with a farms' Nutrient Management Plan as approved by the Oregon Dept. of Agriculture under a Confined Animal Feeding Operation permit.

Step 6: Retain copies of all records and reports for five years from the date created.

Step 7: Update all records such that they reflect current conditions at the anaerobic digestion composting facility.

5.5 Submittal address. Submittals for step 2 (Composting Facility Report and the Annual Permit Compliance Fee) above must be sent to DEQ at:

**Oregon Department of Environmental Quality
Materials Management Section – Environmental Solutions Division
811 SW Sixth Ave.
Portland, OR 97204**

Phone: (503) 229-5913

After November 2016, please send submittals to:

**Oregon Department of Environmental Quality
Materials Management Section – Environmental Solutions Division
700 NE Multnomah Street, Suite 600
Portland, OR 97232**

Submittals for step 3 (Material Recovery Survey) must be sent to the address on the survey form.

6.0 ENGINEERED STRUCTURES, DESIGN AND MANAGEMENT

6.1 Facility Design and Construction Plan. Anaerobic digestion composting facilities that collect biogas, liquid digestate, leachate or stormwater in engineered structures must comply with the requirements of OAR 340-096-0130 *Special Rules Pertaining to Composting: Biogas, Liquid Digestate, Leachate Collection Design and Management Requirements*. Structures subject to this rule include, but are not limited to:

- Biogas collection and storage system;
- Liquid digestate collection and management system;
- Leachate collection and storage facilities;
- Stormwater collection and storage facilities; and
- Constructed surfaces designed to protect groundwater

The permittee must contact DEQ prior to any site modification affecting these structures. DEQ may require the permittee to prepare and submit a modified Facility Design and Construction Plan, stamped by a registered professional engineer. The permittee must receive written approval of the modified Facility Design and Construction Plan from DEQ **prior to commencing construction**. Pursuant to OAR 340-096-0130(11), DEQ will exempt this facility from the secondary containment requirement outlined in OAR 340-096-0130(9)(c) following a review of the design specifications.

6.2 Construction requirements. The permittee must perform all construction in accordance with the approved plans and specifications, including all conditions of approval. Any amendments to those plans and specifications must be approved in writing by DEQ.

6.3 Construction documents. At least 60 days prior to initiating construction, the permittee must submit and receive written DEQ approval of complete construction documents for the project to be constructed. The construction documents submitted must:

- Define the construction project team;
- Include construction contract documents specifying material and workmanship, and requirements to guide how the Constructor is to furnish products and execute work; and
- Include a Construction Quality Assurance (CQA) plan describing the measures that will be taken to monitor and ensure that the quality of materials and the work performed by the Constructor complies with project specifications and contract requirements.

6.4 Construction report submittal. Within **90 days** of completing construction, the permittee must submit to DEQ a Construction Certification Report, prepared by a qualified independent party, to document and certify that all required components and structures have been constructed in compliance with the permit requirements and DEQ approved design specifications. This submittal must include “as constructed” facility plans which note any changes from the original approved plans.

6.5 Approval to use. The permittee must not accept feedstocks for storage, processing or anaerobic digestion in newly constructed facilities or areas until DEQ has accepted the Construction Certification Report. If DEQ does not respond in writing to the Construction Certification Report within 30 days of its receipt, the permittee may accept feedstock at the facility in the newly constructed facilities or areas.

6.6 Submittal address. All submittals to DEQ under this section must be sent to:

Oregon Department of Environmental Quality
Manager, Materials Management/Solid Waste Program
700 NE Multnomah Street, Suite 600
Portland OR 97232 or email to: DEQNWR.SolidWastePermitCoordinator@deq.state.or.us
Phone: (503)229-5353

ANAEROBIC DIGESTION COMPOSTING FACILITY GENERAL CONDITIONS

7.0 ADMINISTRATION

- 7.1 Definitions.** Unless otherwise specified, all terms are as defined in OAR 340-093-0030.
- 7.2 Property rights.** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights.
- 7.3 DEQ liability.** DEQ, its officers, agents, or employees do not sustain any liability on account of the issuance of this permit or on account of the construction, maintenance, or operation of facilities pursuant to this permit.
- 7.4 Documents superseded.** This document is the primary anaerobic digestion composting permit for the facility, superseding all other solid waste permits issued for this facility by DEQ.
- 7.5 Binding nature.** Conditions of this permit are binding upon the permittee. The permittee is liable for all acts and omissions of the permittee's contractors and agents.
- 7.6 Access to disposal site.** The permittee must allow representatives of DEQ access to the facility at all reasonable times for the purpose of performing inspections, surveys, collecting samples, obtaining data and carrying out other necessary functions related to this permit.
- 7.7 Other compliance.** Issuance of this permit does not relieve the permittee from the responsibility to comply with any applicable federal, state, or local laws or regulations.
- 7.8 Penalties.** Violation of any condition of this permit or any incorporated plan may subject the permittee to civil penalties up to \$25,000 for each day of each violation.

8.0 PERMIT MODIFICATION

- 8.1 Mid-term review.** At the mid-point of the permit term, DEQ may review the permit and determine whether or not the permit should be amended. While not an exclusive list, the following factors will be used in making that determination:
- Compliance history of the facility;
 - Changes in volume and/or composition of feedstock(s);
 - Changes in operations at the facility;
 - Changes in state or federal rules which should be incorporated into the permit;
 - Release of leachate to the environment from the facility; or
 - Significant changes to the DEQ-approved Design Plan or Operations Plan.
- 8.2 Modification.** At any time during the life of the permit, DEQ or the permittee may propose changes to the permit.
- 8.3 Modification and revocation by DEQ.** The director of DEQ may, at any time before the expiration date, modify, suspend, or revoke this permit in whole or in part in accordance with Oregon Revised Statutes 459.255 for reasons including, but not limited to, the following:
- Violation of any terms or conditions of this permit or any applicable statute, rule, standard or order of the Environmental Quality Commission;

- Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- A significant change in the quantity or character of feedstocks received;
- Non-compliant operation of the anaerobic digestion composting site; or
- A significant change in the anaerobic digestion composting process.

8.4 Modification by permittee. The permittee must apply for a modification to this permit if a significant change in facility operations is planned or there is a deviation from activities described in this document. The permittee must not implement any change in operations that requires a permit modification prior to receiving approval from DEQ. Examples of a significant change include but are not limited to the addition/construction of a new facility component, introduction of new feedstocks, etc.

8.5 Public participation. Significant changes in the permit will be made public by the issuance of a public notice as required by DEQ rules.

8.6 Changes in ownership or address. The permittee must report to DEQ in writing any changes in either ownership of the composting site property or of the name and address of the permittee or operator within ten (10) days of the change.

9.0 SITE OPERATIONS

9.1 Containers. The permittee must clean all containers on-site, as needed to maintain a sanitary operating environment, and to prevent malodors, unsightliness, and attraction of insects. Wash water that may result from cleaning activities must not be discharged to waters of the state.

9.2 Vehicles and Truck Covers. All vehicles and devices operated by the permittee, and using public roads, must be constructed, maintained, and operated so as to prevent leaking, shifting, or spilling of feedstocks and finished compost while in transit. The permittee must notify all incoming feedstock haulers that trucks containing loads that are likely to blow or fall must be covered or suitably cross-tied to prevent any load loss during shipment, in conformance with OAR 340-093-0220.

9.3 Litter control. The permittee must prevent and clean up litter that results from the anaerobic digestion composting facility operation such that the entire anaerobic digestion composting facility and adjacent lands are maintained virtually free of litter at all times. Any debris from the facility must be retrieved and properly disposed of as soon as possible that same operational day.

9.3 Air Quality. The permittee must control dust in accordance with DEQ's rules on air pollution. According to OAR 340-208-0450 no person may cause or permit the emission of particulate matter larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person when notified by DEQ that the deposition exists and must be controlled.

9.4 Drainage. The permittee must divert surface drainage around or away from feedstock handling and grinding areas and digestate storage areas. The permittee must maintain surface water diversion ditches or structures in a serviceable condition and free of obstructions and debris at all times. Any significant damage must be reported to DEQ and repairs made as soon as possible.

9.5 Leachate prevention and management. The permittee must operate the facility in a manner that deters leachate production to the maximum extent practicable. Leachate must be collected, removed and managed in a manner approved by DEQ to prevent malodors, public health hazards, and discharges to public waters.

9.6 Stormwater management. The permittee must manage and monitor stormwater in accordance with all federal and state requirements.

9.7 Material storage. All materials and wastes must be stored as described in the facility Operations Plan. Material storage areas must be maintained in an orderly manner and kept free of litter. Stored materials must be removed at sufficient frequency to avoid creating nuisance conditions or safety hazards.

Storage of materials outside a building must be stored in a manner to prevent nuisance conditions (dust, odor, vector, etc.) and environmental impacts (i.e., leachate impacts to groundwater or surface water).

9.8 Equipment. The permittee must provide equipment of adequate size and design to properly operate the facility at all times. In the event of an equipment breakdown, alternative equipment must be provided, unless an exemption from DEQ is granted in writing.

9.9 Roads. Roads from the facility property line to the active operational area must be constructed and maintained to deter, to the maximum extent practical, traffic hazards, dust and mud, and to provide reasonable all-weather access for vehicles using the site. The permittee must use appropriate means, including truck washing, as needed to prevent haul trucks from tracking mud on public roadways. Any truck washing activities must be conducted on a hard surface and any disposal of waste water must be accomplished in a manner approved by DEQ.

Reference: OAR 340-093-0210

9.10 Oil & Hazardous Material Spill Response.

Any spill of oil or hazardous material must be cleaned up immediately as described in the facility Operations Plan. In addition to notifying the appropriate DEQ office, if the spill is of a reportable quantity the permittee must immediately report the spill to the Oregon Emergency Response System (OERS), at 1-800-452-0311.

Reportable quantities include:

- Any amount of oil spilled to waters of the state;
- Oil spills on land in excess of 42 gallons;
- 200 pounds (25 gallons) of pesticide residue; or
- Hazardous materials that are equal to, or greater than, the quantity listed in the Code of Federal Regulations, 40 CFR Part 302 (List of Hazardous Substances and Reportable Quantities), and amendments adopted before July 1, 2002. For a complete list of hazardous materials required to be reported, please refer to OAR 340-142-0050.

9.11 Feedstock Unloading area. While it is not anticipated, if feedstocks will be accepted from the public, the area(s) used by the public for unloading feedstocks must be clearly defined by signs, fences, barriers, or other devices.

9.12 Public Access. Public access to the facility must be controlled, as necessary, to prevent unauthorized entry and dumping.

9.13 Legal control of property. The permittee must maintain legal control of the anaerobic digestion composting site property, including maintaining a current permit, contract or agreement that allows the operation of the facility if the site is not owned by the permittee.

9.14 Fire protection. The permittee must make arrangements with the local fire control agency to immediately acquire their services when needed and adequate on-site fire control protection, as determined through the local fire control agency, must be provided. The permittee must immediately and thoroughly extinguish any fire. The permittee must initiate and continue appropriate fire-fighting methods until all smoldering, smoking and burning ceases.

The permittee must report fires to DEQ within twenty-four (24) hours at:

503-229-5353

The permittee must provide water in sufficient quantities for fire protection, dust suppression, and other site operations requiring water.

- 9.15 Signs.** The permittee must post signs at the facility which are clearly visible and legible, providing the following information: Name of anaerobic digestion composting facility, emergency telephone number, days and hours of operation, solid waste permit number; and operator's address.
- 9.16 Vector Control.** The permittee must provide rodent and insect control measures, as necessary, to prevent vector production and sustenance.
- 9.17 Complaints.** The permittee must investigate and attempt to resolve all complaints it receives regarding facility operations by doing the following:
- Contact the complainant within 24 hours to discuss the problem;
 - Keep a record of the complaint, name and phone number of the complainant (when possible), date complaint was received and date of, and response by, the facility operator; and
 - Immediately initiate procedures at the facility, when possible, to resolve the problem identified by the complainant.

For odor, litter or dust complaints, the permittee must report to DEQ as soon as complaints are received at the facility from **five (5)** different businesses and/or individuals about a given event or if an odor event lasts longer than 24 hours without resolution or mitigation.

- 9.18 Permit display.** The permittee must display this permit, or a photocopy thereof, where operating personnel can readily refer to it.

COMPLIANCE SCHEDULE

10.0 SUMMARY OF DUE DATES. The following is a summary of event-driven reporting required by this permit. This section does not include routine reporting and submittals required by this permit.

DUE DATE	ACTIVITY	RULE CITATION/ SECTION IN THIS PERMIT
60 days prior to initiating any new construction for biogas, liquid/solid digestate, leachate or stormwater collection systems or groundwater protective surfaces	Submit facility design and construction plan and receive written DEQ approval of plans	<ul style="list-style-type: none"> • OAR 340-096-0130 • Permit condition 6.1
60 days prior to initiating construction	Submit construction documents, including a Construction Quality Assurance Plan and receive written DEQ approval	<ul style="list-style-type: none"> • OAR 340-096-0130 • Permit condition 6.3
Within 90 days after completion of any major construction and prior to accepting feedstock in new construction	Submit Construction Certification Report for acceptance Receive written DEQ approval of Report	<ul style="list-style-type: none"> • OAR 340-096-0130 • Permit condition 6.4
Within 180 days after permit issuance	Submit an updated operations plan	<ul style="list-style-type: none"> • Permit condition 4.1
One year prior to closure	Notify DEQ in writing	

11.0 WHEN TO NOTIFY DEQ. Note: Contact DEQ staff at phone number listed in section 5.1, “Non-compliance reporting.”

TOPIC	NOTIFICATION REQUIREMENTS	SECTION IN THIS PERMIT
Facility not able to meet requirements of this permit	Contact DEQ for assessment within 24 hours	All
Prohibited or hazardous waste discovered at facility	Notify DEQ within 48 hours	2.2
Conditions of permit violated	Notify DEQ within 24 hours	5.1
Leachate released from facility	Notify DEQ within 24 hours	5.2
Change in ownership of facility	Notify DEQ in writing within 10 days	10.6
Change in name or address of facility, name or address of permittee or name or address of operator	Notify DEQ in writing within 10 days	10.6
Odor Complaints	Notify DEQ after 5 complaints are received for same odor event or if odor persists unresolved after 24 hours	
Litter or Dust Complaints	Notify DEQ after 5 complaints are received for an event	



State of Oregon
Department of
Environmental
Quality

Permit Evaluation

Oregon Department of Environmental Quality
Northwest Region Office
700 NE Multnomah Street, Suite 600
Portland OR 97232

Evaluation date: September 27, 2016

To: Audrey O'Brien, Manager
Northwest Region Environmental Partnerships Manager

From: Killian Condon
Natural Resource Specialist III
Northwest Region Environmental Partnerships Program – Portland Office

Subject: SORT Bioenergy Anaerobic Digester (SORT Bioenergy)
Permit Evaluation Report
Solid Waste Disposal Site Permit #1573
Washington County

Background

SORT Bioenergy, LLC, a foreign limited liability company, registered in Idaho, is proposing to construct and operate an anaerobic digester on an industrially-zoned tract of land in the City of Wilsonville that is owned by Willamette Resources Inc. (WRI), a wholly-owned subsidiary of Republic Services. The proposed facility will be located at 10295 SW Ridder Road in Wilsonville, Oregon. The common name of the facility will be called SORT Bioenergy, which will use commercial food scraps to produce natural gas with organic liquid and solid fertilizer residuals. All activities are to be performed in conformance with the performance standards, requirements, limitations and conditions set out in the permit and DEQ-approved operations plan.

Facility Description

The proposed facility will be located on 3.69 acres of a 10.2-acre lot that Republic Services owns, which was annexed into the City of Wilsonville from Washington County in mid-2016. This 10.2-acre lot is currently an undeveloped wooded lot. DEQ is in receipt of communication between SORT Bioenergy and Daniel Pauly, City of Wilsonville Associate Planner, dated June 20, 2016, that states that Senate Bill 462 (SB 462) requirements have been met and the activity or use received preliminary approval. DEQ accepted this communication as confirmation that the facility is compatible with the local land use plan.

The facility is located in northwest Wilsonville along SW Ridder Road in an area designated Planned Development Industrial-Regionally Significant Industrial Area (Industrial/PDI-RSIA) by the City of Wilsonville. This proposed site is owned by Republic Services who operates the adjacent DEQ-permitted material recovery facility, WRI. The proposed site is bounded on the north by undeveloped land and a cluster of residences beyond which is SW Cahalin Road; to the east by a Bonneville Power Administration (BPA) substation and commercial buildings beyond which is SW 95th Avenue; to the south by SW Ridder Rd and commercial buildings; and

to the west by undeveloped tracts, SW Garden Acres Road and commercial businesses.

The facility is proposing to accept commercial food scraps and fats, oils, greases (FOG), which are classified as a Type III feedstock for the purpose of generating power through biogas creation, with liquid and solid fertilizers also being generated as process byproducts. The facility will be prohibited from accepting all other wastes without prior DEQ approval.



Operations

The facility hours will be modified as appropriate to accommodate the unique delivery schedule of food scrap trucks where collection in off-hours is a necessity. Initially, the facility plans to accept loads from 5am until 5pm Monday through Friday and on weekends as demand dictates. The facility will not be open to the general public.

Delivered feedstocks will undergo pre-processing to remove packaging and other unsuitable materials. Any reject materials will be routed to WRI's MRF. The remaining liquid materials are to be pumped into two anaerobic digesters for conversion to biogas. The biogas will be removed from the digesters and converted via internal combustion engine driven generators that will operate under a DEQ Air Contaminant Discharge Permit (ACDP).

After the digestion process is complete, the solids (fiber) and liquids (effluent) are separated in the digestate building. The liquid digestate will be pre-treated and discharged to the City of Wilsonville POTW under the City's Industrial Pretreatment program with the solid digestate (fiber) being hauled offsite to either a DEQ-licensed composting facility or to Pro-Grow, a soil amendment facility following pathogen reduction verification.

Potential Environmental Risks

Based on DEQ's evaluation of the information submitted in the application, other DEQ file documents, and additional information gathered by DEQ staff, DEQ has determined that SORT's anaerobic digester facility operation poses a potential operational risk for the following:

- Potential risk of a facility operation to cause adverse odors.

Poorly managed solid waste disposal facilities have the potential to adversely affect the environment. The DEQ permit conditions and the DEQ approved Operations Plan elements are intended to prevent environmental harm and address the identified potential environmental risks.

Compliance History

Not applicable as this is a newly-proposed facility by a new corporate entity.

Compliance with SB 462

Daniel Pauly, City of Wilsonville Associate Planner, confirmed that Senate Bill 462 (SB 462) requirements have been met and the activity or use received preliminary approval that includes requirements to fully comply with local requirements.

Recommendation

DEQ recommends proceeding with a public notice and a public hearing to receive comments on the draft solid waste permit.

Public Notice

DEQ intends to issue a public notice requesting public comment on the draft solid waste anaerobic digester permit and the draft air quality permit. The notice will also inform the public that DEQ will hold a public hearing to receive comments on the solid waste and air quality draft permits. The public hearing is scheduled to be held in the Wilsonville Public Library on November 17th, 2016.