



LANE REGIONAL AIR PROTECTION AGENCY (LRAPA) TITLE V OPERATING PERMIT REVIEW REPORT

REVIEW REPORT

Seneca Sustainable Energy, LLC

29650 East Enid Road
Eugene, Oregon 97402

Website: <https://senecasawmill.com/seneca-sustainable-energy/>

Permit No. 206470

Source Information:

Primary SIC	4911
Secondary SIC	--
Primary NAICS	221117
Secondary NAICS	--

Source Categories (LRAPA title 37, Table 1)	B:25: Electrical power generation from combustion
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	Y
Emission Credits	N
Compliance Schedule	N
Source Test Date(s)	See Permit

COMS	Y
CEMS	Y
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	March 1
Semi-Annual Report (due date)	March 1, September 1
Greenhouse Gas (due date)	March 31

Monthly Report (due dates)	N
Quarterly Report (due dates)	N
Excess Emissions Report	Y
Other Reports	N

Air Programs

NSPS (list subparts)	Db, IIII
NESHAP (list subparts)	A, ZZZZ, DDDDD
CAM	Y
Regional Haze (RH)	N
Synthetic Minor (SM)	N
SM-80	N
Title V	Y
Part 68 Risk Management	N
ACDP (SIP)	N

Major FHAP source	Y
Federal major source	N
NA New Source Review (NSR)	Y
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	Y
>20 Megawatt	N

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT

ACDP	Air Contaminant Discharge Permit	ODEQ	Oregon Department of Environmental Quality
AQMA	Air Quality Management Area	ORS	Oregon Revised Statutes
Act	Federal Clean Air Act	O&M	Operation and maintenance
ASTM	American Society of Testing and Materials	Pb	Lead
Btu	British thermal unit	PCD	Pollution Control Device
CAM	Compliance Assurance Monitoring	PM	Particulate matter
CAO	Cleaner Air Oregon	PM _{2.5}	Particulate matter less than 2.5 microns in size
CEMS	Continuous Emissions Monitoring System	PM ₁₀	Particulate matter less than 10 microns in size
CFR	Code of Federal Regulations	ppm	Parts per million
CI	Compression Ignition	PSEL	Plant Site Emission Limit
CMS	Continuous Monitoring System	psia	pounds per square inch, actual
CO	Carbon Monoxide	PTE	Potential to Emit
CO ₂	Carbon dioxide	RATA	Relative Accuracy Testing Audit
CO _{2e}	Carbon dioxide equivalent	RICE	Reciprocating Internal Combustion Engine
COMS	Continuous Opacity Monitoring System	SACC	Semi-Annual Compliance Certification
CPDS	Certified Product Data Sheet	SCEMP	Surrogate Compliance Emissions Monitoring Parameter
CPMS	Continuous parameter monitoring system	Scf	Standard cubic foot
DEQ	Department of Environmental Quality	SER	Significant emission rate
dscf	Dry standard cubic feet	SERP	Source emissions reduction plan
EF	Emission factor	SI	Spark Ignition
EPA	US Environmental Protection Agency	SIC	Standard Industrial Code
EU	Emissions Unit	SIP	State Implementation Plan
FCAA	Federal Clean Air Act	SO ₂	Sulfur dioxide
FHAP	Federal Hazardous Air Pollutant as defined by LRAPA title 12	ST	Source test
ft ²	Square foot	TAC	Toxic air contaminant as defined by OAR 340-245-0020(56)
FSA	Fuel sampling and analysis	TACT	Typically Achievable Control Technology
GHG	Greenhouse Gas	TPY	Tons per year
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)	VE	Visible emissions
HCFC	Halogenated Chlorofluorocarbons	VMT	Vehicle miles traveled
ID	Identification number or label	VOC	Volatile organic compounds
I&M	Inspection and maintenance	VHAP	Volatile hazardous air pollutant
LAER	Lowest Achievable Emission Rate	Year	A period consisting of any 12 consecutive calendar months
LRAPA	Lane Regional Air Protection Agency		
MACT	Maximum Achievable Control Technology		
MM	Million		
MMBtu	Million British thermal units		
MW	Megawatts		
NA	Not applicable		
NESHAP	National Emission Standards for Hazardous Air Pollutants		
NO _x	Nitrogen oxides		
NSPS	New Source Performance Standards		
NSR	New Source Review		
O ₂	Oxygen		
OAR	Oregon Administrative Rules		

INTRODUCTION

1. Seneca Sustainable Energy, LLC, (“SSE” or “the facility”) is an existing facility applying for renewal of an existing Title V federal operating permit. Upon issuance, the renewed Title V federal operating permit will be valid for 5 years
2. In addition to the renewal of the existing Title V federal operating permit, the facility has applied for a simple modification to the Title V federal operating permit. As discussed in this review report, the facility has requested the combined limit on FHAPs with Seneca Sawmill Company (“SSC” – Permit No. 207459) be removed from the permit. As such, SSE will be considered a major source of FHAP. The Title V permit will include major source NESHAPs applicable to the facility as a consequence of becoming a major source of FHAP. Finally, the Title V permit will include Cleaner Air Oregon conditions that result from the risk assessment approved by LRAPA on September 28, 2021.
3. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

FACILITY DESCRIPTION

4. SSE operates a wood-fired electrical cogeneration power plant under the primary SIC code 4911 located at 29650 East Enid Road, Eugene, Oregon. The facility began operations in January 2011. The nameplate capacity of the turbine is 19.778 megawatts. The wood-fired boiler has a maximum heat input capacity of 352.8 MMBtu per hour and has a steam output of 200,000 pounds per hour.
5. The facility is located in an area that is generally flat. The property to the north of the facility is primarily agricultural and mixed industrial/commercial. To the east is a mixed commercial and residential area. To the south is SSC and Highway 99. To the west is a commercial area and Highway 99.

GENERAL BACKGROUND INFORMATION

6. SSE is a Title V major source because potential emissions of CO and NO_x exceed 100 tons per year. The facility is not a federal major source for PSD purposes because the potential emissions of any individual regulated pollutant, excluding GHGs, are less than 250 tons per year and the facility is not in a listed source category. In addition, as discussed below, SSE will become a major source of FHAPs upon issuance of the Title V operating permit.
7. SSE is contiguous with SSC. The two facilities are considered to be separate sources, as this term is defined in LRAPA title 12, because while they are located on contiguous or adjacent properties and are owned or operated by the same person or by persons under common control, their primary air contaminant emitting activities do not belong to the same two-digit SIC code. Also, LRAPA has previously determined that SSC is not a support facility for SSE because SSC does not provide at least 50% of the cellulosic biomass combusted by SSE on an annual basis.
8. SSE and SSC are considered one source for the purposes of determining whether the facilities are a major source of federal hazardous air pollutants (FHAP), as defined in LRAPA title 12, because they are located within a contiguous area and are under common control. As part of a different permitting review, SSC has applied to become a major source of FHAP. Because SSC will be a major source of FHAP, SSE will also

become a major source of FHAP - even though there is no increase in emissions or change in the method of operation at SSE.

9. The facility is located inside the Eugene-Springfield Air Quality Management Area. The facility is located in an area that has been designated attainment/unclassified for PM_{2.5}, ozone (VOC), NO₂, SO₂, and Pb and a maintenance area for CO and PM₁₀. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness area.
10. LRAPA has reviewed and issued the following permitting actions to this facility:

Date Approved	Permit Action Type	Description
10/09/2009	Standard ACDP	Construction of an 18.8 MW cogeneration power plant.
02/11/2014	Standard ACDP Addendum No. 1- Major New Source Review	PM ₁₀ PSEL was increased from 14 tons to 16 tons. Facility subject to LAER for PM ₁₀ emissions.
12/31/2014	Initial Title V Operating Permit	Total facility operating permit.
11/04/2016	Title V – Administrative Amendment – Addendum No. 1	Change the responsible official title and facility contact person title from “Senior VP/General Manager” to “Manager”.
Upon Issuance	Title V – Simple Modification	Remove combined FHAP limit with SSC Add major source boiler NESHAP Add CAO conditions on startup/shutdown
Upon Issuance	Title V Renewal	Total facility operating permit.

EMISSION UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

11. The emissions units regulated by this permit are the following:

EU ID	Emissions Unit Description	PCD ID	Pollution Control Device Description
EU-1	Wood-Fired Boiler: Six cell rotary grate furnace; 352.8 MM Btu/hr maximum heat input rating; 200,000 lb/hr steam production; 19.8 megawatts of electrical production;	MC-1 ESP-1 SNCR FGR	Multiclone Electrostatic precipitator Urea injection Selective Non-Catalytic Reduction Flue gas recirculation
EU-2	Fuel Handling: a. Truck Unloading Station (TD-1): 64 tons/hr b. Hog and Screens (HS-1): 64 tons/hr c. Fuel Storage d. Conveyors and Transfer Points (FT-1 thru FT-4) e. Pneumatic Fuel Conveyor and Target Box (TB-1)	BH-1 BH-2	a. Baghouse (BH-1) b. Baghouse (BH-1) c. Enclosed building d. Baghouse (BH-2) e. Enclosed conveyor, Baghouse (BH-2)

- 11.a. EU-1 – Wood-Fired Boiler: The boiler is a 352.8 MMBtu/hr, open bottom watertube steam generator manufactured by Wellons. The furnace in the boiler has six side-by-side cells each with a water-cooled rotary grate system for wood fuel combustion. The boiler is operated as a base load unit. The boiler fires a maximum of 36.4 tons/hour of wood fuel (hogged fuel, shavings, sawdust). The boiler is equipped with flue gas recirculation for reduced formation of NO_x. NO_x from combustion will be controlled with an SNCR system using urea injection. For particulate matter, the boiler exhaust gas will pass through a multiclone for coarse particulate removal followed by a 4-field dry electrostatic precipitator for fine particulate removal.
- 11.b. EU-2 – Fuel Handling - Truck Unloading Station (TD-1): Wood fuel delivered from offsite locations other than SSC is delivered by truck and unloaded in a truck unloading station. Wood fuel

is offloaded into a surge bin and then conveyed through the hog/screens to the fuel storage building. The unloading station handles up to 64 tons/hr of wood by-products in the form of bark, sawdust, shavings, grindings, or chips. The truck unloading station operates 24 hours a day, 7 days per week year-round. The truck unloading station is partially enclosed with air exhausted to baghouse BH-1 to control particulate matter emissions.

- 11.c. EU-2 – Fuel Handling - Hogs and Screens (HS-1): Wood fuel from the truck unloading station (TD-1) is passed through screens. The fuel that passes through the screens is sent to the fuel storage building or directly to the boiler via enclosed conveyors. Oversized material is ground in a hog before being sent to the fuel storage building. The hog and screens are housed in an enclosed structure with exhaust air sent to baghouse BH-1 to control particulate matter emissions.
- 11.d. EU-2 – Fuel Handling - Fuel Storage: The wood fuel is stored inside a 41,250 square foot fuel storage building. The building is totally enclosed. Fuel is conveyed into the storage building and is placed into separate zones, depending on type of material and moisture content. Fuel is retrieved from the zones and placed onto conveyors that take the fuel to the boiler. The fuel placement, conveyance, and retrieval systems are totally automated.
- 11.e. EU-2 – Fuel Handling - Conveyors and Transfer Points (FT-1 thru FT-4): The SSC wood by-products are conveyed directly from SSC to the fuel storage building. The shavings are conveyed using a pneumatic system and the other wood by-products are mechanically conveyed through fuel conveyors and transfer points FT-1, 2, 3, and 4. The conveyors are capable of handling up to 64 tons/hour of wood fuel. Air from the conveyors is collected and exhausted to baghouse BH-2 to control particulate matter emissions.
- 11.f. EU-2 – Pneumatic Fuel Conveyor and Target Box: The SSC wood by-products are conveyed to the site by way of a pneumatic conveyor until they reach a target box (TB-1) where the wood drops out of the air stream into the storage building. Air from this system is vented to baghouse BH-2 to control particulate matter emissions.

ALTERNATE OPERATING SCENARIOS

12. SSE does not have any alternate operating scenarios.

AGGREGATE INSIGNIFICANT EMISSIONS

13. At this time, SSE has no aggregate insignificant activities at the facility.

CATEGORICALLY INSIGNIFICANT ACTIVITIES

14. The facility has the following categorically insignificant activities on site:
- Evaporative and tail pipe emissions from on-site motor vehicle operation
 - Distillate oil, kerosene, and gasoline fuel burning equipment rated at less than or equal to 0.4 million Btu/hr
 - Natural gas and propane burning equipment rated at less than or equal to 2.0 million Btu/hr
 - Office activities
 - Janitorial activities
 - Personal care activities
 - Grounds-keeping activities including, but not limited to building painting and road and parking lot maintenance
 - Instrument calibration
 - Maintenance and repair shop
 - Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment

- Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems
- Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities
- Temporary construction activities
- Warehouse activities
- Accidental fires
- Air vents from air compressors
- Continuous emissions monitoring line vents
- Demineralized water tanks
- Instrument air dryers and distribution
- Process raw water filtration systems
- Fire suppression
- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment
- Storm water settling basins
- Fire suppression and training
- Paved roads and paved parking lots within an urban growth boundary, including:

Fugitive Road Dust: This includes emissions from paved road surfaces at the facility. This activity is considered to be a Categorically Insignificant Activity (CIA) per the definition of CIA in LRAPA title 12, Item RR.

- Hazardous air pollutant emissions of fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils
- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service, including:

1000 kW Diesel Emergency Generator (EG-1): The facility has a diesel-fired generator to provide electrical power in the event of an interruption of power service. The generator is a 1000 kW (1341 hp-hr) internal combustion engine manufactured by Cummins in March 2010. The engine was installed in January 2011 and is subject to the RICE NESHAP (subpart ZZZZ) and the RICE NSPS (subpart IIII). The maximum hourly firing rate is 72.2 gal/hour. This activity is considered to be a Categorically Insignificant Activity (CIA) as per the definition of CIA in LRAPA title 12, Item UU.

- Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems
- Non-contact steam condensate flash tanks
- Non-contact steam vents on condensate receivers, deaerators and similar equipment
- Boiler blowdown tanks
- Industrial cooling towers that do not use chromium-based water treatment chemicals, including:

Cooling Tower (CT-1): Condensed steam from the steam turbine is cooled by water circulating in a cooling tower. The cooling tower is an induced-draft, counter flow design. Approximately

20,300 gallons per minute (gpm) of water circulates through the cooling tower. Water is recirculated through the cooling tower for 5 cycles. The tower is about 144 ft long by 36 ft wide by 44 ft high. Counter flow drift eliminators have been added to reduce cooling tower drift. The cooling tower operates 24 hours a day, 7 days per week, 52 weeks per year. This activity is considered to be a Categorically Insignificant Activity (CIA) as per the definition of CIA in LRAPA title 12, Item ZZ.

- Ash piles maintained in a wetted condition and associated handling systems and activities, including:

Ash truck loading station (TL-1): Boiler cell ash is collected from EU-1 and is conveyed to a bin loading station. A water mist is sprayed on the ash to condition it prior to being loaded into the bin. The ash bin is totally enclosed. When full, the bin is moved to a staging area and then is loaded onto a truck and the ash is shipped offsite for beneficial reuse. Trucks return to the site with the empty bins. Empty bins are placed back into the system. A similar system is used to collect fly ash from the multiclone and ESP. Fly ash is conditioned using water mist and then loaded into an enclosed bin. When full, the bin is moved and shipped offsite. Multiple bins are rotated so cell ash collection and fly ash collection are continuous. No regulated pollutant emissions are expected to be emitted from this process. This activity is considered to be a Categorically Insignificant Activity (CIA) as per the definition of CIA in LRAPA title 12, Item AAA.

- Oil/water separators in effluent treatment systems

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

15. Section 70.6(a)(3) of the federal Title V permit rules requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V permits. In addition, where the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the facility's compliance with the permit.
16. The Title V permit does include monitoring for all requirements that apply to significant emissions units in addition to the testing requirements in the permit. Periodic visible emissions observations are required for all particulate emissions sources. In addition, the permit includes monitoring of operating parameters for the processes and pollution control devices. It is assumed that as long as these processes and controls are properly operated, the emissions levels will be below the emissions limits specified in the permit.

EU-1 – Wood-fired boiler

17. EU-1 is subject to the visible emission limitations under LRAPA 32-010(5). This emission unit may not have visible emissions that equal or exceed an average of 20% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. Compliance is demonstrated through the use of a COMS.
18. Under the authority of LRAPA 32-007(2), an emission action level for visible emissions has been established under Standard ACDP 206470 (02/11/2014) – Condition 9.a. at 10% opacity as an hourly average. In the event that opacity exceeds 10% opacity as an hourly average, the permittee must take corrective actions to return visible emissions to less than the 10% opacity action level as measured by the COMS. Corrective action must be taken within 1-hour of detection of the opacity emission action level. Operation above the corrective action level but less than the applicable opacity limit is not considered a violation in itself if corrective action is taken to return the boiler opacity to less than the corrective action level. Compliance is demonstrated through the use of a COMS and recordkeeping of any corrective actions taken during any period for which the opacity emission action level is exceeded.
19. EU-1 is subject to particulate matter emission limitations under LRAPA 32-030(1)(a). For fuel burning equipment sources that burn wood fuel installed, constructed or modified after June 1, 1970 but prior to April

- 16, 2015 for which all representative compliance source test results prior to April 16, 2015 demonstrate emissions not greater than 0.080 grains per dry standard cubic foot, the particulate matter emission limit is 0.10 grains per dry standard cubic foot corrected to 12% CO₂. Compliance is demonstrated through the use of a multiclone and an ESP to control particulate matter, the monitoring of parameters indicative of normal operation of the ESP, inspections of the boiler and the control systems, and compliance testing.
20. EU-1 is subject to the process weight rate emission limitation under LRAPA 32-045. Particulate matter emissions in any one (1) hour may not exceed the amount shown in LRAPA 32-8010 for the process weight allocated to the process. Compliance is demonstrated through the use of a multiclone and an ESP to control particulate matter, the monitoring of parameters indicative of normal operation of the ESP, inspections of the boiler and the control systems, and compliance testing.
 21. The PSEL for PM₁₀ emissions from the facility was increased from 14 tons to 16 tons under Standard ACDP 206470 (02/11/2014). At the time of application, the Eugene-Springfield Urban Growth Boundary was considered a nonattainment area for PM₁₀. As such, the facility was subject to PM₁₀ offsets of at least 1:1 and PM₁₀ LAER. SSE purchased 50 tons of PM₁₀ emission reduction credits from International Paper in Springfield, OR and elected to offset the PM₁₀ emissions from the facility at a ratio of 2:1. The remaining 18 tons of PM₁₀ emission reduction credits were not used by SSE by July 25, 2015 and have reverted back to International Paper as unassigned emissions as required under LRAPA 41-0030(5)(b). PM₁₀ LAER for EU-1 was determined under the authority of LRAPA 38-0050(1) to be an emission limit of 0.010 lb/MMBtu, except during startup or shutdown, as part of Standard ACDP 206470 (02/11/2014) - Condition 12. Compliance is demonstrated through the use of a multiclone and an ESP to control particulate matter, the monitoring of parameters indicative of normal operation of the ESP, inspections of the boiler and the control systems, and compliance testing.
 22. Under Standard ACDP 206470 (02/11/2014) – Condition 19 a boiler startup begins when fuel is ignited in the boiler and continues until the ESP is energized. A boiler shutdown begins when the ESP is de-energized and ends when the fire is extinguished. Note that these definitions of startup and shutdown do not apply to the requirements of 40 CFR 63 subpart DDDDD as discussed in the Federal Requirements section of this review report. Under Standard ACDP 206470 (02/11/2014) – Condition 20, the permittee must notify LRAPA if cold startup/shutdown events exceed 10 events per calendar year. For this boiler, a cold start is one where the boiler cools to ambient temperature.
 23. Under Standard ACDP 206470 (02/11/2014) – Condition 6, the boiler exhaust is to be vented through a multiclone and an electrostatic precipitator at all times. The multiclone and ESP must be in operation during soot blowing events. Except during periods of startup and shutdown when the exhaust gas is below the recommended operating temperature provided by the ESP manufacturer, all electrostatic fields in the ESP must be in operation whenever the boiler is operated. In addition, the ESP must be maintained and operated in accordance with the manufacturer's specifications and recommendations, a copy of which is required to be maintained on site. Under Standard ACDP 206470 (02/11/2014) – Condition 21, the permittee must inspect the multiclone during the annual boiler shutdown for signs of physical degradation that could affect performance of the control device. Any necessary repair or maintenance must be performed prior to re-starting the boiler. Compliance is demonstrated through an operating log that documents all inspections, maintenance and repair of the multiclone.
 24. The PSEL for CO emissions from the facility was established at 201 tons per year. Because the PSEL for CO emissions was greater than 100 tons per year in a designated maintenance area for CO, EU-1 was subject to non-PSD BACT for CO as part of Standard ACDP 206470 (02/11/2014) – Condition 14. BACT for CO was determined to be the use of good combustion practices and a CO emission limit of 149.0 pounds per hour on a rolling 8-hour average and 45.9 pounds per hour on a rolling 30-day period. The rolling 30-day hourly CO limit is equivalent to the CO PSEL on an annualized basis. These emission limits apply during all hours of operation excluding startup, shutdown and tuning. Air dispersion modeling performed in support of the Standard ACDP 206470 (02/11/2014) predicted the facility would not exceed the applicable CO Significant Impact Levels at the permitted emission rates. Compliance is demonstrated through the use of a CO CEMS.

25. EU-1 was evaluated for TACT for NO_x because SSE was considered to be a new source, no other state or federal regulation applied to this emission unit for this pollutant, and the potential emissions of NO_x equaled or exceeded 10 tons per year. Standard ACDP 206470 (02/11/2014) determined that the SNCR system used to control NO_x emissions from the boiler met the requirements of TACT because no other wood-fired boiler in the state of Oregon had emission controls for NO_x.
26. The PSEL for NO_x emissions from the facility was established at 185 tons per year. Standard ACDP 206470 (02/11/2014) – Condition 13 also established a NO_x emission limit of 42.3 pounds per hour on a rolling 30-day period which is equivalent to 185 tons per year on an annualized basis. This emission limit applies during all hours of operation excluding startup, shutdown, and tuning. Air dispersion modeling performed in support of Standard ACDP 206470 (02/11/2014) predicted the facility would not exceed the applicable NO₂ NAAQS at the permitted emission rates. Compliance is demonstrated through the use of a NO_x CEMS.
27. As part of this renewal, the facility agreed to remove the exemption from the CO and NO_x emissions limits related to “tuning”. Tuning is not defined in the permit. In addition, tuning for the boiler typically occurs during their May shutdown and maintenance period.
28. Under Standard ACDP 206470 (02/11/2014) – Condition 7, the permittee shall equip and operate the boiler with flue gas recirculation and a selective non-catalytic reduction system that uses urea to control NO_x emissions. As part of the chemical reaction to control NO_x emissions, ammonia is formed. Standard ACDP 206470 (02/11/2014) – Condition 15 limits the ammonia emissions from the boiler to no more than 25 ppm, by volume, at 12% CO₂ at standard conditions. Compliance with this requirement is demonstrated biennially through compliance testing.
29. EU-1 is subject to sulfur dioxide (SO₂) emission limitations under LRAPA 32-070(2)(b). For fuel burning equipment having more than 250 million Btu per hour heat input, the applicable SO₂ emission limit is 1.2 pounds of SO₂ per million Btu heat input, maximum 3-hour average. This boiler is restricted to combusting only biomass as defined in Standard ACDP 206470 (02/11/2014) – Condition 5. The sulfur content of this material is such that the boiler could never exceed the applicable SO₂ limit. Compliance is based upon recordkeeping indicating the source of all biomass combusted in the boiler.
30. EU-1 is limited to combusting biomass as defined in Standard ACDP 206470 (02/11/2014) – Condition 5.a. Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls, and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste. Under ACDP 206470 (02/11/2014) – Conditions 5.b.-c., the facility may not combust (a) chemically-treated wood products, including painted or oil stained material, or preservative treated wood, (b) fossil fuel, or (c) sanderdust. Compliance is based upon recordkeeping indicating the source of all biomass combusted in the boiler.
31. EU-1 is subject to 40 CFR 60 subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. See the Federal Requirements section of this review report for more information.
32. With the reclassification of the facility to a major source of FHAP, EU-1 will cease being regulated under 40 CFR Part 63 subpart JJJJJ (6J) – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources upon issuance of this Title V operating permit. All references to this regulation have been removed from the permit. See the Federal Requirements section of this review report for more information
33. With the reclassification of the facility to a major source of FHAP, EU-1 is now subject to 40 CFR Part 63 subpart DDDDD (5D) – National Emission Standards for Hazardous Air Pollutants for Major Sources:

Industrial, Commercial, and Institutional Boilers and Process Heaters. The facility has three (3) years from the date of issuance of the Title V operating permit to come into compliance with this regulation. See the Federal Requirements section of this review report for more information.

EU-2 – Fuel Handling

34. EU-2 is subject to the visible emission limitations under LRAPA 32-010(3). This emission unit may not have visible emissions equal to or greater than 20% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. Compliance is demonstrated through the use and monitoring of the baghouses and a plant survey of visible emissions to be completed at least once a month. The permittee is required to take corrective action if any visible emissions are identified from the baghouses.
35. In addition, ACDP 206470 (02/11/2014) – Condition 57 requires that there be no visible emissions from the baghouses (BH-1 and BH-2). Each baghouse shall be maintained, and equipped with parts, according to the manufacturer specifications, including bag material and differential pressure gauges. Compliance is demonstrated through the use and monitoring of the baghouses and a plant survey of visible emissions to be completed at least once a month. The permittee is required to take corrective action if any visible emissions are identified from the baghouses.
36. Under ACDP 206470 (02/11/2014) – Condition 56, the permittee must conduct visual surveys as necessary to ensure that truck unloading, hogs and screens, and conveyor transfer points are not sources of fugitive dust emissions. If sources of excess fugitive emissions are identified during the survey, the permittee must use water, repair, require a cover or take other corrective measures to prevent fugitive emissions. If water is used to control the fugitive emissions, the permittee shall take care not to create a water quality problem caused by surface water run-off.
37. EU-2 is subject to the particulate matter emission limitations under LRAPA 32-015(2)(b)(B). For sources installed, constructed or modified on or after June 1, 1970 but prior to April 16, 2015 for which there are no representative compliance source test results, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance is demonstrated through the use and monitoring of the baghouses and a plant survey of visible emissions to be completed at least once a month. The permittee is required to take corrective action if any visible emissions are identified from the baghouses.
38. EU-2 is subject to the process weight rate emission limitation under LRAPA 32-045. Particulate matter emissions in any one (1) hour may not exceed the amount shown in LRAPA 32-8010 for the process weight allocated to the process. Compliance is demonstrated through the use and monitoring of the baghouses and a plant survey of visible emissions to be completed at least once a month.

EMISSION LIMITS FOR INSIGNIFICANT ACTIVITIES

39. As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities, as defined in LRAPA title 12 and/or OAR 340-200-0020. For the most part, the standards that apply to IEUs are for opacity and particulate matter. 40 CFR 70.6(a)(3) of the federal Title V permit rules, requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V permits. In addition, where the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the facility's compliance with the permit. However, the requirements to include in a permit testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor with respect to all emissions units and applicable requirement situations. It does not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. Where compliance with the underlying applicable requirement for an insignificant emission unit is not threatened by a lack of a regular program of monitoring and where periodic testing or monitoring is not

otherwise required by the applicable requirement, then in this instance the status quo (i.e., no monitoring) will meet Section 70.6(a)(3). For this reason, this permit includes limited requirements for categorically insignificant activities.

Categorically Insignificant Activity – 1000 kW Diesel Emergency Generator (EG-1)

40. The facility has one (1) 1000 kW diesel-fired compression ignition (CI) reciprocating internal combustion engine (RICE) emergency generator for which construction commenced after July 11, 2005 and which is subject to the requirements under 40 CFR Part 60 subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. See the Federal Requirements section of this review report for more information.

Categorically Insignificant Activity – Cooling Tower (CT-1)

41. The facility has one (1) cooling tower that is equipped with high efficiency low drift eliminators to reduce the loss of water droplets and dissolved solids from the cooling tower. Standard ACDP 206470 (02/11/2014) – Condition 53 requires the cooling tower to be equipped with high efficiency low drift eliminators with a manufacturer's specified drift rating of 0.0008%. The drift eliminators are to be installed and maintained according to the manufacturer's specifications. Standard ACDP 206470 (02/11/2014) – Condition 54 requires the permittee to perform a visual inspection of the cooling tower drift eliminators at least once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Compliance demonstration with these requirements will be through recordkeeping, including records of the drift eliminator specifications and an operating log that documents all inspections, maintenance and repair of the drift eliminators.

Categorically Insignificant Activity – Fugitive Road Dust

42. Standard ACDP 206470 (02/11/2014) – Condition 55 requires the permittee to pave (apply asphalt) all road surfaces, open areas, and all other SSE facility surfaces which can create airborne dusts. These paved roads and surfaces shall be maintained with schedule application of asphalt and periodic sweeping or cleaning as necessary including prompt removal of material that may be a source of airborne dust.

FEDERAL REQUIREMENTS

Chemical Accident Prevention Provisions

43. The Title V permit includes standard language related to 40 CFR Part 68 – Chemical Accident Prevention Provisions. Should the material storage rate at this facility subject this facility to 40 CFR Part 68, the facility must satisfy all the applicable risk management requirements, including the development of a risk management plan.

Stratospheric Ozone-Depleting Substances

44. The facility does not manufacture, sell, distribute, or use in the manufacturing of a product any stratospheric ozone-depleting substances and the EPA 1990 Clean Air Act as amended, Sections 601-618, do not apply to the facility except that air conditioning units and fire extinguishers containing Class I or Class II substances must be serviced by certified repairmen to ensure that the substances are recycled or destroyed appropriately.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

45. A facility that has potential emissions of FHAP less than the major source thresholds of 10 tons per year of an individual FHAP or 25 tons per year of the aggregate of all FHAP can be classified as an area source. SSE and SSC are considered a single stationary source for the purpose of determining whether the facilities are

major sources of federal hazardous air pollutants (FHAP), as defined in LRAPA title 12, because they are located in a contiguous area and are under common control. The current air permits for SSE and SSC contain a combined limitation on the emission of FHAP to make both facilities an area source. SSC has applied for a permit modification to remove the combined limitation on the emission of FHAP from their permit as part of a facility expansion. Because the facilities are considered a single source of FHAP, SSE has also applied for a permit modification to remove the combined limitation on the emission of FHAP from their permit. Upon issuance of the Title V operating permit, SSE will become a major source of FHAP.

40 CFR Part 63 subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

46. EU-1 was previously subject to the requirements under 40 CFR Part 63 subpart JJJJJ (6J) when the facility was considered to be an area source of FHAPs. Upon issuance of the Title V operating permit, the facility will be considered a major source of FHAPs. As such, this NESHAP will no longer apply to the facility. All references to this NESHAP have been removed from the draft permit.

40 CFR Part 63 subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

47. Upon issuance of this Title V operating permit, the facility will become a major source of FHAPs. As such, EU-1 will become subject to the requirements under 40 CFR 63 subpart DDDDD (5D) – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional boilers and Process Heaters. EU-1 is considered an existing boiler under 40 CFR 63.7490(b) because construction commenced on the boiler on or before June 4, 2010. Under 40 CFR 63.7495(c)(2), EU-1 must be in compliance with this regulation within three (3) years of becoming a major source of FHAPs.
48. The 40 CFR 63 subpart DDDDD requirements that are applicable to EU-1 are identified in the following table:

40 CFR 63 subpart DDDDD Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.7480	Purpose	Yes	None	NA
63.7485	Applicability	Yes	None	NA
63.7490	Affected source	Yes	None	NA
63.7491	Exceptions to affected source	No	None	NA
63.7495	Compliance dates	Yes	Must be in compliance 3 years after the becoming major.	35
63.7499	Subcategories	Yes	None	NA
63.7500	Emission limitations, work practice standards, and operating limits	Yes	None	36
63.7505	General requirements	Yes	A site-specific monitoring plan is not required for CEMS or COMS operating under Appendix B to Part 60	37
63.7510	Initial compliance requirements	Yes	Single fuel boilers are not required to conduct a fuel analysis.	38
63.7515	Subsequent performance tests, fuel analyses, or tune-ups	Yes	None.	39
63.7520	Stack tests and procedures	Yes	At this time, the facility will use compliance testing to	40

40 CFR 63 subpart DDDDD Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
			demonstrate compliance with the PM, CO, HCl and Hg limits.	
63.7521	Fuel analyses, fuel specifications, and procedures	No	None	NA
63.7522	Emissions averaging	No	None	NA
63.7525	Monitoring, installation, operation, and maintenance requirements	Yes	None	41
63.7530	Initial compliance with emission limitations, fuel specifications and work practice standards	Yes	None	42
63.7533	Efficiency credits	No	None	NA
63.7535	Minimum monitoring data	Yes	None	43
63.7540	Continuous compliance with emission limitations, fuel specifications and work practice standards	Yes	The boiler is equipped with a continuous oxygen trim system.	44
63.7541	Continuous compliance with emission averaging	No	None	NA
63.7545	Notifications	Yes	None	45
63.7550	Reports	Yes	None	46
63.7555	Records	Yes	None	47
63.7560	Form and retention of records	Yes	None	48
63.7565	General Provision applicability	Yes	None	NA
63.7570	Implementation and enforcement	Yes	None	NA
63.7575	Definitions	Yes	None	49

40 CFR 63 subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

49. The facility has one (1) 1000 kW diesel-fired emergency generator (EG-1). Upon issuance of the Title V operating permit, this emergency generator will be considered to be located at a major source of HAP emissions. Because the emergency generator has a site rating of more than 500 brake HP and is located at a major source of HAP emissions, this emergency generator is considered to be a new emission unit under 40 CFR 63 subpart ZZZZ. Under 40 CFR 63.6590(b)(1)(i), a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of FHAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year does not have to meet the requirements of 40 CFR 63 subpart ZZZZ, except for the initial notification requirements of 40 CFR 63.6645(f).
50. The 40 CFR Part 63 subpart ZZZZ requirements that are applicable to EG-1 are identified in the following table:

40 CFR Part 63, subpart ZZZZ Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.6580	Purpose	Yes	None	NA
63.6585	Applicability	Yes	None	NA
63.6590	Applicability	Yes	Subject to limited requirements.	57
63.6600	Emission limitations	No	None	NA
63.6601	Emission limitations	No	None	NA
63.6602	Emission limitations	No	None	NA
63.6603	Emission limitations	No	None	NA
63.6604	Fuel requirements	No	None	NA
63.6605	General requirements	No	None	NA
63.6610	Initial compliance	No	None	NA
63.6611	Initial performance test	No	None	NA
63.6612	Initial performance test	No	None	NA
63.6615	Subsequent performance tests	No	None	NA
63.6620	Performance test procedures	No	None	NA
63.6625	Monitoring and maintenance requirements	No	None	NA
63.6630	Initial compliance	No	None	NA
63.6635	Continuous compliance	No	None	NA
63.6640	Continuous compliance	No	None	NA
63.6645	Notifications	Yes	Must submit an initial notification only.	58
63.6650	Reports	No	None	NA
63.6655	Records	No	None	NA
63.6660	Record retention	No	None	NA
63.6665	General provisions	No	None	NA
63.6670	Implementation and enforcement	No	None	NA
63.6675	Definitions	No	None	NA

New Source Performance Standards (NSPS)

40 CFR 60 subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

51. Any steam generating unit as this term is defined under 40 CFR 60.41b that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 MMBtu/hr) is subject to regulation under 40 CFR 60 subpart Db. The wood-fired boiler (EU-1) has a maximum heat input capacity of 325.8 MMBtu per hour and is subject to this regulation.
52. As a wood-fired boiler, the only standards that apply under this regulation are for particulate matter. Under 40 CFR 60.43b(h)(1), a facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts wood must not cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input. This PM limit is based on filterable emissions (“front half”) only. This PM emission standard applies at all times, except during periods of startup, shutdown, or malfunction. The facility performed the required initial compliance testing on April 27, 2011.
53. As part of demonstrating continuous compliance with the PM emission standard, the facility is subject to an opacity standard. Under 40 CFR 60.43b(f), a facility that combusts wood must not discharge into the

atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. This opacity standard applies at all times, except during periods of startup, shutdown, or malfunction. The facility uses a COMS to demonstrate compliance with this requirement.

54. The 40 CFR 60 subpart Db requirements that are applicable to EU-1 are identified in the following table:

40 CFR Part 60, subpart Db Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.40b	Subpart applicability	Yes	Maximum heat input capacity of 325.8 MMBtu per hour.	NA
60.41b	Definitions	Yes	Boiler meets the definition of a <i>steam generating unit</i> .	NA
60.42b	Standards for sulfur dioxide	No	The combustion of wood as a fuel is not subject to these standards	NA
60.43b	Standard for particulate matter (PM)	Yes	PM emission limit (front half only) of 0.030 lb/MMBtu heat input; Opacity emissions restricted to 20% (6-minute avg.), except for one 6-minute period per hour of not more than 27%;	31
60.44b	Standard for nitrogen oxides (NO _x)	No	The combustion of wood as a fuel is not subject to these standards.	NA
60.45b	Compliance and performance test methods and procedures for sulfur dioxide	No	Not applicable because the emission unit is not subject to SO ₂ standards.	NA
60.46b	Compliance and performance test methods and procedures for particulate matter and nitrogen oxides	Yes	Facility is required to perform an initial performance test using US EPA Test Method 5 to demonstrate compliance with the PM emission limit. No requirements related to NO _x apply. Initial compliance requirements have been satisfied and are not included in the permit.	32
60.47b	Emission monitoring for sulfur dioxide	No	Not applicable because the emission unit is not subject to SO ₂ standards.	NA
60.48b	Emission monitoring for particulate matter and nitrogen oxides	Yes	Facility has chosen to install a COMS to demonstrate compliance with the opacity emission limits. No requirements related to NO _x apply.	33
60.49b	Reporting and recordkeeping requirements	Yes	The facility must keep the records listed in the regulation and submit reports as required. Initial reporting and recordkeeping requirements have been satisfied and are not included in the permit.	34

55. For owners and operators, 40 CFR 60 subpart IIII applies to any stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines. Diesel-fired generator EG-1 meets the definition of an *emergency stationary internal combustion engine* under 40 CFR 60.4219. Owners or operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new nonroad CI engines as listed in 40 CFR 89.112 and 40 CFR 89.113.
56. Owners and operators of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. Currently, the sulfur content of nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight).
57. Emergency stationary ICE may be operated for maintenance checks and readiness testing for a maximum of 100 hours per calendar year. The federal requirements also allow an emergency stationary ICE to operate for up to 50 hours per year in non-emergency situations, for which the 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing. However, the description of an emergency generator in the definition of “Categorically Insignificant Activity” LRAPA title 12, does not allow an emergency generator to be used in this manner in the state of Oregon. The portions of the rule that conflict with the definition in LRAPA title 12 have not been included in the draft permit. There is no time limit on the use of emergency stationary ICE in emergency situations.
58. On May 1, 2015, the D.C. Courts of Appeals vacated the exemption provisions for emergency demand response in 40 CFR 63 subpart ZZZZ, 40 CFR 60 subpart IIII, and 40 CFR 60 subpart JJJJ (*Delaware Dept. of Nat. Resources and Envtl. Control v. EPA*). The vacated provisions have been removed from the draft permit even though US EPA has not revised the applicable regulations at this time.
59. The 40 CFR 60 subpart IIII requirements that are applicable to EG-1 are identified in the following table:

40 CFR Part 60, subpart IIII Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.4200	Subpart applicability	Yes	None	NA
60.4201	Emission standards	No	For non-emergency engines.	NA
60.4202	Subpart applicability	Yes	2007 model year and later emergency stationary CI ICE with a max engine power less than or equal to 3,000 HP and a displacement of less than 10 liters per cylinder are subject to the emission standards in 40 CFR 89.112 and 40 CFR 89.113	NA
60.4203	Emission standards	No	Manufacturer requirements.	NA
60.4204	Emission standards	No	Emission standards for non-emergency engines.	NA
60.4205	Emission standards	Yes	Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards in 40 CFR 89.112 and 40 CFR 89.113.	59
60.4206	Emission standards	Yes	The emission standards are applicable for the life of the engine.	60
60.4207	Fuel requirements	Yes	Must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	61

40 CFR Part 60, subpart IIII Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.4208	Requirements	No	Limitations on installation of previous model years engines	NA
60.4209	Monitoring requirements	Yes	Installation of a non-resettable hour meter.	62
60.4210	Compliance requirements	No	Manufacturer compliance requirements.	NA
60.4211	Compliance requirements	Yes	Recordkeeping requirements.	63
60.4212	Testing requirements	No	No testing requirements applicable to emergency engines.	NA
60.4213	Testing Methods	No	No testing requirements applicable to emergency engines.	NA
60.4214	Notification, reporting, and recordkeeping requirements	Yes	None	64
60.4215	Special requirements.	No	Engine is not located in the listed geographic areas.	NA
60.4216	Special requirements	No	Engine is not located in the listed geographic areas.	NA
60.4217	Special requirements	No	Engine does not use special fuels.	NA
60.4218	General provisions	Yes	None	NA
60.4219	Definitions	Yes	None	NA

Toxics Release Inventory (TRI)

60. The Toxics Release Inventory (TRI) is federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment, over which LRAPA has no regulatory authority. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

- Cancer or other chronic human health effects;
- Significant adverse acute human health effects; or
- Significant adverse environmental effects.

There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA’s TRI website.

In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. Because this facility operates under NAICS code 221117 – Biomass Electric Power Generation, this facility is not required to report emissions to the TRI program.

COMPLIANCE ASSURANCE MONITORING

61. Title 40, Part 64 of the Code of Federal Regulations (CFR) contains Compliance Assurance Monitoring (CAM) requirements. These regulations are also codified in LRAPA 35-0200 through 35-0280. CAM requirements apply to any Pollutant Specific Emissions Unit (PSEU) at a Part 70 source that meets the following criteria:

- 61.a. The unit is subject to an emission limitation or standard for a regulated air pollutant;
- 61.b. The unit uses a control device to achieve compliance with that emission limitation or standard;
- 61.c. The unit, by itself, has potential pre-control emissions of the regulated air pollutant that would make it a major source (i.e. greater than 100 tons per year for criteria pollutants; greater than 10 tons per year for individual Federal HAPs); and
- 61.d. The exemptions in 40 CFR 64.2(b) and LRAPA 35-0200(2) do not apply. The exemptions include
 - 61.d.i. Emission limitations or standards proposed by US EPA after November 15, 1990 under section 111 (NSPS) or section 112 (NESHAPs);
 - 61.d.ii. Stratospheric ozone protection requirements under Title VI;
 - 61.d.iii. Acid Rain Program requirements;
 - 61.d.iv. Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by US EPA;
 - 61.d.v. An emissions cap that meets the requirements in 40 CFR 70.4(b)(12);
 - 61.d.vi. Emission limitations or standards for which a Part 70 permit specifies a continuous compliance demonstration method, as defined in 40 CFR 64.1 and LRAPA title 12; and
 - 61.d.vii. Municipally-owned backup utility emission units meeting the requirements under 40 CFR 64.2(b)(2).

62. The following table evaluates CAM applicability for all significant emission units at the facility:

Emission Unit	Regulated Pollutant	Uses a Control Device for a Regulated Pollutant	Uncontrolled Potential Emissions Exceed Major Source Threshold	Is there an Emission Limitation or Standard for this Pollutant	Subject to CAM for the Pollutant	Monitoring Frequency
EU-1	PM	Yes	Yes	Yes	Yes	1x / 24 hr
EU-1	PM ₁₀	Yes	Yes	Yes	Yes	1x / 24 hr
EU-1	PM _{2.5}	Yes	Yes	No	No	--
EU-1	NO _x	Yes	Yes	Yes	No (CEMS)	--
EU-1	CO	No	Yes	Yes	No	--
EU-1	SO ₂	No	No	Yes	No	--
EU-1	VOC	No	No	No	No	--
EU-1	FHAPs	Yes	Yes	Yes	No (MACT)	--
EU-2	PM	Yes	No	Yes	No	--
EU-2	PM ₁₀	Yes	No	No	No	--
EU-2	PM _{2.5}	Yes	No	No	No	--

63. The facility is not subject to CAM for NO_x because the facility uses a continuous compliance demonstration method (CEMS) to demonstrate compliance with the applicable emission limitations or standards specified in the Title V permit.

64. The facility is not subject to CAM for FHAPs because the facility is subject to emission limitations or standards proposed by US EPA after November 15, 1990 under section 112 - 40 CFR 63 subpart DDDDD (5D) – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional boilers and Process Heaters.

65. The facility submitted a CAM plan for PM and PM₁₀ from EU-1 that involves monitoring ESP operational parameters. The facility has proposed minimum and maximum secondary voltages (3-hour average) and maximum spark rate for each field of the ESP. The parametric monitoring parameter ranges were established based on correspondence with the manufacturer. A review of available stack test data indicates the selected parametric monitoring parameter ranges are appropriate.

PLANT SITE EMISSION LIMITS

66. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limit, and emissions capacity.

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PTE (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	
PM	0	16	0	16	24	11
PM ₁₀	0	16	16	16	14	11
PM _{2.5}	NA	16	16	16	14	11
CO	0	201	201	201	201	201
NO _x	0	185	0	185	185	185
SO ₂	0	0	0	39	39	14
VOC	0	0	0	39	39	1.1
GHG (a/b)	216,683	325,591	216,683	325,591	290,683	290,683

Note: (a/b) means anthropogenic and biogenic emissions combined.

- 66.a. The baseline emission rates for PM, PM₁₀, CO, NO_x, SO₂, and VOC are set at zero (0) tons/year since the facility was constructed after the 1978 baseline period. A baseline emission rate is not required for PM_{2.5} in accordance with LRAPA 42-0048(3)
- 66.b. The baseline emission rate for GHGs is normally any consecutive 12 calendar month period during calendar years 2000 through 2010. Because SSE was approved to construct and operate prior to January 1, 2011 in accordance with LRAPA title 37 and the facility had not begun normal operations prior to January 1, 2010, the GHG baseline emission rate was established at the source's potential to emit as allowed under LRAPA 42-0051(1)(c)(B). As required under LRAPA 42-0051(3), ten (10) years from the end of the applicable baseline period or ten (10) years from the date the permit was issued, or an earlier time if requested by the source in a permit application involving public notice, the baseline emission rate must be reset to actual emissions. SSE has selected a consecutive 12-month period of December 1, 2012 through November 30, 2013 as their baseline period for GHG emissions. The baseline emission rate consists of 213,826.8 tons of biogenic CO₂ emissions and 2,856.1 tons of anthropogenic emissions of GHGs expressed as CO₂ equivalents.
- 66.c. Standard ACDP (02/11/2014) incorrectly assigned a netting basis of 16 TPY to PM. Because the facility has not been through federal major NSR or state NSR Type A permitting under LRAPA title 38 for this pollutant, the proposed netting basis for PM is equivalent to the baseline emission rate of zero (0) TPY.
- 66.d. The PM₁₀ netting basis was established as part of the issuance of Standard ACDP (02/11/2014). Under LRAPA 42-0046(3)(e)(B), the netting basis is increased for sources that obtained a permit prior to January 11, 2018 for any emission increases approved through the NSR regulations in LRAPA title 38 in effect at the time. The proposed netting basis is the same as the existing netting basis.
- 66.e. The PM_{2.5} netting basis was established as part of the issuance of Standard ACDP (02/11/2014). Consistent with 42-0046(2)(b)(B), the PM_{2.5} netting basis was calculated based upon the fraction of

- the PM₁₀ PSEL that would have been in place on May 1, 2011, based upon the emission factors used in Standard ACDP (02/11/2014), multiplied by the PM₁₀ netting basis that would have been in effect on May 1, 2011. The fraction of PM₁₀ that is assumed to be PM_{2.5} after control by the ESP is 100%. The proposed netting basis is the same as the existing netting basis.
- 66.f. The CO netting basis was established as part of the issuance of Standard ACDP (02/11/2014). Under LRAPA 42-0046(3)(e) the netting basis is increased for sources that obtained a permit prior to January 11, 2018 for any emission increases approved through the NSR regulations in LRAPA title 38 in effect at the time. The proposed netting basis is the same as the existing netting basis.
- 66.g. Standard ACDP (02/11/2014) incorrectly assigned a netting basis of 185 TPY to NO_x. Because the facility has not been through federal major NSR or state NSR Type A permitting under LRAPA title 38 for this pollutant, the proposed netting basis for NO_x is equivalent to the baseline emission rate of zero (0) TPY.
- 66.h. The netting basis for SO₂ and VOC are zero (0) TPY because the baseline emission rate is zero (0) TPY and the facility has not obtained a permit for emission increases for these pollutants through Major NSR or Type A State NSR action under LRAPA title 38. The proposed netting basis is the same as the existing netting basis.
- 66.i. The netting basis for GHG emissions has been reduced to the new baseline emission rate under the authority of LRAPA 42-0046(3)(d).
- 66.j. Under LRAPA 42-0041(1), sources with a potential to emit for a regulated pollutant less than the SER will receive a source specific PSEL set equal to the generic PSEL level. The potential emissions of PM and PM₁₀ from the facility are less than the applicable SERs of 25 TPY and 15 TPY, respectively. The proposed PSELs for PM and PM₁₀ have been established at the generic PSEL levels of 24 and 14 TPY, respectively.
- 66.k. Under LRAPA 42-0041(2), for sources with a potential to emit for a regulated pollutant greater than or equal to the SER, the source specific PSEL for that pollutant will be set equal to the source's PTE, netting basis, or a level requested by the applicant, whichever is less, except as allowed under the rule. The potential PM_{2.5} emissions from the facility are greater than the applicable SER of 10 TPY. The proposed PSEL for PM_{2.5} has been set at 14 TPY at the request of the permittee as allowed under LRAPA 42-0041(2).
- 66.l. Under LRAPA 42-0041(2), for sources with a potential to emit for a regulated pollutant greater than or equal to the SER, the source specific PSEL for that pollutant will be set equal to the source's PTE, netting basis, or a level requested by the applicant, whichever is less, except as allowed under the rule. The potential CO emissions from the facility are greater than the applicable SER of 100 TPY. The proposed PSEL will remain at the existing netting basis of 201 TPY.
- 66.m. Under LRAPA 42-0041(2), for sources with a potential to emit for a regulated pollutant greater than or equal to the SER, the source specific PSEL for that pollutant will be set equal to the source's PTE, netting basis, or a level requested by the applicant, whichever is less, except as allowed under the rule. The potential NO_x emissions from the facility are greater than the applicable SER of 40 TPY. The proposed PSEL will remain at the previously requested existing PSEL of 185 TPY as allowed under LRAPA 42-0041(4). LRAPA previously evaluated the air quality impacts of the NO_x PSEL in the review report for Standard ACDP (02/11/2014) and determined that there would be no adverse impacts on ambient air quality. Because the NO_x PSEL is not being raised and the previous air quality modeling indicated the facility impact was significantly below air quality standards for this pollutant, the previous air quality analysis is still valid.
- 66.n. Under LRAPA 42-0041, sources with a potential to emit less than the SER will receive a source specific PSEL set equal to the generic PSEL level. Based upon source testing performed on April 27-28, 2011, the potential emissions of SO₂ and VOCs from the facility are less than the SER. The proposed PSEL for each of these pollutants is set equal to the generic PSEL level of 39 TPY.
- 66.o. Under LRAPA 42-0041(2), for sources with a potential to emit for a regulated pollutant greater than or equal to the SER, the source specific PSEL for that pollutant will be set equal to the source's PTE, netting basis, or a level requested by the applicant, whichever is less, except as allowed under the rule. As allowed under LRAPA 42-0041(4), at the request of the permittee the proposed PSEL for GHGs that includes anthropogenic and biogenic CO₂ emissions has been established as the proposed netting basis plus 74,000 TPY, which is just below the SER for GHGs.

SIGNIFICANT EMISSION RATES

67. The proposed PSEL is equal to the previously established PSEL. There are no increases in the PSEL being requested with this Title V permit action. An analysis of the proposed PSEL increases over the Netting Basis are shown in the following table:

Pollutant	Proposed PSEL (TPY)	PSEL Increase Over Netting Basis (TPY)	PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY)	PSEL Increase Due to Modification (TPY)	SER (TPY)
PM	24	24	0	0	25
PM ₁₀	14	0	0	0	15
PM _{2.5}	14	0	0	0	10
CO	201	0	0	0	100
NO _x	185	185	0	0	40
SO ₂	39	39	0	0	40
VOC	39	39	0	0	40
GHGs	290,683	74,000	0	0	75,000

UNASSIGNED EMISSIONS AND EMISSION REDUCTION CREDITS

68. The facility has zero (0) tons of Emission Reduction Credits (ERCs). The facility purchased 50 tons of ERCs from International Paper – Springfield Containerboard on December 2011 to satisfy the net air quality benefit requirement to provide PM₁₀ offsets in a ratio of at least 1:1. The facility provided double the 1:1 ratio for the 16 ton/yr PSEL that triggered non-attainment New Source Review (NSR), or 32 tons of PM₁₀. Because the remaining 18 tons of ERCs were not used by SSE by July 25, 2015, these credits have expired. Under LRAPA 41-0030(5)(b), ERC that are not used prior to the expiration date of the credit will revert to the source that generated the credit – International Paper – and will be treated as unassigned emissions for purposes of the PSEL pursuant to LRAPA 42-0055 and are no longer available for use as external offsets.

69. The facility has unassigned emissions as shown in the table below. Unassigned emissions are equal to the netting basis minus the source’s current PTE, minus any banked emission reduction credits. In accordance with LRAPA 42-0055, unassigned emissions greater than the SER will be reduced to less than the applicable SER at the next Title V operating permit renewal if the unassigned emissions are not used for internal netting prior to that date. This facility does not have unassigned emissions greater than the SER.

Pollutant	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	0	0	25
PM ₁₀	5	0	15
PM _{2.5}	5	0	10
CO	0	0	100
NO _x	0	0	40
SO ₂	0	0	40
VOC	0	0	40
GHGs	0	0	75,000

HAZARDOUS AIR POLLUTANTS/TOXIC AIR CONTAMINANTS

70. As part of the Title V simple modification, SSE has requested the removal of a synthetic minor condition that previously limited the combined FHAPs from SSE and SSC to no more than nine (9) TPY for each individual FHAP and 24 TPY from the aggregate of all FHAPs. Upon issuance of the Title V operating permit, SSE will be considered a major source of FHAPs even though the potential FHAP emissions from SSE alone will not exceed the Title V major source thresholds of ten (10) TPY for each individual FHAP and 24 TPY from the aggregate of all FHAPs.

71. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. Clean Air Oregon requires reporting on the emissions of approximately 600 TACs and regulates approximately 260 TACs that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 TACs. SSE was notified by LRAPA on December 2, 2019, to perform a risk assessment of their TAC emissions. The primary sources of TACs from this facility include particulate and organic TACs from the combustion of wood in the Wood-Fired Boiler (EU-1) and diesel fuel in the 1000 kW Diesel Emergency Generator (EG-1). LRAPA approved SSE's Risk Assessment report on September 28, 2021 and a supplemental Risk Assessment report on May 23, 2022. SSE conducted a Level 3 Risk Assessment adjusted for target organs to determine cancer and noncancer risk from facility TAC emissions. The facility performed the analysis using two operational scenarios – operation at full capacity for chronic and acute cancer and noncancer risk and operation during a startup event for acute noncancer risk. Based on the results of the Level 3 Risk Assessment for this facility as summarized below, SSE exceeds the Source Permit Level and is required to have source risk limits to maintain facility risk at or below the Excess Cancer Risk per Million of five (5) and the Noncancer Hazard Index of one (1). The primary Acute Risk driver is manganese emissions from wood combustion.

Risk Type	Exposure	Risk	Target Organ Fraction	Calculated Risk	Rounded Risk	Source Permit Level	Comm. Engage. RAL
Chronic Cancer Risk (EU-1 Only)							
	Residential	1.00	1	1.00	1	5	25
	Child	0.003	1	0.003			
	Worker	0.07	1	0.07			
Chronic Non-Cancer Risk (EU-1 Only)							
Respiratory	Residential	0.15	0.66	0.10	0.1/0	0.5	1
	Child	0.002	0.43	0.001			
	Worker	0.03	0.43	0.014			
Nervous System	Residential	0.15	0.31	0.047	0.0/0	0.5	1
	Child	0.002	0.53	0.001			
	Worker	0.03	0.53	0.017			
Nervous System Acute Risk – Steady State Scenario (EU-1 and EG-1)							
EU-1 Steady State		0.12	0.64	0.077	--	--	--
EG-1		0.09	0.07	0.006	--	--	--
Total Risk =				0.083	0.1/0	0.5	1
Nervous System Acute Risk – Startup Scenario (EU-1 and EG-1)							
EU-1 Startup		0.83	0.88	0.730	--	--	--
EG-1		0.09	0.07	0.006	--	--	--
Total Risk =				0.736	0.7/1	0.5	1
Respiratory Acute Risk – Steady State Scenario (EU-1 and EG-1)							
EU-1 Steady State		0.12	0.13	0.015	--	--	--
EG-1		0.09	0.44	0.040	--	--	--
Total Risk =				0.055	0.1/0	0.5	1
Respiratory – Startup Scenario (EU-1 and EG-1)							
EU-1 Startup		0.83	0.05	0.042	--	--	--
EG-1		0.09	0.44	0.040	--	--	--
Total Risk =				0.082	0.1/0	0.5	1

* Risk values rounded in accordance with OAR 340-245-0200(4)(a) for comparison to the Risk Action Levels or Source Risk Limits.

72. Under the first operational scenario, operation at full capacity, SSE did not exceed any Risk Action Levels. The Title V operating permit will not include any CAO specific limitations related to this operational scenario. The facility is already required to operate all control systems through existing requirements in the permit.

73. Under the second operational scenario, operation during a startup event, SSE did exceed the source permit level. The Title V operating permit will include a limit on the total number of startup/shutdown events allowed per calendar year, a maximum number of hours that SSE can be in startup prior to engaging the ESP, and a limitation on the number of hours that SSE can operate the emergency generator for maintenance checks and readiness testing. These requirements reflect operational restrictions used in the air quality model that reduced risk. The current Title V permit contains a requirement that the facility notify LRAPA if the number of startup/shutdown events exceeds ten (10) events per calendar year. LRAPA proposes to add a CAO specific limitation allowing no more than fifteen (15) startup/shutdown events per calendar year. Since SSE became operational, the number of startup/shutdown events has never exceeded this proposed limitation. LRAPA proposes to add a CAO specific limitation allowing up to 12 hours of uncontrolled operation before engaging the ESP when performing a cold startup. In the last 5 years, SSE has averaged 6.5 hours of uncontrolled operation prior to engaging the ESP when performing a cold startup. LRAPA proposes to limit operation of the emergency generator (EG-1) for no more than four (4) hours in any calendar day for

maintenance checks and readiness testing. Typically, an emergency generator is operated for about half an hour every other week to ensure proper operation.

74. The table below represents the potential emissions of FHAPs/TACs from SSE assuming operation at full capacity, including 100 hours of emergency generator operation. The potential emissions are calculated based on source specific emission testing and standard emission factors for the types of emission units at this facility.

Pollutant	FHAP	CAO TAC	Wood-Fired Boiler (EU-1) Emissions (TPY)	Emergency Generator Emissions (TPY)
Metals				
Antimony	Yes	Yes	4.67E-04	--
Arsenic	Yes	Yes	2.91E-03	5.78E-06
Barium	No	Yes	0.32	--
Beryllium	Yes	Yes	4.65E-05	--
Cadmium	Yes	Yes	5.66E-04	5.42E-06
Chromium VI	Yes	Yes	4.20E-04	3.61E-07
Chromium (Total)	Yes	No	3.77E-03	--
Cobalt	Yes	Yes	3.63E-03	--
Copper	No	Yes	7.71E-03	1.48E-05
Lead	Yes	Yes	8.05E-03	3.00E-05
Manganese	Yes	Yes	0.14	1.12E-05
Mercury	Yes	Yes	1.64E-03	7.22E-06
Molybdenum (as MoO ₃)	No	Yes	4.81E-03	--
Nickel	Yes	Yes	4.33E-03	1.41E-05
Phosphorus	Yes	Yes	0.48	--
Selenium	Yes	Yes	2.50E-03	7.94E-06
Silver	No	Yes	1.52E-03	--
Thallium	No	Yes	2.86E-03	--
Vanadium	No	Yes	9.18E-04	--
Yttrium	No	No	4.65E-04	--
Zinc	No	Yes	0.20	--
Inorganic Gases				
Ammonia	No	Yes	10.68	1.05E-02
Chlorine	Yes	Yes	1.13	--
Hydrogen Chloride	Yes	Yes	1.46	6.73E-04
Hydrogen Fluoride	Yes	Yes	0.36	--
Organics				
Acetaldehyde	Yes	Yes	0.51	2.83E-03
Acetone	No	Yes	1.84	--
Acetophenone	Yes	Yes	2.84E-03	--
Acrolein	Yes	Yes	0.16	1.22E-04
Benzene	Yes	Yes	1.51	6.73E-04
Benzo[a]pyrene [EG-1]	Yes	Yes	--	1.28E-07
Bis(2-Ethylhexyl)phthalate	Yes	Yes	7.19E-05	--
Bromomethane	No	Yes	1.76E-02	--
1,3-Butadiene	Yes	Yes	--	7.85E-04
Butylbenzylphthalate	No	Yes	2.07E-02	--
Carbon disulfide	Yes	Yes	0.19	--

Pollutant	FHAP	CAO TAC	Wood-Fired Boiler (EU-1) Emissions (TPY)	Emergency Generator Emissions (TPY)
Carbon tetrachloride	Yes	Yes	3.11E-02	--
Chlorobenzene	Yes	Yes	2.57E-02	--
Chloroform	Yes	Yes	3.11E-02	--
Chloromethane (Methyl Chloride)	Yes	Yes	5.84E-02	--
2-Chlorophenol	No	Yes	2.86E-05	--
Crotonaldehyde	No	Yes	6.94E-02	--
Cumene (Isopropylbenzene)	Yes	Yes	2.74E-02	--
1,4-Dichlorobenzene	Yes	Yes	0.43	--
1,2-Dichloroethane (Ethylene Dichloride)	Yes	Yes	4.51E-02	--
1,2-Dichloroethene	No	Yes	2.12	--
1,2-Dichloropropane	No	Yes	2.60E-02	--
Diesel particulate matter	No	Yes	--	0.12
Diethyl phthalate	No	Yes	3.37E-02	--
Dibutyl phthalate	Yes	Yes	5.15E-02	--
4,6-Dinitro-2-methylphenol	Yes	Yes	3.25E-03	--
2,4-Dinitrophenol	Yes	Yes	2.02E-04	--
2,4-Dinitrotoluene	Yes	Yes	1.46E-03	--
Dioxins/Furans as TEQ	Yes	Yes	1.01E-09	--
Ethylbenzene	Yes	Yes	0.61	3.93E-05
Formaldehyde	Yes	Yes	0.16	6.23E-03
Hexachlorobenzene	Yes	Yes	1.59E-03	--
n-Hexane	Yes	Yes	0.45	9.71E-05
Isopropanol	No	Yes	5.62	--
Methanol	Yes	Yes	1.13	--
Methyl Ethyl Ketone	No	Yes	2.41E-02	--
Methyl Isobutyl Ketone	Yes	Yes	0.69	--
Methylene Chloride (Dichloromethane)	Yes	Yes	0.85	--
Naphthalene	Yes	Yes	0.15	7.11E-05
4-Nitrophenol	Yes	Yes	1.45E-04	--
POM/PAH	Yes	Yes	1.77E-02	1.31E-04
PCBs (Total)	Yes	Yes	1.21E-05	--
Pentachlorophenol	Yes	Yes	3.54E-04	--
Phenol	Yes	Yes	0.25	--
Propionaldehyde	Yes	Yes	0.39	--
Styrene	Yes	Yes	6.13E-03	--
Tetrachloroethene (Perchloroethylene)	Yes	Yes	3.80E-02	--
Toluene	Yes	Yes	1.08E-02	3.80E-04
1,1,1-Trichloroethane (Methyl Chloroform)	Yes	Yes	8.93E-02	--
Trichloroethene	Yes	Yes	3.08E-02	--
Trichlorofluoromethane	No	Yes	2.46E-02	--
2,4,6-Trichlorophenol	Yes	Yes	4.26E-04	--
Vinyl chloride	Yes	Yes	2.84E-02	--

Pollutant	FHAP	CAO TAC	Wood-Fired Boiler (EU-1) Emissions (TPY)	Emergency Generator Emissions (TPY)
Xylenes	Yes	Yes	8.07E-03	1.53E-04

TITLE V PERMIT CHANGE LOG

75. The following is a list of condition-by-condition changes between the current Title V permit and the draft Title V permit:

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
Most	Most	Updated and corrected rule references	LRAPA rule changes, typos, etc.
Cover page	Cover page	Updated “Information Relied Upon”	New application for renewal.
Definitions	19	Updated the definition of “modified EPA Method 9”. Included a definition of “shutdown”.	Required for Title V.
1	1	No change	Not Applicable.
2	--	Added LRAPA’s authority to implement DEQ Title V regulations	Not Applicable.
3	2	Updated condition numbers that are LRAPA-only and/or DEQ-only enforceable	Regulatory updates
4	3	Updated emission unit list to indicate emission units with permit requirements.	Clarification.
5-7	4	Listed the fugitive emission precautions.	Revised to more closely follow regulatory language.
8	5	Minor verb and citation adjustments.	Clarification.
9	--	Added applicable requirement.	Title V permits are required to include all applicable requirements.
10	6	Updated regulatory language. Compliance demonstration changed to reference condition 10.	Revised to more closely follow regulatory language.
11	5.a.	Renumbered.	Clarification.
12	7	Minor verb and word changes.	Revised to more closely follow regulatory language.
13	10	Updated regulatory language.	Revised to more closely follow regulatory language.
14	11.b.	Added ACDP citation authority. Renumbered.	Clarification.
15	11.a.	Minor verb and word changes. Updated citations. Renumbered.	Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
16	11.a.x.	Minor verb and word changes. Renumbered.	Clarification.
17	12	Updated SIP limit. Updated citations.	PM SIP limits changed in 2018.
18	--	Added applicable requirement.	Title V permits are required to include all applicable requirements.
19	14	Minor verb and word changes. Updated citations. Added ACDP citation authority.	Clarification.
--	15	Removed offset language.	Expired condition.
--	16	Removed language related to operating boiler in a manner consistent with good air pollution control practice. Monitoring retained.	Unenforceable requirement.
--	17	Removed unnecessary NSPS A requirement.	Consistency.
20	21	Minor verb and word changes. Updated citations. Added ACDP citation authority.	Clarification.
21	--	Added CAM requirements for PM/PM ₁₀ /PM _{2.5} .	CAM is added at the first renewal for a source whose potential emissions of the applicable pollutant are less than 100 TPY.
22	23	Minor verb and word changes.	Clarification.
23	14.a.	Expanded the monitoring and recordkeeping requirement to apply to other regulations. Changed the compliance testing to once every five (5) years in the referenced section. Renumbered.	Added additional requirements that required monitoring and recordkeeping.
24	18	Minor verb and word changes. Removed reference to tuning. Updated citations. Added ACDP citation authority. Renumbered.	Clarification.
25	19	Minor verb and word changes. Removed reference to tuning. Updated citations. Added ACDP citation authority. Renumbered.	Clarification.
26	12.b.	None.	None.
27	22	Minor word changes. Added ACDP citation authority.	Clarification.
28	24	Minor word changes. Updated citations. Added ACDP citation authority. Added monitoring requirements.	Clarification. Title V permits are required to have adequate monitoring and compliance demonstration.
29	20	Minor verb and word changes. Updated citations.	Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
30	25	Minor word changes. Updated citations. Added ACDP citation authority.	Clarification.
31-34	11, 13	Inserted all applicable NSPS Db requirements. Removed previous paraphrasing.	Title V permits are required to include all applicable requirements.
35-49	26-29	Inserted all applicable NESHAP 5D requirements. Removed NESHAP 6J requirements that are no longer applicable.	Title V permits are required to include all applicable requirements.
50	--	Added applicable requirement.	Title V permits are required to include all applicable requirements.
51	30	Minor verb changes. Included all applicable language from Standard ACDP. Added ACDP citation authority.	Title V permits are required to include all applicable requirements.
52	31	Updated SIP limit. Updated citations.	PM SIP limits changed in 2018.
53	--	Added applicable requirement.	Title V permits are required to include all applicable requirements.
54	31.a.	Minor verb and word changes. Renumbered.	Clarification.
55	32	Minor word changes. Clarified and expanded the list of requirements for insignificant activities.	Clarification.
56	33	None.	Not applicable.
57-58	--	Inserted all applicable NESHAP ZZZZ requirements.	Title V permits are required to include all applicable requirements.
59-66	34	Inserted all applicable NSPS IIII requirements. Removed previous paraphrasing.	Title V permits are required to include all applicable requirements.
67	35	Minor word changes. Updated citations. Added ACDP citation authority.	Clarification.
68-74	--	Added CAO requirements.	Title V permits are required to include all applicable requirements.
75	8	Updated PSELs based upon requirements under LRAPA title 42. Removed FHAP limitations.	Required changes under the applicable regulation. Clarification. Permit modification.
76	9	Minor verb and word changes. Removed reference to LLV. Assumed to be LHV, which is unnecessary.	Clarification. Streamline requirements.
77	9.b.	Clarified wording. Minor word changes. Renumbered.	Clarification.
--	9.c.	Removed requirements related to calculating FHAP emissions.	Permit modification.
78	9.g.	Added language to clarify the use of emission factors.	Clarification.
79	--	Added language regarding the register and reporting of GHGs.	Title V permits are required to include all applicable requirements
80	36	Minor verb and word changes. Updated citations.	Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
81	37	Added ACDP citation authority.	Clarification.
82	38	Minor verb and word changes. Updated citations.	Clarification.
83	39	Minor verb and word changes. Changed PM ₁₀ testing to once every five years rather than once every permit term. Updated applicable test methods. Removed NSPS Dc Method 5 testing time and volume language. Removed unnecessary multiclon pressure drop requirement.	Clarification.
84	40	Minor verb changes.	Clarification.
85	41	Minor verb changes.	Clarification.
86	42	Minor verb changes. Updated citations.	Clarification.
87	43	Minor verb changes. Updated citations. Revised reporting of excess emission events. Updated name of OERS.	Clarification.
88	44	Minor verb changes. Updated citations.	Clarification.
89	45	Minor verb changes. Updated citations.	Clarification.
90	46	Minor verb changes. Updated citations.	Clarification.
91	47	Updated citations.	Clarification.
92	48	Updated citations.	Clarification.
93	49	Updated US EPA address.	Address change.
94	50	Minor verb changes.	Clarification.
95	51	Minor verb changes.	Clarification.
96	52	Minor verb and word changes. Updated citations.	Clarification.
97	--	Added language regarding the register and reporting of GHGs.	Title V permits are required to include all applicable requirements
98	53	Updated citations.	Clarification.
99	54	None.	Not Applicable.
100	55	Minor verb and word changes. Updated citations.	Clarification.
101	56	Expanded the discussion of non-applicable requirements. Table format.	Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
General conditions G1. - G29.	General Conditions G1. - G29.	Updated the general conditions to the latest version of the template.	Consistency.

GENERAL RECORDKEEPING REQUIREMENTS

- 76. The permit includes requirements for maintaining records of all testing, monitoring, and production information necessary for assuring compliance with the standards and calculating plant site emissions. The records of all monitoring specified in the Title V permit must be kept at the plant site for at least five (5) years.

GENERAL REPORTING REQUIREMENTS

- 77. The permit includes a requirement for submitting semi-annual and annual monitoring reports that include semi-annual compliance certifications. Excess emissions are required to be reported to LRAPA immediately as well as in a logbook attached to the annual report. Emissions fees reports are required annually.

COMPLIANCE HISTORY

- 78. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The following table indicates the inspection history of this facility since the facility was constructed and began operation:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	06/24/2014	In Compliance
US EPA - Full Compliance Evaluation	06/24/2014	Not Applicable
LRAPA - Full Compliance Evaluation	07/20/2016	In compliance
LRAPA - Full Compliance Evaluation	07/09/2018	In Compliance
LRAPA - Full Compliance Evaluation	06/23/2021	In Compliance

- 79. Since the facility was constructed and began operation, LRAPA has issued the following violation notices and/or taken the following enforcement actions against this facility:
 - 79.a. The facility was issued a Notice of Non-Compliance (NON 3298) on May 20, 2011 and Notice of Civil Penalty (NCP) No. 11-3298 on June 30, 2011 for exceeding 20% opacity for a period or periods aggregating more than 3 minutes in any one hour and for failure to notify LRAPA of excess emissions within one (1) hour. A civil penalty in the amount of \$2,200 was assessed. The facility responded that the incident was due to a power failure that occurred as a result of the ESP field controller not being set correctly to match the breaker effective load. The facility paid the fine on July 19, 2011 and the file was closed.
 - 79.b. The facility and LRAPA entered into Stipulated and Final Order (SFO) 11-3322 on September 19, 2011 to address non-compliance related to PM₁₀ testing and the subsequent and intentional non-operation of the required NO_x control system (SNCR). Stack testing revealed the SNCR used to control emissions of NO_x may have caused the test method used for particulate matter to generate false readings. The readings elevated the particulate emissions to an amount that exceeded the 0.008 lb/MMBtu permit limit. In order to obtain accurate readings of particulate, the SFO outlined conditions and penalties for the facility to operate without the SNCR until more sophisticated and

- accurate tests were completed and the results verified. The facility conducted additional testing using the CTM-039 dilution method and demonstrated compliance with the 0.008 lb/MMBtu limit. A civil penalty in the amount of \$9,856 was assessed. The facility paid the fine and the file was closed.
- 79.c. The facility was issued NON 3360 on January 24, 2012, for exceeding the CO rolling 8-hour limit of 105.8 lbs/hour as a result of excess moisture in the boiler fuel. The facility identified and committed to following corrective actions including: implementing better fuel management such that they have the ability to switch to drier material when CO CEM levels increase, instructed staff to reduce load (steam and electrical output) as necessary to help control CO, and implemented a parametric action level to allow adjustments to be made prior to an exceedance of the limit. No (\$0) civil penalty was assessed and the file was closed on May 1, 2012.
- 79.d. The facility was issued NON 3474 on October 29, 2013, for exceeding the CO rolling 8-hour limit of 105.8 lbs/hour as a result of inconsistent boiler fuel quality. The exceedance occurred on October 7, 2013. SSE and LRAPA both recognized the CO limit to be too stringent and that LRAPA was in process of modifying the permit to change the CO rolling 8-hour limit to 149.0 lbs/hour. No (\$0) civil penalty was assessed and the file was closed on November 4, 2013.
- 79.e. The facility was issued NON 3733 on October 1, 2018, and NCP No. 18-3733 on January 30, 2019, for failing to conduct a RATA at least once every four calendar quarters. Historically, the facility has conducted RATAs in September of each calendar year (3rd quarter). The facility conducted the 2017 RATA during the week of June 12, 2017 (2nd quarter). The facility conducted the 2018 RATA on September 26, 2018, which is the fifth quarter after the 2017 testing. A civil penalty in the amount of \$1,500 was assessed. The facility paid the fine and the file was closed.

SOURCE TEST RESULTS

80. Source test results are summarized as part of the emission detail sheets included in this review report.

Particulate Matter Emission Testing

81. The facility performed numerous stack tests during the first two (2) years of operation. At least five (5) separate stack tests were performed in 2011 and 2012. Using DEQ Method 5 and EPA Method 202, the test results were greater than the applicable PM emission limits unless NO_x controls were turned off. The very low PM emission rate of the SSE facility created challenges for traditional EPA particulate matter compliance testing methods. To collect enough sample to meet the minimum detection level, the normal sampling time was increased by a factor of three (3). Even at the extended sampling time there is reduced precision (variability) of the results. Additionally, trace minerals in the wood fuel are oxidized in the boiler and combine with residual ammonia from the urea-based NO_x controls in the condensing portion of the sampling equipment to produce artifact salts which bias the testing results high.
82. To minimize artifact bias, compliance testing of the boiler was conducted with EPA Method CTM-039, which is designed to eliminate particulate artifact formation. For this testing, LRAPA required extended sampling times and twice as many sampling replicates to assess the variability of the results. The facility performed three (3) compliance tests and met the PM₁₀ LAER emission limit with the NO_x controls turned on during each test.
83. The draft permit contains a requirement to perform annual testing using EPA Method 5 as one way to verify the ESP is operating properly. The draft permit also contains a requirement to perform stack testing once every 5 years, starting from issuance of this Title V permit, using EPA Method OTM-37 to demonstrate compliance with the PM₁₀ LAER emission limit. The previous Title V operation permit required use of EPA Method CTM-039. EPA Method OTM-37 is an improved version of EPA Method CTM-039 which attempts to further enhance the precision of the method as related to measuring condensable particulate matter.

PUBLIC NOTICE

84. This permit was on public notice from June 9, 2022 to July 27, 2022. A hearing was held on July 11, 2022. Comments were submitted in writing during the comment period and in person at the public hearing. After the comment period and hearing, LRAPA reviewed the comments but did not make substantive changes to the permit. A proposed permit was then sent to EPA for a 45-day review period. Since substantive comments were received, LRAPA did not request an expedited review by EPA.

If the EPA does not object in writing, any person may petition the EPA within 60 days after the expiration of EPA's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in OAR 340-218-0210, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.

Public Hearing Summary

On Monday, July 11, 2022 beginning at approximately 5:25pm, a public hearing was held in-person at the Eugene Public Library and remotely over Zoom for the modification and renewal of the Title V operating permit for Seneca Sustainable Energy, LLC (206470) located at 29650 East Enid Road, Eugene, Oregon, 97402. Three members of the public were in attendance in person. Sixteen members of the public were in attendance remotely based upon a count of Zoom logins.

The LRAPA representatives participating in the public hearing were Steven Dietrich, Director, Travis Knudsen, Public Affairs Manager, Jonathan Wright, Permit Writer, and Cassandra Jackson, Compliance Inspector.

Prior to the public hearing, Mr. Knudsen conducted an informational session that discussed the location and purpose of the facility, the types of emission units at the facility, a summary of the emissions from the facility, and a summary of the proposed modifications to the permit. The public hearing was opened by Mr. Dietrich, who provided a summary of the purpose and format of the hearing. The rest of the public hearing consisted of a forum for public comments.

Public Comments Summary and LRAPA Responses

[All public comments that were received for this project are a public record and are retained with the public permit review files. For purposes of this summary document, the public comments may have been edited to reduce length or consolidated with similar comments. Public comments that are not related to the review report or draft permit, such as those comments that are statements of fact or express an opinion, are not presented in this document, and do not require a response from LRAPA. In addition, some of the public comments applied to either Seneca Sustainable Energy, Seneca Sawmill Company, or both facilities. LRAPA has made every effort to distinguish to which facility the comment applied.]

Comment 1: The State rules on Climate will be in place soon, is this an attempt to get these changes in before the needed State rules are enacted?

Response 1: LRAPA assumes that the commenter is referring to the Oregon Climate Protection Program under OAR chapter 340 division 271 that took affect on January 1, 2022. The Oregon Climate Protection Program applies to anthropogenic greenhouse gas emissions. Under OAR 340-271-0110(5)(b)(B)(ii), biogenic CO₂ emissions from solid fuels are specifically exempted from regulation under the Oregon Climate Protection Program. Under OAR 340-215-0020(5), "Biogenic CO₂ emissions" means carbon dioxide emissions generated as the result of biomass or biomass-derived fuel combustion. Because Seneca Sustainable Energy (SSE, Seneca, or the facility) only combusts biomass, the CO₂ emissions that result from that combustion are not subject to the Oregon Climate Protection Program. The small amount of methane and

nitrous oxide emissions that result from the combustion of biomass at SSE are subject to regulation under the Oregon Climate Protection Program. However, the actual or potential emissions of these pollutants on a CO₂ equivalent basis does not equal or exceed 25,000 metric tons per year for additional regulation under the Oregon Climate Protection Program. In summary, the regulation referenced by the commenter had no impact on the timing of this permit action.

Comment 2: The environmental justice issues (See ORS 182.538; 182.542; 182.545; 182.550) at stake here have clearly not been addressed... and must be before such a permit is considered. Another commenter stated that LRAPA must consider environmental justice in relation to this project.

Response 2: [Please note that the underlined text contains hyperlinks to documents and materials available on LRAPA's website] The commenter references a mixture of Oregon Revised Statutes (ORSs) related to the duties of the state Environmental Justice Task Force and the duties and reports required of natural resource agencies. As defined in ORS 182.535, LRAPA is not listed as "natural resource agency" and is, therefore, LRAPA is technically not subject to the requirements of ORS 182.545 or 182.550. However, LRAPA already follows the key elements of ORS 182.545 as part of our [Public Participation Policy](#). Specifically, LRAPA posted information to our website regarding this permit action in both English and Spanish; LRAPA held a public information session and a public hearing at a time and location that was convenient for people in the community that may be affected by the decision stemming from the hearing; LRAPA provided Spanish language translation services for the public information session and the public hearing; LRAPA published a fact sheet specific to these permit changes in both English and Spanish; and LRAPA engaged in public outreach activities in the communities that could potentially be affected by this decision by contacting significant media outlets in the community and reaching out to organizations that purport to represent affected communities, including Beyond Toxics, Active Bethel Citizens, Santa Clara Community Organization and Industrial Corridor Community Organization. Additionally, the Oregon Department of Environmental Quality's (DEQ) Cleaner Air Oregon Community Engagement Toolkit provided the internal guidance used by LRAPA when considering environmental justice issues from the facility's potential emissions and potential health impact on communities exposed to those emissions; particularly Black, Indigenous, people of color, low-income and other traditionally underrepresented communities, including those who have environmental justice concerns or a continued interest in the facility. The potential health impact on communities surrounding the facility was examined within an approximate [10km radius around the facility](#). This health risk assessment indicated the potential risk was below Cleaner Air Oregon's Risk Action Levels requiring community engagement. However, LRAPA elected to conduct community engagement and hosted a [public meeting in September of 2021](#) to share the Risk Assessment results with localized communities and interested stakeholders. In summary, LRAPA believes it has followed its Public Participation Policy and has considered Environmental Justice issues for this permit action.

Comment 3: A number of commenters stated that these increased emissions can have severe health impacts and will add to cumulative air pollution harms and will be primarily experienced by people in West Eugene. Additionally, a commenter asked how will the proposed increase in air pollution affect morbidity and mortality in neighborhoods downwind of the two Seneca facilities. Another commenter stated that LRAPA must consider cumulative health impacts of SSE emissions.

Response 3: Under Cleaner Air Oregon regulations, LRAPA does not have the regulatory authority to analyze the public health risk due to Toxic Air Contaminant (TAC) emissions from multiple facilities and establish permit limits based on these results. As SSE is considered a separate source from Seneca Sawmill Company, this response concerns only the public health risk resulting from the TAC emissions resulting from SSE. SSE completed a risk assessment under Cleaner Air Oregon on September 28, 2021, and submitted an addendum on May 23, 2022 that evaluated emission units that were previously exempt under the Cleaner Air Oregon rules. SSE conducted a Level 3 Risk Assessment adjusted for target organs to determine cancer and noncancer risk from facility TAC emissions. The facility performed the analysis using two operational scenarios – operation at full capacity for chronic and acute cancer and noncancer risk and operation during a startup event for acute noncancer risk. Based on the results of the Level 3 Risk Assessment for this facility, SSE exceeds the Source Permit Level and is required to have source risk limits to maintain facility risk at or

below the Excess Cancer Risk per Million of five (5) and the Noncancer Hazard Index of one (1) for operation during a startup event. SSE is below the Source Permit Level and requires no additional permit requirements when operating at full capacity. Based on the CAO regulations, the risk from SSE to the surrounding community is considered acceptable. Because the primary emission point of TACs at SSE is 98 feet tall, it is unlikely that there is significant overlap in the health risk impact from SSE and Seneca Sawmill Company.

Comment 4: *A number of commenters expressed concern at the use of Generic Plant Site Emission Limits (PSELs) for some criteria pollutants emitted by the facility. Many commenters stated that LRAPA should use potential to emit (PTE) as the highest limit, which would reflect new rules in the upcoming DEQ rulemaking.*

Response 4: Under current regulations, both DEQ and LRAPA are required to use Generic PSELs for any regulated pollutant at a source with a PTE less than the Significant Emission Rate (SER) that requests a source specific PSEL. As an example, the PTE for total particulate matter (PM) is less than the SER of 25 tons per year (TPY). Under LRAPA 42-0041(1), LRAPA is required to set the PSEL for PM at 24 TPY – the Generic PSEL for PM. LRAPA is required to follow the regulations that apply or will apply at the time the permit is expected to be issued. Federal, state, and local regulations are constantly evolving and changing. If DEQ changes their regulations to require the use of the PTE in site-specific permits, LRAPA will evaluate the final rules as they apply to SSE the next time the SSE permit is modified, which could occur anytime during the 5 year permit term, or when the permit is renewed in 5 years.

Comment 5: *Along with the issue of Generic PSELs, a number of commenters stated that it is particularly important that PM₁₀ and PM_{2.5} be kept to the 11 TPY PTE and not the 14 TPY PSEL because Seneca has a history of changing their calculations of fine particulate matter and asking for increases in the amount of particulate matter pollution they are legally allowed to emit. For example, in regards to their 2013 permit, SSE said that all PM₁₀ emissions are the same as PM_{2.5} emissions and requested limits increases from 14 TPY to 16 TPY.*

Response 5: A number of commenters seem to believe that the potential emissions of PM₁₀ and PM_{2.5} have fluctuated over time. Based on the Lowest Achievable Emission Rate (LAER) of 0.010 pounds of PM₁₀ per MMBtu of heat input for the boiler established in the Standard ACDP issued on February 11, 2014, the PTE for PM₁₀ and PM_{2.5} is 16 TPY. SSE has not modified their operations to take advantage of any Generic PSEL or increased emissions since that time. The PTE listed as 11 TPY in the current review report reflects DEQ's Internal Management Directive – Emission Factor Guidance for NSR Regulated Pollutants and the use of highest and best under LRAPA 32-005. Under this directive, the emission factor for PSEL calculations must be based on the average of all representative source test results if such source testing exists. Since SSE has conducted three representative compliance tests for PM₁₀ emissions, the average of these three compliance tests has been used to calculate the PTE for setting the PSEL. Portions of this directive may no longer be applicable if DEQ changes their regulations to require the use of the PTE for PSELs in site-specific permits, and the PSELs for PM, PM₁₀ and PM_{2.5} emissions may revert back to 16 TPY.

Comment 6: *A number of commenters asked why LRAPA is not requiring annual stack testing and stack testing during start-up and at maximum capacity scenarios, and that each stack test reflect the 'worst case scenario' to determine compliance.*

Response 6: These comments appear to be directed at particulate matter emissions, including PM, PM₁₀ and PM_{2.5} emissions, resulting from combustion of biomass in the boiler at SSE. Actually, Condition 84.a in the permit does require the desired annual particulate matter emission testing of boiler as part of a three-prong approach that includes: (1) performance testing to demonstrate the specified PM₁₀ emission limit is being met; (2) operation and maintenance of the electrostatic precipitator (ESP) to ensure that it continues to operate properly; and, (3) the Compliance Assurance Monitoring (CAM) plan to provide a mechanism for assessing the performance of the ESP on an ongoing basis. As part of the first prong, the facility will be required to directly test compliance with the PM₁₀ emission limit of 0.010 pounds per MMBtu of heat input at least once every 5 years using US EPA Method OTM-37 or other equivalent test method approved in

writing by LRAPA. As part of the second prong, SSE is required to test annually the total particulate matter emissions (PM) using US EPA Method 5, maintain and tune up the boiler, multiclone and ESP at least annually to ensure proper operation of the boiler and emission control systems. US EPA Method 5 measures total particulate matter (PM), not just the fraction of PM that is PM₁₀, so the results are not used for demonstrating compliance with the PM₁₀ emission limit – although they do demonstrate compliance with the LRAPA particulate matter concentration (i.e., 0.1 grains/dscf) and visible emission standards, and the US EPA New Source Performance Standard (NSPS) PM emission limits. The results of this test are compared to previous annual tests to ensure the ESP is functioning normally. For the third prong, SSE is required to measure and record a number of operational parameters that indicate proper operation of the boiler and emission control systems. Some of these operational parameters have limits that are part of the CAM plan. All emission testing is performed in compliance with the DEQ Source Sampling Manual which requires the source operate at least 90% of the normal maximum operating rate. Stack testing is not performed during startup because there are no approved US EPA test methods for non-steady state conditions. To represent uncontrolled emissions during startup/shutdown events, SSE used stack test results for biomass boilers in other parts of the country that are controlled only by a multiclone primarily collected by US EPA for their preparation of the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. LRAPA believes these results adequately represent SSE emissions during startup/shutdown events because the SSE multiclone is operational during startup/shutdown events even when the ESP is not operating.

***Comment 7:** A number of commenters asked why LRAPA is not requiring SSE to reduce production as a means of reducing particulate and other air toxic emissions in our airshed for public health benefits on poor air quality days, when the air quality index (AQI) is over 101 (Unhealthy for Sensitive Groups).*

Response 7: The AQI is a tool for use by the general public to quickly determine whether there is a health concern for the air quality in their Metropolitan Statistical Area for ground level ozone, particulate pollution, carbon monoxide, sulfur dioxide, and nitrogen dioxide. LRAPA has no regulatory authority to link the operation of any particular facility to the AQI. LRAPA does have regulatory authority to require source emission reductions under LRAPA Title 51 – Air Pollution Emergencies. To activate the generic emission reduction plans, LRAPA’s Director or an appointed representative must declare an air pollution alert, warning, or emergency. Different actions are required at the different air pollution levels for SSE – which is considered a wood-fired electric generating facility under this regulation. The permit already includes a generic emission reduction plan in Attachment A: Air Pollution Emergencies. Like many industrial facilities, the emissions from SSE are lowest under steady-state operation. Particulate matter emissions during a startup/shutdown event are approximately three times higher than during steady state operation at full capacity for a given 24 hour period. In addition, the CAO risk assessment demonstrated that there is a higher health risk associated with startup/shutdown events. In short, SSE emits less emissions and has lower potential health risk when continuing to operate, versus each time the facility undergoes a startup/shutdown. This is why the permit limits the total number of startup/shutdown events and the length of time allowed for a startup/shutdown event. LRAPA believes that, except during air pollution emergencies, industrial and commercial facilities should operate in a manner that does not increase emissions while also minimizing disruptions to economic activity.

***Comment 8:** During the initial hearings to allow them to pollute our air, I suggested a camera be installed at the hopper could ensure that prohibited materials would not be added to the incinerator (construction debris, treated lumber, etc.). Given how ubiquitous cameras are, especially over a decade later, there is no reasonable excuse not to monitor this.*

Response 8: Biomass is supplied in two ways to the facility – by truck dump and by conveyor from Seneca Sawmill Company. The biomass supplied by external third parties via the truck dump must meet sizing specifications in order to be accepted by the facility. It is highly unlikely that a camera would detect any construction debris or treated lumber that is passing through the system. Instead, the permit requires that SSE keep and maintain records of the source of all biomass combusted in the boiler so that LRAPA can be sure

the biomass is coming from reputable sources. In addition, LRAPA has seen no evidence of construction debris in the biomass storage building during any inspections since the facility started operation.

Comment 9: *It's also worth remembering that figures of how much pollution is actually sent up the stack are estimates. There are no alarms that go off if an extra ton of soot is emitted.*

Response 9: The commenter is partially correct. Particulate Matter, PM₁₀, PM_{2.5}, VOC and SO₂ emissions are not directly measured on a continuous basis. The facility is not a significant source of VOC and SO₂ emissions due to the nature of the operations and the fuel type. The facility is a significant source of total particulate matter (PM), PM₁₀, and PM_{2.5} emissions. As previously stated, the facility uses a mixture of source testing, operation and maintenance requirements, and parametric monitoring of the boiler and control systems to demonstrate continuous compliance with the applicable PSEL. The parametric monitoring will signal an alarm if the operation of the boiler or control systems exceeds a predefined parameter or range. In addition, the facility is equipped with a Continuous Opacity Monitoring System (COMS) that continuously measures opacity from the exhaust stack. A COMS provides another indicator of high particulate matter emissions. The facility is equipped with Continuous Emission Monitoring Systems (CEMS) for NO_x and CO. These devices continuously measure the listed pollutants and will alarm if NO_x or CO are emitted above the permitted limits.

Comment 10: *I am particularly concerned that the proposed change would convert these two facilities into "Major Sources" of Federal Hazardous Air Pollutants and remove current limits of 25 tons of FHAPs per year. Please protect our neighborhood by considering any changes necessary to your permitting process to keep current limits in place.*

Response 10: The current federal hazardous air pollutant (HAP) limit shared by SSE and Seneca Sawmill Company of 9 TPY for any individual HAP and 24 TPY for the aggregate of all HAPs was requested by Seneca to avoid additional applicable regulations and not imposed by LRAPA. Seneca also has the right to request the removal of this shared limit as long as they comply with all rules and regulations that result from this action. In this case, SSE will be subject to the requirements applicable to a major source of HAPs under the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters if the shared HAP limit is removed.

Comment 11: *Perhaps my hope that the approval of The Eugene Community's Climate Action Plan would result in changes to the city's actions was misplaced. CAP 2.0 Chapter 4 states: By the year 2100, total community greenhouse gas emissions shall be reduced to an amount that is no more than the city of Eugene's average share of a global atmospheric greenhouse gas level of 350 ppm, which is estimated in 2016 to require an annual average emission reduction level of 7.6%.*

Response 11: As prepared, the Eugene Climate Action Plan 2.0 anticipated a number of benefits from House Bill 2020 (2019), which ultimately was not passed by the Oregon State Legislature. House Bill 2020 and all subsequent state regulations resulting from Governor Brown's 2020 Executive Order directing Oregon's administrative agencies to develop regulations to cut pollution in line with the state's climate goals have recognized that biomass is considered a biogenic source of CO₂ emissions. Thus, only the minor methane and nitrous oxide emissions as CO₂ equivalents (CO₂e) resulting from the combustion of biomass in SSE's boiler would be considered by the city or the state as greenhouse gases contributing to climate change. Nothing in the existing Eugene Climate Action Plan 2.0 would require any changes in the operation of SSE.

Comment 12: *Seneca Sustainable Energy, LLC (SSE) proposes to increase its particulate matter emission limit from sixteen to twenty-four tons. Particulate matter includes persistent environmental contaminants, such as heavy metals. SSE emits a volume of heavy metals that, while low relative to the significant emission rate (SER), is significant nonetheless. As illustrated in Figure 2-2 in the 2022-03-31 risk assessment report, a considerable portion of the area surrounding the SSE site is zoned for exclusive farm use (EFU) or similar. Many of the EFU and similarly zoned parcels, particularly bearing southwest from the facility, are situated near the site and may see elevated levels of particulate fallout, assuming wind conditions consistent with the*

wind rose in Fig. 3-2 of the same risk assessment report. The risk assessment procedure outlined suggests that an additional risk adjustment is applied to multipathway (MP) pollutants such as heavy metals; however, it is not immediately clear what this factor is (LRAPA rules and the OARs do not clarify) nor whether said adjustment is sufficient in conducting risk assessments where the assessed facility is situated near farming activity. OAR 340-245-0050(12) allows for DEQ to require that an owner or operator conduct further risk evaluation for MP toxic air contaminants if the aforementioned adjustment does not account for specific scenarios. Because LRAPA rules are harmonized with OAR 340-245 (CAO), and as such rely upon the risk assessment procedures outlined therein, and because it is not clear whether the MP adjustment sufficiently accounts for situations where farming activity lies suitably close to a facility such that it might receive significant quantities of particulate fallout, LRAPA should undertake further consideration such as pursuing an additional risk assessment either through DEQ or directly if permissible.

Response 12: According to Section 2.5.2 – Multipathway Adjustment Factors of DEQ’s Recommended Procedures for Toxic Air Contaminant Health Risk Assessments (July 2020), DEQ considered multipathway effects on residents in developing the Risk Based Concentrations (RBCs). This document also contains information on the adjustment factors used for the RBCs. The multipathway adjustment factors for residential exposure scenarios consider: (1) inhalation of TACs in air, (2) deposition of airborne TACs to backyard soil, (3) contact with soil by incidental ingestion and dermal exposure, (4) uptake into garden vegetables, and ingestion of vegetables, and (5) bioaccumulation into women, and infant ingestion of breastmilk. The multipathway adjustment factors did not include exposure scenarios that incorporate airborne deposition to (1) agricultural land, (2) livestock grazing areas, (3) drinking water reservoirs, and (4) bodies of water for fishing. One of the reasons that the multipathway adjustment factors do not represent these exposure scenarios is that the health risk determined by risk assessments under Cleaner Air Oregon is tied to an exposure location. The theoretical risk of a nearby resident consuming agricultural products that were grown on agricultural land near a facility of concern would be diluted as the agricultural product is distributed through the marketplace. Additionally, the chronic cancer risk for this facility is one (1) excess cancer risk per million and the current chronic non-cancer risk is 0.1. As an existing source, SSE would not be subject to additional requirements under CAO unless the results of the risk assessment exceeded 25 excess cancer risk per million, or unless the chronic non-cancer risk exceeded one (1). It is unlikely that an additional multipathway risk evaluation conducted for SSE would exceed these Risk Action Levels. The primary risk driver for cancer and noncancer chronic risk at SSE is arsenic. As part of the risk assessment for Owens-Brockway in Portland, Oregon, DEQ required a multipathway analysis as allowed under the authority of OAR 340-245-0050(12). This risk assessment determined that the existing multipathway adjustment factors used to create the current arsenic RBCs for chronic noncancer risk from arsenic are very conservative and would probably encompass any chronic noncancer risk from considering agricultural land deposition and uptake.

Comment 13: *Instead of authorizing Seneca to continue to pollute Lane County, please have more than eight sensors deployed and put sensors near Seneca’s location of operation and enforce the existing regulations. LRAPA should install a few NCore systems within close proximity to the Seneca Complex.*

Response 13: Currently, LRAPA operates an air toxics monitoring site in west Eugene near the intersection of Highway 99 and Roosevelt Boulevard. This air monitoring site also measures PM₁₀ and PM_{2.5} concentrations in the atmosphere. The Highway 99 air monitor is located along the eastern border of the West Eugene neighborhoods and provides an effective indication of the air quality experienced by West Eugene residents. The Highway 99 air monitor is supported by several commercial-grade PM_{2.5} sensors installed by LRAPA and private entities in west and northwest Eugene for which the PM_{2.5} data aligns with PM_{2.5} data from the Highway 99 monitor. Placing additional monitors near SSE would not be expected to provide any new information on the impacts to the local community. It should be noted that the Eugene-Springfield area already has a higher number of monitors per capita (4 monitors) than other similar sized areas, such as Salem-Keizer (2 monitors). NCore is a multi-pollutant network that integrates several advanced measurement systems for particulates, gaseous pollutants and meteorology. The monitoring stations in the NCore network are funded and placed by US EPA. LRAPA does not have any control over the NCore monitoring network.

Comment 14: *The sawmill and cogen facilities are located within 100 kilometers of two Class I air quality protection areas located in the Willamette National Forest: Diamond Peak Wilderness and Three Sisters Wilderness areas. These areas are granted special air quality protections under Section 162(a) of the federal Clean Air Act. Are there certain conditions under which the permit modifications may impact the air quality in these wilderness areas?*

Response 14: Any source that requests to construct or modify such that the increase in criteria pollutant emissions constitutes Major New Source Review or a Type A Modification under LRAPA title 38 is required to perform an air quality modeling analysis as part of their permit application. To approve this type of application, the permittee may be required to demonstrate through the air quality modeling analysis that there is no adverse impact on air quality related values in the affected Class I areas. As part of this process, LRAPA may be required to provide notice of the permit application to US EPA and the Federal Land Manager in charge of the Class I area. The review report for SSE documents that the facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness. The 100 kilometers is a reminder to LRAPA staff and the public that these facilities are near Class I areas, but it is not a regulatory threshold. Based upon the January 11, 2017 memorandum from US EPA to Ms. Carol McCoy, Chief of the Air Resources Division of the National Park Service, state and local regulators are expected to notify Federal Land Managers of permit applications of not only facilities constructing or modifying within 100 km of a Class I area, but also large sources located at distances greater than 100 km if there is a reason to believe that such sources could affect the air quality of the Class I area. Because SSE is not undergoing any physical change or change in the method of operation that would result in an increase in emissions that would constitute Major New Source Review or a Type A Modification, there is no requirement to perform an air quality modeling analysis with this permit action.

Comment 15: *LRAPA should require Seneca SSE to report on fuel sources used.*

Response 15: Under Condition 28.e of the permit, SSE must keep and maintain records of the source of all biomass combusted in the boiler. LRAPA believes that this requirement meets the intention of the commenter to ensure that SSE is not combusting prohibited materials. Please note that this information may be considered confidential business information subject to review by only LRAPA and other state or federal agencies.

Comment 16: *LRAPA should closely monitor increase fugitive emissions from non-stationary sources at Seneca SSE.*

Response 16: There are no increased fugitive emissions expected from SSE as the facility is not modifying their operations. The commenter may be referring to the increase in the PM PSEL due to the use of a Generic PSEL as required by current rules. The use of the Generic PSEL for PM does not result in any changes in the operation of the facility that would increase fugitive emissions.

Comment 17: *LRAPA should monitor FHAP emissions before MACT compliance and prioritize establishing a minimum requirement of annual FHAP testing and verification.*

Response 17: The federal HAP emissions from wood-fired boilers are very well characterized. As part of developing National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, US EPA required a number of biomass boilers around the country to perform stack testing to better understand the federal HAP emissions from these sources. This data was used as part of the Cleaner Air Oregon risk assessment process in conjunction with site specific testing previously performed at SSE. The US EPA data is considered conservative for SSE as many of the tested biomass boilers do not achieve the same high level of combustion efficiency or particulate matter control as SSE. Based upon available existing testing and monitoring information and the type of fuel combusted by SSE, LRAPA does not expect SSE to have any issues demonstrating compliance with the

emission limits required under the NESHAP. In summary, LRAPA does not believe that additional monitoring is warranted prior to the implementation of the NESHAP requirements.

Public Hearing Comment Receipt Log

Oral comments were received from:

John Brown 101 East Broadway Eugene, OR 97401 john@eebcre.com (In Person)	Vonnie Mikkelsen Springfield Chamber of Commerce vonnie@springfield- chamber.org (Remote)	Tiffany Monroe Lane County Farm Bureau tiffanycmonroe@gmail.com (Remote)
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Public Comment Receipt Log

Written comments were received from:

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PUBLIC COMMENT PROCESS PERMIT CHANGES

85. The following is a list of condition-by-condition changes between the draft Title V permit and the proposed Title V permit as part of the public comment process:

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
73-75	73-75	Updated the CAO general conditions	DEQ revised their CAO general conditions template during the public comment period for this permit.

EPA REVIEW

86. The proposed permit was sent to EPA for a 45-day review period on August 5, 2022. LRAPA did not request An expedited review of five days as there were comments submitted during the public notice comment period and hearing. EPA did not submit comments. In any event, the public will have 105 days (45-day EPA review period plus 60 days) from the date the proposed permit was sent to EPA to appeal the permit with EPA.

JJW:cmw
09/20/2022

EMISSION DETAIL SHEETS

Seneca Sustainable Energy, LLC - 206470									
Emission Detail Sheets									
Plant Site Emission Limits									
Pollutant	Baseline (TPY)	Existing Netting Basis (TPY)	Proposed Netting Basis (TPY)	Existing PSEL (TPY)	Proposed PSEL (TPY)	Unassigned Emissions (TPY)	PSEL Increase Over Netting Basis (TPY)	PTE (TPY)	SER (TPY)
PM	0	16	0	16	24	0	24	11	25
PM ₁₀	0	16	16	16	14	5	0	11	15
PM _{2.5}	NA	16	16	16	14	5	0	11	10
CO	0	201	201	201	201	0	0	201	100
NO _x	0	185	0	185	185	0	185	185	40
SO ₂	0	0	0	39	39	0	39	14	40
VOC	0	0	0	39	39	0	39	1	40
GHG	216,683	325,591	216,683	325,591	290,683	0	74,000	323,818	75,000

Seneca Sustainable Energy, LLC - 206470									
Emission Detail Sheets									
Facility Potential Emission Summary									
		Pollutant (TPY)							
EU ID	Emission Unit Description	PM	PM ₁₀	PM _{2.5}	CO	NO _x	SO ₂	VOC	GHG
EU-1	Wood-Fired Boiler (B-1)	10.5	10.5	10.5	201	185	14.2	1.1	323,818
EU-2	Fuel Handling	0.54	0.54	0.51	NA	NA	NA	NA	NA
Total =		11	11	11	201	185	14	1	323,818

Seneca Sustainable Energy, LLC - 206470									
Emission Detail Sheets									
Pollutant - PM									
		Max						PTE	
EU ID	Emission Unit Description	Device/Activity/Parameter	Annual Rate	Units	EF	Unit	Reference	TPY	
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.007	lb/MMBtu	PM10 Compliance Testing	10.5	
EU-2	Fuel Handling	NA	NA	NA	0.54	tons/yr	US EPA AP-42	0.54	
Total =								11.0	
Notes:									
PM emissions assumed to be equivalent to PM10 emissions									

Seneca Sustainable Energy, LLC - 206470									
Emission Detail Sheets									
Pollutant - PM10									
		Max						PTE	
EU ID	Emission Unit Description	Device/Activity/Parameter	Annual Rate	Units	EF	Unit	Reference	TPY	
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.007	lb/MMBtu	Compliance Testing	10.5	
EU-2	Fuel Handling	NA	NA	NA	0.54	tons/yr	US EPA AP-42	0.54	
Total =								11.0	
Notes:									
PM10 emission factor based on the average of all valid PM10 compliance testing since startup.									

Seneca Sustainable Energy, LLC - 206470									
Emission Detail Sheets									
Pollutant - PM2.5									
		Max						PTE	
EU ID	Emission Unit Description	Device/Activity/Parameter	Annual Rate	Units	EF	Unit	Reference	TPY	
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.007	lb/MMBtu	PM10 Compliance Testing	10.5	
EU-2	Fuel Handling	NA	NA	NA	0.51	tons/yr	US EPA AP-42	0.51	
Total =								11.0	
Notes:									
PM2.5 emissions assumed to be equivalent to PM10 emissions									

Seneca Sustainable Energy, LLC - 206470
 Emission Detail Sheets
 Pollutant - CO

EU ID	Emission Unit Description	Device/Activity/Parameter	Max				Reference	PTE
			Annual Rate	Units	EF	Unit		TPY
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.156	lb/MMBtu	Highest annual CEMS data	201
EU-2	Fuel Handling	NA	NA	NA	NA	NA	NA	NA
Total =								201

Notes:
 The CO PTE is set to the PSEL based on the CO emission limitations in the permit.

Seneca Sustainable Energy, LLC - 206470
 Emission Detail Sheets
 Pollutant - NOx

EU ID	Emission Unit Description	Device/Activity/Parameter	Max				Reference	PTE
			Annual Rate	Units	EF	Unit		TPY
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.197	lb/MMBtu	Highest annual CEMS data	185
EU-2	Fuel Handling	NA	NA	NA	NA	NA	NA	NA
Total =								185

Notes:
 The NOx PTE is set to the PSEL based on the NOx emission limitations in the permit.

Seneca Sustainable Energy, LLC - 206470
 Emission Detail Sheets
 Pollutant - SO2

EU ID	Emission Unit Description	Device/Activity/Parameter	Max				Reference	PTE
			Annual Rate	Units	EF	Unit		TPY
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.0092	lb/MMBtu	Compliance Testing	14.2
EU-2	Fuel Handling	NA	NA	NA	NA	NA	NA	NA
Total =								14.2

Notes:
 SO2 emissions based upon the results of compliance testing performed 04/27/2011.

Seneca Sustainable Energy, LLC - 206470
 Emission Detail Sheets
 Pollutant - VOC

EU ID	Emission Unit Description	Device/Activity/Parameter	Max				Reference	PTE
			Annual Rate	Units	EF	Unit		TPY
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	0.0007	lb/MMBtu	Compliance Testing	1.1
EU-2	Fuel Handling	NA	NA	NA	NA	NA	NA	NA
Total =								1.1

Notes:
 Emission factor reported 'as Carbon'. Potential VOC emissions 'as VOC' may be as much as 3 times higher.

Seneca Sustainable Energy, LLC - 206470
 Emission Detail Sheets
 Pollutant - GHGs

EU ID	Emission Unit Description	Device/Activity/Parameter	Max				Reference	PTE
			Annual Rate	Units	EF	Unit		TPY
EU-1	Wood-Fired Boiler (B-1)	Maximum Heat Input	352.8	MMBtu/hr	93.8	kg CO2/MMBtu	40 CFR 98 Table C-1	319,550
					0.0072	kg CH4/MMBtu	40 CFR 98 Table C-2	613
					0.0036	kg N2O/MMBtu	40 CFR 98 Table C-2	3,655
EU-2	Fuel Handling	NA	NA	NA	NA	NA	NA	
Total =								323,818

Notes:

Seneca Sustainable Energy, LLC - 206470					
Emission Detail Sheets					
CIA Emissions					
1000 kW Generator					
72.2	Max. hourly fuel usage				
100	Max. hours of operation				
CAS	Pollutant	Reference	Emission Factor (lb/M gal)	Potential Emissions (lbs/hr)	Potential Emissions (TPY)
71-43-2	Benzene	2020 ATEI Combustion Tool	0.1863	1.35E-02	6.73E-04
106-99-0	1,3-Butadiene	2020 ATEI Combustion Tool	0.2174	1.57E-02	7.85E-04
7440-43-9	Cadmium and compounds	2020 ATEI Combustion Tool	0.0015	1.08E-04	5.42E-06
50-00-0	Formaldehyde	2020 ATEI Combustion Tool	1.7261	0.12	6.23E-03
18540-29-9	Chromium VI, chromate and dichromate particulate	2020 ATEI Combustion Tool	0.0001	7.22E-06	3.61E-07
7440-38-2	Arsenic and compounds	2020 ATEI Combustion Tool	0.0016	1.16E-04	5.78E-06
7439-92-1	Lead and compounds	2020 ATEI Combustion Tool	0.0083	5.99E-04	3.00E-05
365	Nickel compounds, insoluble	2020 ATEI Combustion Tool	0.0039	2.82E-04	1.41E-05
91-20-3	Naphthalene	2020 ATEI Combustion Tool	0.0197	1.42E-03	7.11E-05
401	Polycyclic aromatic hydrocarbons (PAHs) (exc. naphthalene)	2020 ATEI Combustion Tool	0.0362	2.61E-03	1.31E-04
50-32-8	Benzo[a]pyrene	AP-42 Section 3.4	3.55E-05	2.56E-06	1.28E-07
75-07-0	Acetaldehyde	2020 ATEI Combustion Tool	0.7833	5.66E-02	2.83E-03
107-02-8	Acrolein	2020 ATEI Combustion Tool	0.0339	2.45E-03	1.22E-04
7664-41-7	Ammonia	EPA Webfire	2.9	0.21	1.05E-02
7440-50-8	Copper and compounds	2020 ATEI Combustion Tool	0.0041	2.96E-04	1.48E-05
100-41-4	Ethyl benzene	2020 ATEI Combustion Tool	0.0109	7.87E-04	3.93E-05
110-54-3	Hexane	2020 ATEI Combustion Tool	0.0269	1.94E-03	9.71E-05
7647-01-0	Hydrochloric acid	2020 ATEI Combustion Tool	0.1863	1.35E-02	6.73E-04
7439-96-5	Manganese and compounds	2020 ATEI Combustion Tool	0.0031	2.24E-04	1.12E-05
7439-97-6	Mercury and compounds	2020 ATEI Combustion Tool	0.002	1.44E-04	7.22E-06
7782-49-2	Selenium and compounds	2020 ATEI Combustion Tool	0.0022	1.59E-04	7.94E-06
108-88-3	Toluene	2020 ATEI Combustion Tool	0.1054	7.61E-03	3.80E-04
1330-20-7	Xylene (mixture), including m-xylene, o-xylene, p-xylene	2020 ATEI Combustion Tool	0.0424	3.06E-03	1.53E-04
200	Diesel particulate matter	2020 ATEI Combustion Tool	33.5	2.42	0.12
Note:					
Diesel is assumed to have a net heating value of 138 MMBtu per 1,000 gallons.					

Organics						
Acetaldehyde	3.27E-04	Source Testing	0.51	2.83E-03	Yes	Yes
Acetone	1.19E-03	NCASI TB 1013	1.84		No	Yes
Acetophenone	1.84E-06	NCASI TB 1013	2.84E-03		Yes	Yes
Acrolein	1.05E-04	Source Testing	0.16	1.22E-04	Yes	Yes
Benzene	9.80E-04	NCASI TB 1013	1.51	6.73E-04	Yes	Yes
Benzo[a]pyrene				1.28E-07	Yes	Yes
Bis(2-Ethylhexyl)phthalate	4.65E-08	NCASI TB 1013	7.19E-05		Yes	Yes
Bromomethane	1.14E-05	NCASI TB 1013	1.76E-02		No	Yes
1,3-Butadiene				7.85E-04	Yes	Yes
Butylbenzylphthalate	1.34E-05	NCASI TB 1013	2.07E-02		No	Yes
Carbon disulfide	1.25E-04	NCASI TB 1013	0.19		Yes	Yes
Carbon tetrachloride	2.01E-05	NCASI TB 1013	3.11E-02		Yes	Yes
Chlorobenzene	1.66E-05	NCASI TB 1013	2.57E-02		Yes	Yes
Chloroform	2.01E-05	NCASI TB 1013	3.11E-02		Yes	Yes
Chloromethane (Methyl Chloride)	3.78E-05	NCASI TB 1013	5.84E-02		Yes	Yes
2-Chlorophenol	1.85E-08	NCASI TB 1013	2.86E-05		No	Yes
Crotonaldehyde	4.49E-05	NCASI TB 1013	6.94E-02		No	Yes
Cumene (Isopropylbenzene)	1.77E-05	NCASI TB 1013	2.74E-02		Yes	Yes
1,4-Dichlorobenzene	2.79E-04	NCASI TB 1013	0.43		Yes	Yes
1,2-Dichloroethane (Ethylene Dichloride)	2.92E-05	NCASI TB 1013	4.51E-02		Yes	Yes
1,2-Dichloroethene	1.37E-03	NCASI TB 1013	2.12		No	Yes
1,2-Dichloropropane	1.68E-05	NCASI TB 1013	2.60E-02		No	Yes
Diesel Particulate Matter				0.12		
Diethyl phthalate	2.18E-05	NCASI TB 1013	3.37E-02		No	Yes
Dibutyl phthalate	3.33E-05	NCASI TB 1013	5.15E-02		Yes	Yes
4,6-Dinitro-2-methylphenol	2.10E-06	NCASI TB 1013	3.25E-03		Yes	Yes
2,4-Dinitrophenol	1.31E-07	NCASI TB 1013	2.02E-04		Yes	Yes
2,4-Dinitrotoluene	9.42E-07	NCASI TB 1013	1.46E-03		Yes	Yes
Dioxins/Furans as TEQ	6.56E-13	See D/F Table	1.01E-09		Yes	Yes
Ethylbenzene	3.95E-04	NCASI TB 1013	0.61	3.93E-05	Yes	Yes
Formaldehyde	1.05E-04	Source Testing	0.16	6.23E-03	Yes	Yes
Hexachlorobenzene	1.03E-06	NCASI TB 1013	1.59E-03		Yes	Yes
n-Hexane	2.88E-04	NCASI TB 1013	0.45	9.71E-05	Yes	Yes
Isopropanol	3.64E-03	NCASI TB 1013	5.62		No	Yes
Methanol	7.32E-04	NCASI TB 1013	1.13		Yes	Yes
Methyl Ethyl Ketone	1.56E-05	NCASI TB 1013	2.41E-02		No	Yes
Methyl Isobutyl Ketone	4.45E-04	NCASI TB 1013	0.69		Yes	Yes
Methylene Chloride (Dichloromethane)	5.47E-04	NCASI TB 1013	0.85		Yes	Yes
Naphthalene	9.96E-05	NCASI TB 1013	0.15	7.11E-05	Yes	Yes
4-Nitrophenol	9.41E-08	NCASI TB 1013	1.45E-04		Yes	Yes
POM/PAH	1.15E-05	See PAH Table	1.77E-02	1.31E-04	Yes	Yes
PCBs (Total)	7.86E-09	NCASI TB 1013	1.21E-05		Yes	Yes
Pentachlorophenol	2.29E-07	NCASI TB 1013	3.54E-04		Yes	Yes
Phenol	1.60E-04	NCASI TB 1013	0.25		Yes	Yes
Propionaldehyde	2.52E-04	NCASI TB 1013	0.39		Yes	Yes
Styrene	3.97E-06	Source Testing	6.13E-03		Yes	Yes
Tetrachloroethene (Perchloroethylene)	2.46E-05	NCASI TB 1013	3.80E-02		Yes	Yes
Toluene	7.02E-06	Source Testing	1.08E-02	3.80E-04	Yes	Yes
1,1,1-Trichloroethane (Methyl Chloroform)	5.78E-05	NCASI TB 1013	8.93E-02		Yes	Yes
Trichloroethene	1.99E-05	NCASI TB 1013	3.08E-02		Yes	Yes
Trichlorofluoromethane	1.59E-05	NCASI TB 1013	2.46E-02		No	Yes
2,4,6-Trichlorophenol	2.76E-07	NCASI TB 1013	4.26E-04		Yes	Yes
Vinyl chloride	1.84E-05	NCASI TB 1013	2.84E-02		Yes	Yes
Xylenes	5.22E-06	NCASI TB 1013	8.07E-03	1.53E-04	Yes	Yes
Total Organic FHAPs (TPY) =			7.99	1.15E-02		

				SSE	
		Potential Individual Federal HAP =	1.51	TPY (Benzene)	
		Potential Aggregate Federal HAPs =	11.6	TPY	
		Total HAP Factor =	7.50E-03	lb/MMBtu	
		Highest HAP Factor =	9.80E-04	lb/MMBtu (Benzene)	

	Emission		Potential		
	Factor		Emissions	Federal	CAO
PAHs (ex. Naphthalene)	(lb/MMBtu)	Reference	(TPY)	HAP	Toxic
2-Methylnaphthalene	2.30E-06	NCASI TB 1013	3.55E-03	Yes	Yes
Acenaphthene	1.59E-07	AP-42/NCASI	2.46E-04	Yes	Yes
Acenaphthylene	2.26E-06	AP-42/NCASI	3.49E-03	Yes	Yes
Anthracene	1.42E-07	AP-42/NCASI	2.19E-04	Yes	Yes
Benzo(a)anthracene	3.38E-08	AP-42/NCASI	5.22E-05	Yes	Yes
Benzo(a)pyrene	1.87E-08	AP-42/NCASI	2.89E-05	Yes	Yes
Benzo(b)fluoranthene	4.17E-08	AP-42/NCASI	6.44E-05	Yes	Yes
Benzo(e)pyrene	1.56E-07	NCASI TB 1013	2.41E-04	Yes	Yes
Benzo(g,h,i)perylene	5.07E-08	AP-42/NCASI	7.83E-05	Yes	Yes
Benzo(k)fluoranthene	8.09E-08	AP-42/NCASI	1.25E-04	Yes	Yes
Chrysene	5.80E-08	AP-42/NCASI	8.96E-05	Yes	Yes
Dibenzo(a,h)anthracene	1.03E-08	AP-42	1.59E-05	Yes	Yes
Dimethylbenz(a)anthracene-7,12	4.57E-09	NCASI TB 1013	7.06E-06	Yes	Yes
Fluoranthene	1.25E-06	AP-42/NCASI	1.93E-03	Yes	Yes
Fluorene	3.28E-07	AP-42/NCASI	5.07E-04	Yes	Yes
Indeno(1,2,3-cid)pyrene	1.47E-08	AP-42/NCASI	2.27E-05	Yes	Yes
Methylcholanthrene-3	8.68E-09	NCASI TB 1013	1.34E-05	Yes	Yes
Perylene	6.58E-09	NCASI TB 1013	1.02E-05	Yes	Yes
Phenanthrene	2.62E-06	AP-42/NCASI	4.05E-03	Yes	Yes
Pyrene	1.93E-06	AP-42/NCASI	2.98E-03	Yes	Yes
PAH FHAP Emission Factor =	1.15E-05	PAH FHAP Total =	1.77E-02		

	Emission		Potential		
	Factor		Emissions	Federal	CAO
Dioxin/Furans	(ug/ODT wood)	Reference	(lb/yr)	HAP	Toxic
TetraCDD, 2,3,7,8-	0.005	NCASI TB 1013	1.01E-09	Yes	Yes
1,2,3,7,8-PentaCDD	0.011	NCASI TB 1013	2.23E-09	No	Yes
1,2,3,4,7,8-HexaCDD	0.007	NCASI TB 1013	1.42E-09	No	Yes
1,2,3,6,7,8-HexaCDD	0.017	NCASI TB 1013	3.45E-09	No	Yes
1,2,3,7,8,9-HexaCDD	0.017	NCASI TB 1013	3.45E-09	No	Yes
1,2,3,4,6,7,8-HeptaCDD	0.075	NCASI TB 1013	1.52E-08	No	Yes
OctaCDD	0.190	NCASI TB 1013	3.85E-08	No	Yes
2,3,7,8-TetraCDF	0.063	NCASI TB 1013	1.28E-08	No	Yes
1,2,3,7,8-PentaCDF	0.031	NCASI TB 1013	6.29E-09	No	Yes
2,3,4,7,8-PentaCDF	0.043	NCASI TB 1013	8.72E-09	No	Yes
1,2,3,4,7,8-HexaCDF	0.028	NCASI TB 1013	5.68E-09	No	Yes
1,2,3,6,7,8-HexaCDF	0.024	NCASI TB 1013	4.87E-09	No	Yes
1,2,3,7,8,9-HexaCDF	0.005	NCASI TB 1013	1.01E-09	No	Yes
2,3,4,6,7,8-HexaCDF	0.020	NCASI TB 1013	4.06E-09	No	Yes
1,2,3,4,6,7,8-HeptaCDF	0.044	NCASI TB 1013	8.92E-09	No	Yes
1,2,3,4,7,8,9-HeptaCDF	0.007	NCASI TB 1013	1.42E-09	No	Yes
OctaCDF	0.039	NCASI TB 1013	7.91E-09	No	Yes
D/F FHAP Emission Factor =	6.56E-13	D/F FHAP Total =	1.01E-09		

