LANE REGIONAL AIR PROTECTION AGENCY
TITLE V OPERATING PERMIT
REVIEW REPORT

1010 Main Street
Springfield, OR 97477

Kingsford Manufacturing Company **Permit No. 204402**
3315 Marcola Road
Springfield, Oregon 97478
Website: http://www.kingsford.com/

Source Information:

Primary SIC	2861
Secondary SIC	--
Primary NAICS	325191
Secondary NAICS	--

Source Category (LRAPA Title 37, Table 1)	Part B: 69. Charcoal manufacturing. Part C: 4. All sources that request a PSEL equal to or greater than the SER for a regulated pollutant. Part C: 5. All sources having the potential to emit more than 100 tons or more of any regulated pollutant, except GHG, in a year
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	N
CEMS	N
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	Immediately
Other reports	N

Air Programs

NSPS (list subparts)	N
NESHAP (list subparts)	A, ZZZZ
CAM	Y
Regional Haze (RH)	N
Part 68 Risk Management	N
Cleaner Air Oregon (CAO)	N
Synthetic Minor (SM)	N
SM-80	N
Title V	Y
Major FHAP Source	N
Federal Major Source	Y
TACT	N

Type A State New Source Review	N
Type B State New Source Review	N
Prevention of Significant Deterioration (PSD)	N
Nonattainment New Source Review (NNSR)	N

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT

ACDP	Air Contaminant Discharge Permit
AQMA	Air Quality Management Area
Act	Federal Clean Air Act
ASTM	American Society of Testing and Materials
Btu	British thermal unit
CAM	Compliance Assurance Monitoring
CAO	Cleaner Air Oregon
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CI	Compression Ignition
CMS	Continuous Monitoring System
CO	Carbon Monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
COMS	Continuous Opacity Monitoring System
CPDS	Certified Product Data Sheet
CPMS	Continuous parameter monitoring system
DEQ	Department of Environmental Quality
dscf	Dry standard cubic feet
EF	Emission factor
EPA	US Environmental Protection Agency
EU	Emissions Unit
FCAA	Federal Clean Air Act
FHAP	Federal Hazardous Air Pollutants as defined by LRAPA title 12
ft^2	Square foot
FSA	Fuel sampling and analysis
GHG	Greenhouse Gas
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)
HCFC	Halogenated Chloro-Fluoro-Carbons
Hr	Hour
ID	Identification number or label
Lb	Pound
LRAPA	Lane Regional Air Protection Agency
MACT	Maximum Achievable Control Technology
MM	Million
MMBtu	Million British thermal units
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
ODEQ	Oregon Department of Environmental Quality
OPR	Operation
ORS	Oregon Revised Statutes
O&M	Operation and maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate matter
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PM_{10}	Particulate matter less than 10 microns in size
ppm	Parts per million
PSEL	Plant Site Emission Limit
psia	pounds per square inch, actual
PTE	Potential to Emit
PWR	Process weight rate
QIP	Quality Improvement Plan
RICE	Reciprocating Internal Combustion Engine
SACC	Semi-Annual Compliance Certification
SCEMP	Surrogate Compliance Emissions Monitoring Parameter
Scf	Standard cubic foot
SDS	Safety data sheet
SER	Significant emission rate
SERP	Source emissions reduction plan
SI	Spark Ignition
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	Sulfur dioxide
ST	Source test
TAC	Toxic Air Contaminant
TACT	Typically Achievable Control Technology
TBI	To be installed
TPY	Tons per year
TSM	Total selected metals
UGB	Urban growth boundary
VE	Visible emissions
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
VHAP	Volatile hazardous air pollutant
Year	A period consisting of any 12-consecutive calendar month

INTRODUCTION

1. Kingsford Manufacturing Company ("KMC" or "the facility") is an existing facility applying for renewal of an existing Title V Operating Permit. Upon issuance, the renewed Title V Operating Permit will be valid for five (5) years.

    1.a. Information relied upon: The renewed Title V Operating Permit is based upon application no. 69796 received August 21, 2023 and application no. 70824 received on August 21, 2024.

2. As part of the renewal of the existing Title V Operating Permit, the facility has requested modification of the Title V Operating Permit as listed below. Additional information concerning these modifications is included in each emissions unit section discussion or the stack testing section, as applicable:
    2.a. Emissions Unit EU03 – revision of the CAM requirements.
    2.b. Emissions Unit EU08 – change fabric filter inspection frequency from quarterly to semiannually.
    2.c. Emissions Unit EU10 – change the monitoring and recordkeeping from visible emission monitoring to documentation of fuel use capability.
    2.d. Emissions Unit EU11 – change maximum daily uncontrolled solvent discharge limit from 8 (eight) hours per day to 12 hours per day.
    2.e. Remove PM_{10} and SO_2 periodic testing requirements for some emissions units, as applicable.

3. As part of the renewal of the existing Title V Operating Permit, LRAPA has modified the Title V Operating Permit to update any regulatory requirements that were changed as part of a rule package approved by the LRAPA Board of Directors in April 2024. Additional information concerning these modifications is included in each emissions unit section discussion, as applicable.

4. 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

5. KMC manufactures and packages charcoal briquets. The charcoal manufacturing operation consists of two (2) separate production areas, char production and briquet manufacturing. The char production process uses a retort furnace to convert wood hogged fuel into char. The briquet manufacturing process consists of mixing additives with the char to form, dry, and package charcoal briquets. Solvent treated briquets are manufactured by adding solvent to charcoal briquets prior to packaging. KMC began operations in 1967.

6. The facility is located in an area that is generally flat. To the north of the facility is a governmental office building and a mobile home park. To the east of the facility is a light commercial area and the McKenzie River. To the south of the facility is a mixed industrial/commercial area and a residential area. To the west of the facility is a residential area.

GENERAL BACKGROUND INFORMATION

7. KMC is a Title V major source because potential PM and NO_X emissions exceed 100 tons per year. The facility is considered a federal major source for PSD purposes because charcoal production plants are a listed source category and the potential emissions of at least one (1) criteria pollutant are more than the listed source emission threshold of 100 tons per year. The facility is an area source of federal HAPs.

8. The facility is located in an area that has been designated as attainment or unclassified for all criteria pollutants. The facility is inside the Eugene-Springfield UGB as defined in LRAPA 29-0010 which designates the Eugene-Springfield CO and PM_{10} maintenance areas. The facility is also located inside the Eugene-Springfield UGB as described in the current Eugene-Springfield Metropolitan Area General Plan, as amended. The facility is located within 100 kilometers of three (3) Class I air quality protection areas: Diamond Peak Wilderness, Mount Washington and Three Sisters Wilderness.

9. LRAPA has reviewed and issued the following permitting actions to this facility since the issuance of the last Title V Operating Permit renewal:

Date Approved	Permit Action Type	Description
08/26/2019	Title V Operating Permit	Renewal.
01/31/2020	NC-204402-A20 (Off-Permit Change)	Installation of a biochar loading station.
05/20/2020	NC-204420-B20 (Off-Permit Change)	Modification of existing starch and lignite handling/storage operations.
09/14/2020	Minor Permit Modification – Addendum No. 1	Modification to incorporate limitations related to the Regional Haze program and update the permit to reflect the use of propane as a backup fuel for natural gas.
09/24/2021	NC-204402-A21	Replacement of the existing solvent treated briquet (STB) dip tank and curtain coater with an enclosed spray application system.
09/17/2021	NC-204402-B21 (Off-Permit Change)	Replacement of the centerfinder in the after combustion chamber and replacement of the retort furnace induced draft fan variable frequency drive.
11/15/2021	Minor Permit Modification – Addendum No. 2	Incorporate the changes authorized under NC-204402-A21.
05/06/2022	NC-204402-A22 (Off-Permit Change)	Replacement of the hot air fan variable frequency drive and motor.
09/10/2024	NC-204402-A24 (Off-Permit Change)	Installation of a transfer hopper with bin vent on the existing starch silo.
01/03/2025	Title V Operating Permit	Renewal.

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

10. The existing emissions units regulated by the permit are the following:

Emissions Unit ID	Emissions Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
Significant Emissions Units			
EU01	Wood Fuel Receipt and Storage	Tilt-Dump Controls: (2001) Partial Enclosure with Negative Air Baghouse Water Spray	Various – See Emissions Unit Discussion
EU02	Hogfuel Sizing and Infeed System	Not Applicable	2002/2008
EU03	Charring and Drying System: Wood Fuel Drying System Charcoal Manufacturing Briquet Dryers ACC Burners for Startups	 After Combustion Chamber (03-01C) After Combustion Chamber (03-01C) Not Applicable Not Applicable	Various – See Emissions Unit Discussion
EU04	Briquet Cooling	Not Applicable	1977

Emissions Unit ID	Emissions Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
EU08	Briquet Handling System: Briquetting Briquet Conveying Briquet Packaging	 Wet Scrubber (08-26C) Small Vokes Dust Collector (08-27C) West Dust Collector (08-29C) East Dust Collector (08-30C) North Package Bin Vent Dust Collector (08-41C) South Package Bin Vent Dust Collector (08-42C)	Various – See Emissions Unit Discussion
EU10	3.345 MMBtu Boiler	Not Applicable	1970
EU11	Solvent-Treated Briquet (STB) Operation	ACC (03-01C) West Dust Collector (08-29C)	2000
Categorically Insignificant Activities			
CIA-1	274 kW Gas-Fired Emergency RICE	Not Applicable	<2006
Aggregate Insignificant Activities			
AIA-1	Starch Silo	Bin Vent	1982
AIA-2	Lime Silo	Bin Vent	2004
AIA-3	Flavor Dust Blower Exhaust	Not Applicable	1985
AIA-4	Flavor Dust Tank	Bin Vent	2003
AIA-5	Flavor Dust Truck Unloader	Bin Vent	2007
AIA-6	Starch Filter/Receiver	Bin Vent	2022
AIA-7	Starch Transfer Hopper	Bin Vent	2025
AIA-8	Hammermill Blending	Bin Vent	2010
AIA-9	Briquet Press	Dust Collector	1997
AIA-10	Rerun Storage	Dust Collector	2017
AIA-11	Blend I/F Tramco	Bin Vent	2010
AIA-12	Vacuum System Blower	Bin Vent	2013
AIA-13	Fugitive Dust Sources	Not Applicable	--

11. Emissions Unit EU01 – Wood Fuel Receipt and Storage: EU01 consists of a tilt-dump and wood storage piles. The wet hog fuel is delivered by truck and unloaded by a tilt-dump to form storage piles. The operation has a maximum annual throughput of 320,000 tons of wet hog fuel at 50% moisture per year or approximately 160,000 tons of dry wood per year. The material storage area measures approximately 1000 feet by 1000 feet in plan and is about 50 feet high. The tilt-dump is partially enclosed and under negative air. A baghouse is used to control any captured particulate matter. A water spray is used to wet incoming material before it is transferred to the storage piles. The current tilt dump became operational in 2001. The wood storage operation has existed since the facility began operations in 1967. As part of this renewal, the facility provided an excerpt from Technical Bulletin 884 developed by the National Council on Air and Stream Improvement. Technical Bulletin 884 contains an estimation methodology for VOC emissions from wood chip piles that documents that VOC emissions from fresh cut wood chips decline exponentially – reaching insignificant emission rates within a few hours.

12. Emissions Unit EU02 – Hogfuel Sizing and Infeed System: The wet hog fuel is moved on a series of conveyers across a belt scale to a screener. Material passing through the screener is sent to the hog fuel dryer. Material caught by the screener is sent to a hammer mill, and then to the hog fuel dryer. The sizing and infeed system has the capacity to process approximately 72 tons per hour of wet wood at 50% moisture. The current primary mill became operational in 2002 and the secondary system became operational in 2008.

13. Emissions Unit EU03 – Charring and Drying System: There are five (5) emission points in EU03:

- ACC Stack
- Dryer 1 Wet End Exhaust
- Dryer 1 Dry End Exhaust
- Dryer 2 Wet End Exhaust
- Dryer 2 Dry End Exhaust

Charring
Wet wood hog fuel is dried in a drying system. Heated air from the drying system is conveyed to material recovery cyclones and sent to the after combustion chamber (ACC) on the retort furnace. After being dried, the wood hog fuel is conveyed to the retort furnace, which is a multi-hearth furnace, where the wood hog fuel pyrolyzes into charcoal and off-gases. The charcoal is cooled and conveyed to storage. The off-gases pass through hot cyclones for recovery of charcoal material before entering the after combustion chamber (ACC). Some of the heated air from the ACC is recovered and used in the briquet dryers. Material recovered from the cyclones is combined with dry wood hog fuel being conveyed to the retort. Heated air from the ACC is exhausted directly to the atmosphere.

Drying
The wet briquets created in the briquetting process (see EU08) are dried in one (1) of two (2) briquet dryers. Briquet Dryer 1 became operational in 1977. Briquet Dryer 2 became operational in 1994. Heated air from the briquet dryers is exhausted directly to the atmosphere.

The following table describes the equipment used in the charring and drying system:

Device Description	Device ID	Year Installed	Device Capacity	Pollution Control Device	PCD ID	PCD Design Parameters
Wood Fuel Drying System	NA	1997 Burner replaced 2019	72 wet tons/hour 320,000 wet tons/year	After Combustion Chamber	03-01C	1400-2000ºF
Charcoal Manufacturing	03-01P	1974	9 tons/hour, 48,000 tons/year	After Combustion Chamber	03-01C	1400-2000ºF
Briquet Dryers	03-02P	1977 for Dryer 1; 1994 for Dryer 2	21 tons/hour 150,000 tons/year	NA	NA	NA
ACC Assist Burners	NA	Two (2) low-NO_X burners (2013); two (2) burners (1985)	Four (4) natural gas- or propane-fired burners rated at 70 MMBtu/hr total heat input	NA	NA	NA

14. Emissions Unit EU04 – Briquet Cooling: The dried briquets are conveyed through the briquet coolers, and then to storage. In the briquet coolers, fans pull ambient air through the bed of briquets. The air from the briquet coolers is exhausted directly to the atmosphere. The briquet cooling system (Device ID 04-01P) was installed in 1977 and has the capacity to process 21 tons of briquets per hour (daily average) and 150,000 tons of briquets per year.

15. Emissions Unit EU08 – Briquet Handling System: In briquetting, retort char is combined with other carbon material, limestone, minor ingredients, water, and starch as a binder. The mixed material is conveyed to the briquet press which continuously forms the materials into wet briquets. The briquets are dried in one (1) of two (2) briquet dryers (see EU03). Dried briquets are conveyed from the storage area to the Packaging Department, where they are filled into bags, palletized, warehoused, and shipped from the plant site. The

briquet handling system has the capacity to process 21 tons of briquets per hour (daily average) and 150,000 tons of briquets per year. The following table describes the equipment used in the briquet handling system.

Device Description	Device ID	Year Installed	Pollution Control Device	PCD ID	PCD Design Parameters
Briquetting	08-26D	1993	Wet Dust Collector (Wet Scrubber)	08-26C	5 gal/min design water flow rate 20 psig design water pressure 2500 acfm design inlet gas flow rate 2 in water design pressure drop
Briquet Conveying	08-27D 08-29D	1967 1967	West Dust Collector	08-29C	99.95% rated efficiency 23,000 acfm design inlet gas flow rate 8.8:1 air-to-cloth ratio 14-15 in water design pressure drop
			East Dust Collector	08-30C	
			Small Vokes Dust Collector	08-27C	99.95% rated efficiency 10,000 acfm design inlet gas flow rate 7.7:1 air-to-cloth ratio 12 in water design pressure drop
Briquet Packaging	08-41D 08-42D	1967 1967	North Package Bin Vent Dust Collector	08-41C	99.95% rated efficiency 1400 acfm design inlet gas flow rate 7:1 air-to-cloth ratio 2-4 in water design pressure drop
			South Package Bin Vent Dust Collector	08-42C	

16. Emissions Unit EU10 – 3.345 MMBtu Boiler: The facility operates a natural gas- or propane-fired boiler (Device ID 10-01P), which was installed in June of 1970, and is rated at 3.345 MMBtu/hour. The exhaust from the burner is vented directly to the atmosphere.

17. Emissions Unit EU11 – Solvent-Treated Briquet (STB) Operation: In the solvent-treated briquet (STB) operation some of the charcoal briquets are treated with Match Light® and BBQ Bag® solvent before packaging. The operating schedule for the source is 8,232 hours per year. Emissions from some of the solvent-handling equipment, i.e., equipment that is located inside the STB building, are collected by the solvent exhaust system and ducted to the existing ACC. In the event of an ACC malfunction, the solvent exhaust system will be discharged to the atmosphere uncontrolled. The STB operation was installed in 2000. The STB operation was modified in 2022 to change the way the solvent was added to the process such that hourly solvent emissions decreased.

The following table describes the equipment used in the STB operation:

Device Description	Year Installed	Device Capacity	Pollution Control Device	PCD ID	PCD Design Parameters
Solvent Application and Fines Recycling	2000	25.0 tons/hour, 73,160 tons/year	After Combustion Chamber	03-01C	1400–2000°F
Solvent Handling	2000	NA	After Combustion Chamber	03-01C	1400-2000°F
Storage Tanks	2000	NA	NA	NA	NA

ALTERNATIVE OPERATING SCENARIOS

18. In addition to the base operating scenario, the facility may also operate under the following alternative operating scenario:

- Alternative Operating Scenario EU03-1 – ACC Shutdown Briquet Dryer Emissions: When the retort furnace and wood dryer systems in EU03 are shut down and no char is being produced, the facility may operate auxiliary natural gas- or propane-fired burners to provide heat to the briquet dryers. The auxiliary burners used under this alternative operating scenario have a maximum total heat input rating of 40 MMBtu per hour.

19. The facility previously had an Alternative Operating Scenario EU03-2 related to ACC Burner Startup Emissions. This alternative operating scenario was defined as the use of assist burners to maintain the minimum ACC combustion temperature during retort furnace and wood dryer startups when no char is being produced or during process fluctuations. However, the use of these assist burners is already assumed as part of normal operation of this process and limited to 2,500 hours per year. As such, this alternative operating scenario will be removed as part of this renewal.

AGGREGATE INSIGNIFICANT EMISSIONS

20. The emission estimates from the activities included in the aggregate insignificant emissions unit (EU-AIE) are as follows:

	Pollutant Emissions (TPY)*		
Emissions Source	**PM**	**PM_{10}**	**$PM_{2.5}$**
Starch Silo	0.001	0.001	0.001
Lime Silo	0.004	0.004	0.004
Flavor Dust Blower Exhaust	0.001	0.001	0.001
Flavor Dust Tank	0.005	0.005	0.005
Flavor Dust Truck Unloader	0.002	0.002	0.002
Starch Filter/Receiver	0.014	0.014	0.014
Starch Transfer Hopper	0.010	0.010	0.010
Hammermill Blending (exhaust into building)	0.064	0.064	0.064
Briquet Press (exhaust into building)	0.006	0.006	0.006
Rerun Storage (exhaust into building)	0.064	0.064	0.064
Blend I/F Tramco	0.074	0.074	0.074
Vacuum System Blower	0.014	0.014	0.014
Fugitive Dust Sources (Railcar/Truck Unloading and Rerun Handling)	0.040	0.040	0.040
Total for All Sources	**0.30**	**0.30**	**0.30**

*Assumes PM_{10} and $PM_{2.5}$ emissions are equal to PM emissions.
Sources that exhaust into the building assume a 50% control efficiency in addition to any process-specific controls.

CATEGORICALLY INSIGNIFICANT ACTIVITIES

21. The facility has the following categorically insignificant activities on site:

- Constituents of a chemical mixture present at less than 1 percent by weight of any chemical or compound regulated under divisions 200 through 268 excluding divisions 248 and 262 of this chapter, or less than 0.1 percent by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year

- Evaporative and tail pipe emissions from on-site motor vehicle operation
- Distillate oil, kerosene, gasoline, natural gas or propane burning equipment, provided the aggregate expected actual emissions of the equipment identified as categorically insignificant do not exceed the de minimis level for any regulated pollutant, based on the expected maximum annual operation of the equipment. If a source's expected emissions from all such equipment exceed the de minimis levels, then the source may identify a subgroup of such equipment as categorically insignificant with the remainder not categorically insignificant. The following equipment may never be included as categorically insignificant:
  - Any individual distillate oil, kerosene or gasoline burning equipment with a rating greater than 0.4 million Btu/hour;
  - Any individual natural gas or propane burning equipment with a rating greater than 2.0 million Btu/hour;
- Distillate oil, kerosene, gasoline, natural gas or propane burning equipment brought on site for six months or less for maintenance, construction or similar purposes, such as but not limited to generators, pumps, hot water pressure washers and space heaters, provided that any such equipment that performs the same function as the permanent equipment, must be operated within the source's existing PSEL
- Office activities
- Food service activities
- Janitorial activities
- Personal care activities
- Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance
- Instrument calibration
- Maintenance and repair shop
- Automotive repair shops or storage garages
- 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
- Electrical charging stations
- Fire brigade training
- 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
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment

- Pressurized tanks containing gaseous compounds
- Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities
- Storm water settling basins
- Fire suppression and training
- Paved roads and paved parking lots within an urban growth boundary
- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency, provided that the aggregate horsepower rating of all stationary emergency generator and pump engines is not more than 3,000 horsepower. If the aggregate horsepower rating of all stationary emergency generator and pump engines is more than 3,000 horsepower, then no emergency generators and pumps at the source may be considered categorically insignificant
- 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
- Combustion source flame safety purging on startup

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

22. 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 Operating 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.

23. The Title V Operating 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 particulate emissions levels will be below the emissions limits specified in the permit.

Nuisance, Deposition and Other Emission Limitations

24. Under subsection 49-010(1), the permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

25. Under section 32-055, the permittee must not cause or permit the emission of particulate matter which is larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

26. Under subsection 32-090(1), the permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property; such determination is to be made by LRAPA. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

Emission Limitations and Monitoring

Emissions Unit EU01 – Wood Fuel Receipt and Storage

27. The fugitive emissions related to Emissions Unit EU01 (piles) are subject to the visible emissions limitations under section 48-015. The permittee must not have visible emissions that leave the property of a source for a period or periods totaling more than 18 seconds in a six (6) minute period. The facility must follow, but is not limited to, the list of reasonable precautions under paragraphs 48-015(1)(a)-(g). Compliance will be demonstrated through a survey of facility fugitive emissions using EPA Method 22 to be completed at least monthly. Under the previous Title V Operating Permit, the survey of facility fugitive emissions was to be completed quarterly. LRAPA increased the frequency to monthly to more closely follow the Oregon Title V Monitoring and Testing Guidance. The permittee is required to take corrective action if any visible emissions are identified. If requested by LRAPA, the facility must develop a fugitive emission control plan.

28. The direct source emissions related to Emissions Unit EU01 (tilt) are subject to the visible emission limitations under subsection 32-010(3). This emissions unit may not have visible emissions equal to or greater than 20% opacity. Compliance is demonstrated through a survey of visible emissions using EPA Method 22 and/or EPA Method 9 to be completed at least quarterly. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. As part of the rule packaged approved by LRAPA's Board of Directors in April 2024, the averaging period for this opacity limitation changed from a period or periods aggregating more than three (3) minutes in any one hour to a six-minute block average.

29. The direct source emissions related to Emissions Unit EU01 (tilt) are subject to particulate matter emission limitations under subparagraph 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 monitoring of the pressure drop across the baghouse and inspection of the baghouse at least semiannually. As part of this renewal, LRAPA enhanced the monitoring requirements for this emissions unit from solely opacity readings to also include applicable control device monitoring parameters.

30. The direct source emissions related to Emissions Unit EU01 (tilt) are subject to the process weight rate emission limitation under subsection 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance is demonstrated through monitoring of the pressure drop across the baghouse and inspection of the baghouse at least semiannually. As part of this renewal, LRAPA enhanced the monitoring requirements for this emissions unit from solely opacity readings to also include applicable control device monitoring parameters.

31. Emissions Unit EU01 (piles) is considered an existing emissions unit under section 32-008. Subsection 32-008(1) requires an existing unit at a facility prior to January 1, 1994, to meet Typically Achievable Control Technology (TACT) if the emissions unit meets the following criteria: The emissions unit is not already subject to emission standards for the regulated pollutant under title 30, title 33, title 38, or title 46 at the time TACT is required; the source is required to have a permit; the emissions unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment.

EU01 (piles) is subject to TACT because potential emissions of particulate matter are equal to or greater than five (5) tons per year. While LRAPA has not performed a formal TACT determination for particulate matter from this emissions unit, LRAPA has determined that the list of reasonable precautions under paragraphs 48-015(1)(a)-(g) likely represents TACT.

32. Emissions Unit EU01 (tilt) is considered a new emissions unit under section 32-008. Subsection 32-008(2) requires new units installed or existing emissions units modified on or after January 1, 1994, to meet TACT if the emissions unit meets the following criteria: The emissions unit is not subject to Major NSR or Type A State NSR in title 38, and applicable NSPS in title 46, or any other standard applicable to only new or modified sources in title 30, title 33, title 39, or title 46 for the regulated pollutant; the source is required to have a permit; if new, the emissions unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emissions unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT. While LRAPA has not performed a formal TACT determination for particulate matter from this emissions unit, LRAPA has determined that the use of a partial enclosure with negative air exhausting to a baghouse likely represents TACT.

Emissions Unit EU02 – Hogfuel Sizing and Infeed System

33. The fugitive emissions from Emissions Unit EU02 are subject to the visible emissions limitations under section 48-015. The permittee must not have visible emissions that leave the property of a source for a period or periods totaling more than 18 seconds in a six (6) minute period. The facility must follow, but is not limited to, the list of reasonable precautions under paragraphs 48-015(1)(a)-(g). Compliance will be demonstrated through a survey of facility fugitive emissions using EPA Method 22 to be completed at least monthly. The permittee is required to take corrective action if any visible emissions are identified. If requested by LRAPA, the facility must develop a fugitive emission control plan.

34. Emissions Unit EU02 is considered a new emissions unit under section 32-008. Subsection 32-008(2) requires new units installed or existing emissions units modified on or after January 1, 1994, to meet TACT if the emissions unit meets the following criteria: The emissions unit is not subject to Major NSR or Type A State NSR in title 38, and applicable NSPS in title 46, or any other standard applicable to only new or modified sources in title 30, title 33, title 39, or title 46 for the regulated pollutant; the source is required to have a permit; if new, the emissions unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emissions unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT. Emissions Unit EU02 is not subject to TACT because potential emissions of particulate matter are estimated to be less than one (1) ton per year.

Emissions Unit EU03 – Charring and Drying System

35. Emissions Unit EU03 is subject to the visible emission limitations under subsection 32-010(3). This emissions unit may not have visible emissions equal to or greater than 20% opacity. Compliance is demonstrated through a survey of visible emissions from the ACC and the Dryer 1 Wet Exhaust on Emissions Unit EU03 using EPA Method 22 and/or EPA Method 9 to be completed at least once each day of operation of these sources. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. The Dryer 1 Wet Exhaust stack was selected by the facility and LRAPA because this stack has had historically the greatest measured grain-loading values of all the dryer exhaust stacks. As part of the rule packaged approved by LRAPA's Board of Directors in April 2024, the averaging period for this opacity limitation changed from a period or periods aggregating more than three (3) minutes in any one hour to a six-minute block average.

36. Emissions Unit EU03 is subject to the particulate matter emission limitation under subsection 33-065(1). The particulate matter from charcoal producing plant sources, including, but not limited to, charcoal

furnaces (retorts), heat recovery boilers, after combustion chambers, and wood dryers using any portion of the charcoal furnace off-gases as a heat source, may not be in excess of a total from all sources within the plant site of ten (10.0) pounds per ton of charcoal produced (as determined from the retort process) as an annual average. Compliance is demonstrated through Compliance Assurance Monitoring (CAM). CAM for this emissions unit requires a minimum temperature for ACC operation and conduct inspections of the ACC. The facility applied to modify the CAM for this emissions unit as part of this operation permit renewal. LRAPA agreed to remove monitoring related to minimum temperatures for the retort furnace cyclones, monitoring the hogfuel dryer cyclone, and monitoring the operation of the rotary valve at the discharge of the hogfuel dryer cyclone because these monitoring parameters are not directly related to emissions from this process. Under subsection 33-065(5), the permittee must make or have made particulate matter emission tests once every year to determine the type, quantity, quality and duration of particulate matter emissions from Emissions Unit EU03. As allowed under paragraph 33-065(5)(b), LRAPA has determined that based on multiple years of testing that the facility is consistently operating at the lowest practicable levels. As such, LRAPA has authorized the permittee to perform this source testing at least once every five (5) years.

37. Under subsection 33-065(3), charcoal producing plant sources as listed in Item 34 are exempt from the limitations of section 32-030 related to particulate matter emission concentrations.

38. Emissions Unit EU03 is subject to the process weight rate emission limitation under subsection 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance for the charring operations is demonstrated through Compliance Assurance Monitoring (CAM). CAM for this emissions unit requires a minimum temperature for ACC operation and conduct inspections of the ACC. The facility applied to modify the CAM for this emissions unit as part of this operation permit renewal. LRAPA agreed to remove monitoring related to minimum temperatures for the retort furnace cyclones, monitoring the hogfuel dryer cyclone, and monitoring the operation of the rotary valve at the discharge of the hogfuel dryer cyclone because these monitoring parameters are not directly related to emissions from this process.

39. Emissions Unit EU03 is considered a new emissions unit under LRAPA 32-008 because portions of the process have been installed or modified on or after January 1, 1994. LRAPA 32-008(2) requires new emissions units to meet TACT if the emissions unit meets the following criteria: The emissions unit is not subject to Major NSR or Type A State NSR in title 38, and applicable NSPS in title 46, or any other standard applicable to only new or modified sources in title 30, title 33, title 39, or title 46 for the regulated pollutant; the source is required to have a permit; if new, the emissions unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emissions unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.

39.a. Emissions Unit EU03 is subject to a particulate matter emission limitation under title 33 that limits PM, PM_{10} and $PM_{2.5}$ emissions. As such, EU03 is not subject to TACT for these criteria pollutants.

39.b. Emissions Unit EU03 has CO emissions that are greater than one (1) TPY, primarily from the charring and drying of wood. While LRAPA has not performed a formal TACT determination for CO emissions, LRAPA has determined that the use of an ACC to control CO emissions likely meets TACT for this process.

39.c. Emissions Unit EU03 has NO_X emissions that are greater than one (1) TPY, primarily from the operation of the ACC and natural gas or propane combustion. While LRAPA has not performed a formal TACT determination for NO_X emissions, LRAPA has determined that a requirement to perform inspections of the ACC and the auxiliary burners at least annually likely meets TACT for this process.

39.d. Emissions Unit EU03 has SO_2 emissions that are greater than one (1) TPY, primarily from the charring and drying of wood and natural gas or propane combustion. While LRAPA has not performed a formal TACT determination for SO_2 emissions, LRAPA has determined that limiting the facility to pyrolyzing only clean cellulosic biomass as defined in the permit likely meets TACT for this process.

39.e. Emissions Unit EU03 has VOC emissions that are greater than one (1) TPY, primarily from the charring and drying of wood. While LRAPA has not performed a formal TACT determination for VOC emissions, LRAPA has determined that the use of an ACC to control VOC emissions likely meets TACT for this process.

40. In order to avoid potentially being considered an incinerator subject to the 129 standards under the Clean Air Act, the facility has requested to be limited to processing materials that meet the definition of clean cellulosic biomass under EPA's non-hazardous secondary material rule for solid waste in 40 CFR 241.2. Clean cellulosic biomass is considered a traditional fuel and is not a secondary material or solid waste unless discarded.

41. Under Alternative Operating Scenario EU03-1, the briquet dryers associated with EU03 are not subject to subsection 33-065(3) because the facility is not using any portion of the charcoal furnace off-gases as a heat source. 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 tests during this period, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance is demonstrated through a survey of visible emissions using EPA Method 22 and/or EPA Method 9 to be completed in any month that the facility is operating under Alternative Operating Scenario EU03-1. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. The facility is required to document the date and times whenever the facility is operating under the Alternative Operating Scenario EU03-1.

Emissions Unit EU04 – Briquet Cooling

42. Emissions Unit EU04 is subject to the visible emission limitations under subsection 32-010(3). This emissions unit may not have visible emissions equal to or greater than 20% opacity. Compliance is demonstrated through a survey of visible emissions using EPA Method 22 and/or EPA Method 9 to be completed at least once a month. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. As part of the rule packaged approved by LRAPA's Board of Directors in April 2024, the averaging period for this opacity limitation changed from a period or periods aggregating more than three (3) minutes in any one hour to a six-minute block average.

43. Emissions Unit EU04 is subject to particulate matter emission limitations under paragraph 32-015(2)(b). For sources installed, constructed or modified on or 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 no greater than 0.080 grains per dry standard cubic foot, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance is demonstrated through a survey of visible emissions using EPA Method 22 and/or EPA Method 9 to be completed at least once a month. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. In addition, the permittee is required to verify the particulate matter emission limit at least once every five (5) years.

44. Emissions Unit EU04 is subject to the process weight rate emission limitation under subsection 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance is demonstrated through a survey of visible emissions using EPA Method 22 and/or EPA

Method 9 to be completed at least once a month. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. In addition, the permittee is required to verify compliance with the particulate matter emission limit at least once every five (5) years.

45. Emissions Unit EU04 is considered an existing emissions unit under section 32-008. Subsection 32-008(1) requires an existing unit at a facility prior to January 1, 1994, to meet Typically Achievable Control Technology (TACT) if the emissions unit meets the following criteria: The emissions unit is not already subject to emission standards for the regulated pollutant under title 30, title 33, title 38, or title 46 at the time TACT is required; the source is required to have a permit; the emissions unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment. Emissions Unit EU04 is subject to TACT because potential emissions of particulate matter are equal to or greater than five (5) tons per year. While LRAPA has not performed a formal TACT determination for particulate matter from this emissions unit, LRAPA has determined that the use of current operating practices likely meets TACT for this process. A review of other similar facilities around the United States showed that no other briquet cooling process had emission controls for particulate matter.

Emissions Unit EU08 – Briquet Handling System

46. Emissions Unit EU08 is subject to the visible emission limitations under subsection 32-010(3). This emissions unit may not have visible emissions equal to or greater than 20% opacity. Compliance is demonstrated through a survey of visible emissions using EPA Method 22 and/or EPA Method 9 to be completed at least quarterly. The permittee is required to take corrective action if any visible emissions exceed the opacity limitation. If the visible emissions exceed the opacity limitation after corrective action, the permittee must immediately contact LRAPA. As part of the rule packaged approved by LRAPA's Board of Directors in April 2024, the averaging period for this opacity limitation changed from a period or periods aggregating more than three (3) minutes in any one hour to a six-minute block average.

47. Emissions Unit EU08 is subject to particulate matter emission limitations under paragraph 32-015(2)(b). For sources installed, constructed or modified on or 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 no greater than 0.080 grains per dry standard cubic foot, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance is demonstrated through the use of CAM. CAM for this emissions unit is the use of a wet scrubber and baghouse control device(s), monitoring parametric monitoring parameters, and semiannual inspections of the baghouse control device(s). The facility requested and LRAPA approved a relaxation of the inspection requirements for the baghouse control device from quarterly to semiannually to align facility baghouse inspection requirements.

48. Emissions Unit EU08 is subject to the process weight rate emission limitation under subsection 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance is demonstrated through the use of CAM. CAM for this emissions unit is the use of a wet scrubber and baghouse control device(s), monitoring and recording parametric monitoring parameters at least daily, and semiannual inspections of the baghouse control device(s). The facility requested and LRAPA approved a relaxation of the inspection requirements for the baghouse control device from quarterly to semiannually to align facility baghouse inspection requirements.

49. Emissions Unit EU08 is considered an existing emissions unit under section 32-008. Subsection 32-008(1) requires an existing unit at a facility prior to January 1, 1994, to meet Typically Achievable Control

Technology (TACT) if the emissions unit meets the following criteria: The emissions unit is not already subject to emission standards for the regulated pollutant under title 30, title 33, title 38, or title 46 at the time TACT is required; the source is required to have a permit; the emissions unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment. Emissions Unit EU08 is subject to TACT because potential emissions of particulate matter are equal to or greater than five (5) tons per year. While LRAPA has not performed a formal TACT determination for particulate matter from this emissions unit, LRAPA has determined that the use of a wet scrubber and baghouse control device(s), likely meets TACT for this process.

Emissions Unit EU10 – 3.345 MMBtu Boiler

50. Emissions Unit EU10 is subject to the visible emission limitations under subsection 32-010(3). This emissions unit may not have visible emissions equal to or greater than 20% opacity. As part of the rule packaged approved by LRAPA's Board of Directors in April 2024, the averaging period for this opacity limitation changed from a period or periods aggregating more than three (3) minutes in any one hour to a six-minute block average. Compliance is demonstrated through documentation that this boiler is only capable of combusting gaseous fuels. Natural gas and propane are clean burning fuel for which visible emissions exceeding 20% opacity would not be expected. To date, the facility has never detected any visible emissions from this emissions unit. In addition, based on public comments received on this project, LRAPA has added an annual inspection requirement for this emissions unit.

51. Emissions Unit EU10 is subject to particulate matter emission limitations under paragraph 32-015(2)(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 tests during this period, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance is demonstrated through documentation that this boiler is only capable of combusting gaseous fuels. Natural gas and propane are clean burning fuels which would not be expected to exceed the particulate matter emission standard. In addition, based on public comments received on this project, LRAPA has added an annual inspection requirement for this emissions unit.

52. Emissions Unit EU10 is not subject to the process weight rate emission limitation under section 32-045.

53. Emissions Unit EU10 is considered an existing emissions unit under section 32-008. Subsection 32-008(1) requires an existing unit at a facility prior to January 1, 1994, to meet Typically Achievable Control Technology (TACT) if the emissions unit meets the following criteria: The emissions unit is not already subject to emission standards for the regulated pollutant under title 30, title 33, title 38, or title 46 at the time TACT is required; the source is required to have a permit; the emissions unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment. Emissions Unit EU10 is not subject to TACT because potential emissions from all criteria pollutants are less than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant.

Emissions Unit EU11 – Solvent-Treated Briquet (STB) Operation

54. Emissions Unit EU11 is subject to the visible emission limitations under subsection 32-010(3). This emissions unit may not have visible emissions equal to or greater than 20% opacity. Compliance is demonstrated through a plant survey of visible emissions to be completed according to the frequencies for Emissions Unit EU03 and Emissions Unit EU08. The monitoring requirements for Emissions Unit EU03 and Emissions Unit EU08 are appropriate for Emissions Unit EU11 because the VOC emissions from

Emissions Unit EU11 are directed to the ACC controlling emissions on Emissions Unit EU03 and the particulate matter emissions from Emissions Unit EU11 are directed to the baghouse(s) associated with Emissions Unit EU08.

55. Emissions Unit EU11 is subject to particulate matter emission limitations under paragraph 32-015(2)(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 tests during this period, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance is demonstrated by following the monitoring requirements for Emissions Unit EU08. The monitoring requirements for Emissions Unit EU08 are appropriate for Emissions Unit EU11 because the particulate matter emissions from Emissions Unit EU11 are directed to the baghouse(s) associated with Emissions Unit EU08.

56. Emissions Unit EU11 is subject to the process weight rate emission limitation under subsection 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance is demonstrated by following the monitoring requirements for Emissions Unit EU08. The monitoring requirements for Emissions Unit EU08 are appropriate for Emissions Unit EU11 because the particulate matter emissions from Emissions Unit EU11 are directed to the baghouse(s) associated with Emissions Unit EU08.

57. Emissions Unit EU11 is considered a new emissions unit under section 32-008. Subsection 32-008(2) requires new units installed or existing emissions units modified on or after January 1, 1994, meet TACT if the emissions unit meets the following criteria: The emissions unit is not subject to Major NSR or Type A State NSR in title 38, and applicable NSPS in title 46, or any other standard applicable to only new or modified sources in title 30, title 33, title 39, or title 46 for the regulated pollutant; the source is required to have a permit; if new, the emissions unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emissions unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.

57.a. Emissions Unit EU11 is subject to TACT because potential emissions of particulate matter are assumed to be equal to or greater than one (1) ton per year. While LRAPA has not performed a formal TACT determination for particulate matter from this emissions unit, LRAPA has determined that the use of baghouse control device(s) likely meets TACT for this process.

57.b. Emissions Unit EU11 is subject to TACT because potential emissions of VOC are assumed to be equal to or greater than one (1) ton per year. A TACT analysis for VOCs was performed in support of the modified ACDP issued on May 15, 2000. The application for the installation of Emissions Unit EU11 demonstrated that BACT at other facilities around the country with similar processes was the use of an ACC. As BACT will always be at least as strict as TACT, LRAPA agreed that TACT would be the use of an ACC and the requirements listed below. As part of this renewal, the requirements related to measuring the temperature of the solvent have been clarified.

57.b.i. Solvent must be transferred to the tanks in the railcar unloading building only by submerged filling.

57.b.ii. The daily average temperature of the solvent being applied to the briquets must be less than 50°F for each day of operation of Emissions Unit EU11. The permittee must measure the solvent temperature in the solvent line supplying the solvent application system.

57.b.iii. The permittee must perform prescreening of briquets prior to solvent application in order to minimize the production of solvent-coated fines.

57.b.iv. During solvent treated briquet operations, the permittee must collect the solvent vapors generated in the briquet treatment area and must exhaust the collected solvent vapors to

the ACC serving the charcoal retort furnace. The collection of the solvent vapors must satisfy the following enclosure requirements:

57.b.iv.A. The total area of all natural draft openings must not exceed 5% of the total surface area of the total enclosure's walls, floor, and ceiling.

57.b.iv.B. The average inward face velocity across all natural draft openings must be a minimum of 200 feet per minute (1600 meters per hours); and

57.b.iv.C. The air passing through all natural draft openings must flow into the enclosure continuously.

57.b.v. The temperature within the combustion zone of the ACC must be maintained at 1400°F and must achieve at least 95% destruction of the VOC generated by the solvent treated briquet operation.

57.b.vi. In the event that the ACC is not available, solvent vapors collected from the briquet treatment area may be discharged uncontrolled to the atmosphere. Uncontrolled atmospheric discharge of solvent vapors must not exceed 12 hours in one (1) calendar day nor 280 hours in one (1) calendar year.

57.b.vii. Solvent may be applied to briquets using the spray application system.

58. Emissions Unit EU11 is subject to CAM for VOCs. In addition to the monitoring required for the ACC on Emissions Unit EU03, CAM for this emissions unit is monitoring and recording of the temperature on the solvent line to the Emissions Unit EU11 solvent application system at least hourly while Emissions Unit EU11 is operating, calculating the daily average temperature for each day of operation, and determining the average inward face velocity for all natural draft openings on the process to verify the velocity is greater than 200 feet per minute at least once every five (5) years.

EMISSION LIMITS FOR INSIGNIFICANT ACTIVITIES

59. As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate 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 rules, requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V Operating 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 emissions 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 40 CFR 70.6(a)(3). For this reason, this permit includes limited requirements for categorically insignificant activities and aggregate insignificant activities.

Categorically Insignificant Activity – 274 kW Gas-Fired Emergency RICE

60. The facility has one (1) 274 kW natural gas- or propane-fired emergency RICE installed before June 12, 2006, which is subject to the requirements under 40 CFR part 63 subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The emergency generator is considered to be an existing emissions unit at an area source of federal HAPs. See the Federal Requirements section of this review report for more information.

FEDERAL REQUIREMENTS

Chemical Accident Prevention Provisions

61. The Title V Operating 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

62. 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, does 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.

Regional Haze

63. On December 24, 2019, DEQ sent KMC a letter requesting the facility conduct a four-factor analysis for Regional Haze precursor pollutants as part of the requirements related to Round 2 of the Regional Haze program for the period 2018 to 2028. The Regional Haze pollutants evaluated by DEQ include PM_{10}, NO_X and SO_2. KMC subsequently sent DEQ a letter on January 24, 2020 requesting that DEQ reevaluate the applicability of Round 2 of the Regional Haze program based on the PSELs contained in the Title V Operating Permit issued August 26, 2019. In subsequent conversations with KMC and LRAPA, DEQ stated that KMC could be excluded from conducting a four-factor analysis if the facility was willing to accept a combined limitation on Regional Haze precursor PSELs and unassigned emissions such that a Q/d analysis based on the combined limitation resulted in a value of less than five (5) at all Class I areas in the state of Oregon. In this Q/d analysis, the *Q* represents the combined total of the PSEL and unassigned emissions of all the Regional Haze precursor pollutants evaluated by DEQ and the *d* represents the distance to each Class I area. KMC agreed in a letter to DEQ on April 16, 2020 to accept this limitation. This limitation was subsequently incorporated into the Title V Operating Permit as part of the minor modification issued on September 14, 2020.

National Emission Standards for Hazardous Air Pollutants

64. A facility that has potential emissions of federal HAP (FHAP) less than the major source thresholds of ten (10) tons per year of an individual FHAP or 25 tons per year of the aggregate of FHAP or has obtained federally-enforceable permit limits to restrict FHAP emissions below the major source thresholds prior to a major NESHAP compliance date can be classified as an area source. This facility is considered an area source of FHAPs.

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

65. The facility has one (1) 274-kW natural gas- or propane-fired emergency generator installed prior to June 12, 2006, which is considered a categorically insignificant activity as defined under LRAPA title 12. This emergency generator is subject to the requirements under 40 CFR part 63 subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Based upon the description of an emergency generator under paragraph 12-005(29)(uu), this emissions unit is not allowed to operate for non-emergency situations. Non-emergency situations do not include maintenance and testing.

66. The 40 CFR part 63 subpart ZZZZ requirements that are applicable to the 274-kW natural gas- or propane-fired emergency generator 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	None	NA
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	Yes	None	72, 74
63.6604	Fuel requirements	No	None	NA
63.6605	General requirements	Yes	None	76
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	Yes	None	73, 75
63.6630	Initial compliance	No	None	NA
63.6635	Continuous compliance	No	None	NA
63.6640	Continuous compliance	Yes	None	77
63.6645	Notifications	No	None	NA
63.6650	Reports	Yes	None	NA
63.6655	Records	Yes	None	78-81
63.6660	Record retention	Yes	None	82
63.6665	General provisions	Yes	None	NA
63.6670	Implementation and enforcement	Yes	None	NA
63.6675	Definitions	Yes	None	NA

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

67. This standard does not apply because this facility is not a major source of federal HAPs.

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

68. Emissions Unit EU10 is not subject to this regulation because it is a gas-fired boiler as defined in 40 CFR 63.11237. No other emissions units at this facility meet the definition of a boiler under 40 CFR 63.11237.

40 CFR part 63 subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

69. The facility is not subject to 40 CFR part 63 subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources. Although the facility's NAICS code for charcoal manufacturing (NAICS 325191) is listed in the NESHAP as being potentially subject to this regulation, the facility does not expect any of the target HAP listed in 40 CFR part 63 subpart VVVVVV,

Table 1 to be present above the de minimis. Specifically, the metals content in the feedstocks used or the products produced by the facility are less than 1.0% and 0.1% by weight, as applicable, for the target HAP as indicated by the facility in correspondence to LRAPA received on February 11, 2010. The facility does not expect any feedstocks, byproducts, or products produced by the facility to contain hydrazine or any 40 CFR part 63 subpart VVVVVV, Table 1 organic HAP above 1.0% and 0.1% by weight, as applicable.

New Source Performance Standards

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

70. This standard does not apply to Emissions Unit EU10 because the boiler has a maximum heat input rating of less than ten (10) MMBtu/hr heat input. No other emissions units at this facility meet the definition of a steam generating unit under 40 CFR 60.41c.

40 CFR part 60 subpart DDDD – Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units

71. This standard does not apply to this facility because units burning only wood feedstock for the production of charcoal are defined as a "chemical recovery units" (CRU) under 40 CFR 60.2265. A CRU is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under these regulations.

Toxics Release Inventory (TRI)

72. 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. For calendar year 2023, this facility reported the emissions of the following chemicals:

Chemical Name	CAS Number	Fugitive Release (pounds)	Stack Release (pounds)	Total (pounds)
Lead compounds	--	0.02	18.29	18.31
Methanol	67-56-1	--	280.45	280.45

COMPLIANCE ASSURANCE MONITORING

73. Title 40, Part 64 of the Code of Federal Regulations (CFR) contains Compliance Assurance Monitoring (CAM) requirements. CAM requirements apply to any Pollutant Specific Emissions Unit (PSEU) at a Part 70 source that meets the following criteria:

73.a. The unit is subject to an emission limitation or standard for a regulated air pollutant;
73.b. The unit uses a control device to achieve compliance with that emission limitation or standard;
73.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 a criteria pollutant; greater than ten (10) tons per year for an individual federal HAP or 25 tons per year for the aggregate of federal HAPs; and
73.d. The exemptions in 40 CFR 64.2(b) and subsection 35-0200(2) do not apply. The exemptions include:
73.d.i. Emission limitations or standards proposed by US EPA after November 15, 1990 under section 111 (NSPS) or section 112 (NESHAPs);
73.d.ii. Stratospheric ozone protection requirements under Title VI;
73.d.iii. Acid Rain Program requirements;
73.d.iv. Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by US EPA;
73.d.v. An emissions cap that meets the requirements in 40 CFR 70.4(b)(12);
73.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 title 12; and
73.d.vii. Municipally-owned backup utility emissions units meeting the requirements under 40 CFR 64.2(b)(2).

74. An emission limitation or standard is defined under the Clean Air Act and in title 12 as a requirement which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement related to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under the Clean Air Act.

75. The following table evaluates CAM applicability for each significant emissions unit at the facility:

Emissions Unit	Regulated Pollutant	Subject to Emission Limitation or Standard for the Pollutant	Uses a Control Device for the Pollutant	Potential Precontrol Emissions Exceed Major Source Threshold	Subject to CAM for the Pollutant	Minimum Monitoring Frequency
EU01 (tilt)	PM	Yes	Yes	No	No	--
EU01 (tilt)	PM_{10}	Yes	Yes	No	No	--
EU01 (tilt)	$PM_{2.5}$	Yes	Yes	No	No	--
EU01 (pile)	PM	Yes	No	No	No	--
EU01 (pile)	PM_{10}	Yes	No	No	No	--
EU01 (pile)	$PM_{2.5}$	Yes	No	No	No	--
EU02	PM	Yes	No	No	No	--
EU02	PM_{10}	Yes	No	No	No	--
EU02	$PM_{2.5}$	Yes	No	No	No	--
EU03	PM	Yes	Yes	Yes	Yes	4x/hr
EU03	PM_{10}	Yes	Yes	Yes	Yes	1x/24-hr
EU03	$PM_{2.5}$	Yes	Yes	Yes	Yes	1x/24-hr
EU03	CO	No	Yes	Yes	No	--
EU03	NO_X	No	No	Yes	No	--
EU03	SO_2	No	No	No	No	--

Emissions Unit	Regulated Pollutant	Subject to Emission Limitation or Standard for the Pollutant	Uses a Control Device for the Pollutant	Potential Precontrol Emissions Exceed Major Source Threshold	Subject to CAM for the Pollutant	Minimum Monitoring Frequency
EU03	VOC	No	Yes	Yes	No	--
EU03	HAP	No	Yes	Yes	No	--
EU04	PM	Yes	No	No	No	--
EU04	PM_{10}	Yes	No	No	No	--
EU04	$PM_{2.5}$	Yes	No	No	No	--
EU08	PM	Yes	Yes	Yes	Yes	1x/24-hr
EU08	PM_{10}	Yes	Yes	Yes	Yes	1x/24-hr
EU08	$PM_{2.5}$	Yes	Yes	Yes	Yes	1x/24-hr
EU10	PM	Yes	No	No	No	--
EU10	PM_{10}	Yes	No	No	No	--
EU10	$PM_{2.5}$	Yes	No	No	No	--
EU10	CO	No	No	No	No	--
EU10	NO_X	No	No	No	No	--
EU10	SO_2	No	No	No	No	--
EU10	VOC	No	No	No	No	--
EU10	HAP	No	No	No	No	--
EU11	PM	Yes	Yes	Yes	Yes	1x/24-hr
EU11	PM_{10}	Yes	Yes	Yes	Yes	1x/24-hr
EU11	$PM_{2.5}$	Yes	Yes	Yes	Yes	1x/24-hr
EU11	VOC	Yes	Yes	Yes	Yes	1x/24-hr

76. This analysis conservatively assumes that the historical emissions units regulated by the permit also represent pollutant specific emissions units (PSEU) as defined under Title 12 and 40 CFR part 64, except for Emissions Unit EU01 as discussed below. This analysis also conservatively assumes that an opacity or particulate matter grain loading limitation qualifies as an emission limitation or standard for total particulate matter (PM), PM_{10} and $PM_{2.5}$.

77. Emissions Unit EU01 consists of a tilt-dump and wood storage piles. For CAM applicability, Emissions Unit EU01 is evaluated as two (2) PSEU – EU01 (tilt) and EU01 (pile). EU01 (tilt) consists of a truck tilt-dump whose particulate matter emissions are controlled through a partial enclosure with negative air exhausting to a baghouse. EU01 (pile) consists of wood storage piles that have no active control device.

78. The particulate matter emissions from Emissions Unit EU11 are directed to the baghouses associated with Emissions Unit EU08. This CAM applicability conservatively assumes that the potential precontrol emissions of PM, PM_{10}, and $PM_{2.5}$ exceed major source thresholds as the facility does not have particulate matter emission information specific to EU11. CAM for EU08 is the CAM for EU11.

79. The VOC emissions from Emissions Unit EU11 are directed to the ACC associated with Emissions Unit EU03. CAM for Emissions Unit EU03 is the CAM for Emissions Unit EU11.

80. CAM for particulate matter emissions from Emissions Unit EU03 is considered to be the following:

80.a. The permittee must maintain an operating temperature of at least 1400°F in the ACC, except during startup, shutdown or maintenance. The ACC operating temperature must be continuously monitored at the outlet of the ACC combustion chamber and recorded automatically on a strip chart or data acquisition system. Corrective action must be taken within ten (10) minutes if the ACC operating temperature falls below 1500°F, except during startup, shutdown or maintenance.

Corrective actions include, but are not limited to, turning on auxiliary natural gas- or propane-fired burners to provide additional heat.

80.b. At least annually, the permittee must conduct inspections of the ACC and the auxiliary burners to ensure proper operation of the oxidizer. These include, but are not limited to, periodic inspections of the burner assemblies, blowers, refractory lining, oxidizer shell, fuel lines, and ductwork.

81. As part of this renewal, the facility requested a revision of the CAM plan for particulate matter emissions from Emissions Unit EU03. Previously, the CAM plan for particulate matter emissions from Emissions Unit EU03 included additional monitoring requirements related to temperatures in the retort furnace cyclones, the hogfuel dryer cyclone bin level, and the operation of the hogfuel dryer cyclone rotary valve. Because the operations of these components are not directly correlated to potential particulate matter emissions from Emissions Unit EU03, the CAM plan has been revised.

82. CAM for particulate matter emissions from Emissions Unit EU08 is considered to be the following:

82.a. The permittee must exhaust the particulate matter emissions from Emissions Unit EU08 to a wet scrubber and/or baghouse(s). The permittee must operate, maintain and calibrate monitoring devices for measuring the pressure drop across each baghouse. The permittee must maintain the pressure drop across each baghouse between 1.0 and 8.0 inches of water column whenever Emissions Unit EU08 is operating. Operation of the baghouse(s) within this pressure drop range is an indication that the grain-loading and process weight limits are not being exceeded. This pressure drop range has been established based on a historical correlation between measured values and compliance testing results. The permittee may establish alternate operating parameter ranges or values with the approval of LRAPA using the procedures under OAR-340-218.

82.b. The permittee must immediately take corrective action to return to the highest reasonable efficiency and effectiveness, all air pollution control equipment and emission reduction processes that the regular inspections show to be operating at less than an optimum level or that the parametric monitoring shows deviations from the approved parametric monitoring range. If the permittee cannot return the baghouse(s) to operating within the approved parametric monitoring range within 24 hours, the permittee must contact LRAPA immediately. Operating the baghouse(s) when the pressure drop exceeds the parametric monitoring range listed above is not considered a violation of an emission limit. However, failure to take corrective action will be considered a violation of this permit.

82.c. At least semiannually, the permittee must inspect each baghouse for wear, plugging, abrasion, and integrity of mechanical and ancillary systems.

83. The particulate matter emissions from Emissions Unit EU11 are directed to the baghouses associated with Emissions Unit EU08. This CAM applicability conservatively assumes that the potential precontrol emissions of PM, PM_{10}, and $PM_{2.5}$ exceed major source thresholds as the facility does not have particulate matter emission information specific to EU11. CAM for EU08 is the CAM for EU11.

84. The VOC emissions from Emissions Unit EU11 are directed to the ACC associated with Emissions Unit EU03. CAM for Emissions Unit EU03 is the CAM for Emissions Unit EU11.

PLANT SITE EMISSIONS LIMITS

85. Under paragraph 42-0055(3), unassigned emissions are reduced to not more than the SER at each permit renewal following July 1, 2010. The netting basis is reduced by the amount that unassigned emissions are reduced. Under paragraph 42-0055(5), each time the permit is renewed, the unassigned emission will be established again and reduced upon the following permit renewal to no more than the SER for each regulated pollutant. Please note that the netting basis listed in the Title V Operating Permit Addendum No. 2 issued on November 15, 2021 is incorrect for PM_{10}, NO_X, and SO_2. The review report for Addendum No. 1 issued on September 14, 2020 has the correct netting basis for PM_{10}, NO_X, and SO_2.

Pollutant	Current Netting Basis (TPY)	Current PSEL (TPY)	Current Unassigned Emissions (TPY)	SER (TPY)	Adjusted Netting Basis (TPY)	Proposed PSEL (TPY)	Proposed Unassigned Emissions (TPY)
PM	298	164	134	25	189	146	43
PM_{10}	149	103	46	15	118	95	23
$PM_{2.5}$	147	96	51	10	106	87	19
CO	80	99	0	100	80	29	51
NO_X	142	103	39	40	142	103	39
SO_2	19	39	0	40	19	12	7
VOC	74	96	0	40	74	62	12
GHG (CO_2e)	140,233	214,233	0	75,000	140,233	214,233	0

86. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limits, and emissions capacity:

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PTE (TPY)	SER (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)		
PM	312	298	189	164	146	145	25
PM_{10}	180	149	118	103	95	94	15
$PM_{2.5}$	NA	147	106	96	87	86	10
CO	80	80	80	99	29	29	100
NO_X	330	142	142	103	103	107	40
SO_2	19	19	19	39	12	12	40
VOC	74	74	74	96	62	62	40
GHG (CO_2e)	140,233	140,233	140,233	214,233	214,233	214,233	75,000

87. The baseline emission rates were established based upon the following:
    87.a. The baseline emission rates for all regulated pollutants were determined in previous permitting actions. There are no changes to these emission rates as part of this permitting action.
    87.b. A baseline emission rate is not required for $PM_{2.5}$ in accordance with subsection 42-0048(3).
    87.c. The baseline emission rate for greenhouse gases (GHG) is based on the consecutive 12-month period of January 2010 through December 2010.

88. The netting basis was established based upon the following:
    88.a. The previous netting basis for regulated pollutants, except for PM_{10}, NO_X and SO_2, were established as discussed in the review report for the previous Title V Operating Permit issued on August 26, 2019.
    88.b. The netting basis for PM_{10}, NO_X and SO_2 were modified in the minor permit modification issued on September 14, 2020. The facility requested a combined limitation on Regional Haze precursor PSELs and unassigned emissions of no more than 304 tons per year. In addition, the facility requested the netting basis and unassigned emissions for PM_{10} and NO_X be reduced to the Current PSEL values listed in the table for Item 80. The netting basis is reduced on a 1:1 basis for every reduction in unassigned emissions as required under paragraph 42-0055(3)(b).

89. The PSEL are established based upon the following:
    89.a. The PSEL for PM, PM_{10}, and $PM_{2.5}$ were reduced based upon the most recent stack testing results and related changes to emission factors for EU03 and EU04.

89.b. The PSEL for NO_X and VOC were reduced based upon the most recent stack testing results and related changes to emission factors for EU03.

89.c. The PSEL for CO, SO_2, and GHG were reset to the potential emission rate from the significant emissions units as required by subsection 42-0041(3). The previous PSEL for CO, SO_2, and GHG were based on Generic PSEL that are no longer allowed by rule.

89.d. Where applicable, the PSEL include 1 TPY to account for aggregate insignificant emissions unit emissions.

90. The PTE values are established based upon the following:

90.a. The PTE for all pollutants. other than NO_X and GHG, are based on the calculations in the emission detail sheets.

90.b. For NO_X, the PTE for the facility is 107 TPY due to propane combustion that was not previously accounted for as a backup fuel until the minor modification of the Title V Operating Permit issued on 09/14/2020. The facility requested that the PSEL for NO_X not be increased to account for propane as a backup fuel.

90.c. For GHG, the PTE for the facility is 217,025 TPY due to propane combustion that was not previously accounted for as a backup fuel until the minor modification of the Title V Operating Permit issued on 09/14/2020. The facility requested that the PSEL for GHG not be increased to account for propane as a backup fuel.

SIGNIFICANT EMISSION RATES

91. The proposed PSEL are equal to or less than the previously established PSEL. There are no increases in the PSEL being requested with this 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	146	0	0	0	25
PM_{10}	95	0	0	0	15
$PM_{2.5}$	87	0	0	0	10
CO	29	0	0	0	100
NO_X	103	0	0	0	40
SO_2	12	0	0	0	40
VOC	62	0	0	0	40
GHG (CO_2e)	214,233	74,000	0	0	75,000

UNASSIGNED EMISSIONS AND EMISSION REDUCTION CREDITS

92. 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. The facility has zero (0) tons of emission reduction credits. For the purposes of this calculation, the PSEL represents the PTE for each regulated pollutant. In accordance with section 42-0055, any unassigned emissions that exceed the SER shall be reduced upon the following permit renewal to no more than the SER for each regulated pollutant.

Pollutant	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	43	0	25
PM_{10}	23	0	15
$PM_{2.5}$	19	0	10
CO	51	0	100
NO_X	39	0	40
SO_2	7	0	40
VOC	12	0	40
GHG (CO_2e)	0	0	75,000

HAZARDOUS AIR POLLUTANTS (HAPs)

93. The significant sources of federal HAPs at the facility are from the retort furnace associated with EU03 and from the combustion of natural gas or propane.

93.a. In the retort furnace, which is a multi-hearth furnace, wood hog fuel pyrolyzes into charcoal and off-gases. The off-gases consist primarily of carbon monoxide, carbon dioxide, hydrogen gas, methane, unsaturated hydrocarbons, methanol, acetic acid and water. The ACC acts as a control device to reduce the emissions of organic compounds, carbon monoxide and hydrogen gas. Methanol is considered the most significant and highest emitted single federal HAP from the pyrolysis of wood. To determine methanol emissions, the facility uses a methanol emission factor of 68.70 pounds of methanol per ton of char produced (Kirk-Othmer (vol. 11, 1980), W.G. Nelson (1930)). The facility assumes a 99.99% control efficiency of the resulting emission rate based upon the use of the ACC and the relative ease of oxidizing methanol.

93.b. Natural gas or propane are combusted in the two (2) 20 MMBtu per hour burners associated with the wood dryers, the 70 MMBtu per hour (total) assist burners associated with the ACC, and EU10 – 3.345 MMBtu per hour boiler. The potential federal HAP and toxic air contaminant (TAC) emissions from natural gas combustion were estimated based on the Oregon DEQ 2020 ATEI Combustion EF Tool and the assumption of 8,760 hours of operation per year. Because propane is used as an emergency backup fuel, no estimate was made of the potential federal HAP and TAC emissions associated with the use of this fuel.

94. This facility is considered a synthetic minor source of federal HAP emissions because the facility uses a control device (ACC) to reduce federal HAP emissions to less than major source thresholds. A facility is a major source of federal HAPs if potential emissions of an individual federal HAP are at least ten (10) tons per year or the potential emissions of the aggregated of federal HAPs are at least 25 tons per year. Potential federal HAP emissions are projected to be 0.21 tons per year, with methanol having the highest individual federal HAP emissions at 0.16 tons per year.

95. Under the Cleaner Air Oregon (CAO) program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and is not yet required to perform a risk assessment or report annual emissions of toxic air contaminants. LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and 2020 and regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All hazardous air pollutants are on the list of approximately 600 toxic air contaminants. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially.

96. The table below represents the potential emissions of federal HAPs and CAO TACs from this facility, excluding any emissions from aggregate insignificant activities and categorically insignificant activities.

CAS / TAC Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
Organics				
75-07-0	Acetaldehyde	1.5E-03	Yes	Yes
107-02-8	Acrolein	1.3E-03	Yes	Yes
71-43-2	Benzene	2.8E-03	Yes	Yes
50-32-8	Benzo[a]pyrene	5.8E-07	Yes	Yes
100-41-4	Ethyl Benzene	3.3E-03	Yes	Yes
50-00-0	Formaldehyde	6.0E-03	Yes	Yes
110-54-3	Hexane	2.2E-03	Yes	Yes
67-56-1	Methanol	1.6E-01	Yes	Yes
91-20-3	Naphthalene	1.5E-04	Yes	Yes
401	PAHs	4.8E-05	Yes	Yes
108-88-3	Toluene	1.3E-02	Yes	Yes
1330-20-7	Xylenes	9.5E-03	Yes	Yes
Inorganic Gases				
7664-41-7	Ammonia	1.5E+00	No	Yes
Metals				
7440-38-2	Arsenic and compounds	9.7E-05	Yes	Yes
7440-39-3	Barium and compounds	2.1E-03	No	Yes
7440-41-7	Beryllium and compounds	5.8E-06	Yes	Yes
7440-43-9	Cadmium and compounds	5.3E-04	Yes	Yes
18540-29-9	Chromium VI, chromate/dichromate	6.8E-04	Yes	Yes
7440-48-4	Cobalt and compounds	4.1E-05	Yes	Yes
7440-50-8	Copper and compounds	4.1E-04	No	Yes
7439-92-1	Lead and compounds	2.4E-04	Yes	Yes
7439-96-5	Manganese and compounds	1.8E-04	Yes	Yes
7439-97-6	Mercury and compounds	1.3E-04	Yes	Yes
1313-27-5	Molybdenum trioxide	8.0E-04	No	Yes
365	Nickel compounds, insoluble	1.0E-03	Yes	Yes
7782-49-2	Selenium and compounds	1.2E-05	Yes	Yes
7440-62-2	Vanadium (fume or dust)	1.1E-03	No	Yes
7440-66-6	Zinc and compounds	1.4E-02	No	Yes

TITLE V OPERATING PERMIT CHANGE LOG

97. The following is a list of condition-by-condition changes between the previous permit and the current permit:

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
1	1	Not applicable	Not applicable
2	--	Add language clarifying LRAPA's authority to implement Title V.	Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
3	2	Updated state/LRAPA enforceable only conditions.	Update.
4	3	Updated emissions unit naming. Added CIA and AIA to table.	Clarification.
5	4	Removed an unnecessary alternative operating scenario.	Update.
Facility Wide Table	Facility Wide Table	Moved I&M requirements to each emissions unit with a control device. Updated table to reflect rule changes.	Update. Clarification.
6	5	Not applicable	Not applicable
7	6	Clarified monitoring requirements.	Clarification.
8	7	Clarified recordkeeping requirements.	Clarification.
9	8	Not applicable	Not applicable
10	9	Not applicable	Not applicable
11	10	Not applicable	Not applicable
12	11-12	Merged monitoring and recordkeeping requirement. Clarified recordkeeping requirements.	Clarification.
--	13	Moved I&M requirements to each emissions unit with a control device.	Clarification.
13	14	Not applicable	Not applicable
EU01 Emission Limits Table	EU01 Emission Limits Table	Updated table to reflect rule changes.	Update.
14	--	Added a link to the applicable fugitive requirements under Condition 6.	Clarification.
15	--	Added a link to the applicable monitoring requirements under Condition 7.	Clarification.
16	--	Added a link to the applicable recordkeeping requirements under Condition 8.	Clarification.
17	15	Update language to reflect rule changes.	Update.
18	18	Update language to reflect rule changes. Clarified monitoring requirements.	Update. Clarification.
19	19	Not applicable	Not applicable
20	16	Not applicable	Not applicable
21	17	Not applicable	Not applicable
22	18	Monitoring requirement changed from VE to parametric monitoring.	Parametric monitoring is better than VE for demonstrating compliance with the applicable limitations.
23	--	Added recordkeeping requirement for the parametric monitoring	Update.
EU02 Emission Limits Table	EU02 Emission Limits Table	Not applicable	Not applicable
24	--	Added a link to the applicable fugitive requirements under Condition 6.	Clarification.
25	--	Added a link to the applicable monitoring requirements under Condition 7.	Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
26	--	Added a link to the applicable recordkeeping requirements under Condition 8.	Clarification.
EU03 Emission Limits Table	EU03 Emission Limits Table	Update language to reflect rule changes. Corrected grain loading limitation.	Update.
27	22	Update language to reflect rule changes.	Update.
28	23	Update language to reflect rule changes. Clarified monitoring requirements.	Update. Clarification.
29	24	Not applicable	Not applicable
30	25	Not applicable	Not applicable
31	30	Reordered conditions. Removed VE requirements for compliance demonstration.	Not applicable
32	26	Removed unnecessary monitoring requirements. Split old requirements into monitoring and recordkeeping.	Update. Clarification.
33	26	Removed unnecessary recordkeeping requirements. Split old requirements into monitoring and recordkeeping.	Update. Clarification.
34	27	Not applicable	Not applicable
35	28	Clarified recordkeeping to focus on the source of the material rather than the amount of the material.	Clarification.
36	29	Corrected grain loading limitation. Clarified that this limitation was specific to an alternative operating scenario.	Update. Clarification.
37	29.a	Split old requirements into monitoring and recordkeeping. Clarified the monitoring requirement.	Update. Clarification.
38	29.a	Split old requirements into monitoring and recordkeeping. Clarified the recordkeeping requirement.	Update. Clarification.
39	--	Added a requirement to document the dates and times of AOS operations.	Update.
EU04 Emission Limits Table	EU04 Emission Limits Table	Update language to reflect rule changes.	Update.
40	31	Update language to reflect rule changes.	Update.
41	32	Not applicable	Not applicable
42	33	Clarified testing requirements.	Clarification.
43	34	Update language to reflect rule changes. Clarified monitoring requirements.	Update. Clarification.
44	35	Not applicable	Not applicable
EU08 Emission Limits Table	EU08 Emission Limits Table	Update language to reflect rule changes.	Update.
45	36	Update language to reflect rule changes.	Update.
46	37	Update language to reflect rule changes. Clarified monitoring requirements.	Update. Clarification.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
		Changed frequency to monthly from quarterly.	
47	38	Not applicable	Not applicable
48	39	Not applicable	Not applicable
49	40	Not applicable	Not applicable
50	41	Clarified applicable control devices. Split old requirements into monitoring and recordkeeping.	Clarification. Update.
51	42	Added recordkeeping requirements from old Condition 41. Clarified recordkeeping requirements.	Update. Clarification.
EU10 Emission Limits Table	EU10 Emission Limits Table	Update language to reflect rule changes.	Update.
52	43	Update language to reflect rule changes.	Update.
53	44	Not applicable	Not applicable
54	45, 46	Replace VE monitoring with recordkeeping	Revision
EU11 Emission Limits Table	EU11 Emission Limits Table	Update language to reflect rule changes.	Update.
55	47	Update language to reflect rule changes.	Update.
56	48	Not applicable	Not applicable
57	49	Not applicable	Not applicable
58	50	Not applicable	Not applicable
59	51	Not applicable	Not applicable
60	52	Updated to reflect minor modification. Clarified temperature monitoring.	Update. Clarification.6
61	54	Clarified monitoring and recordkeeping requirement.	Clarification.
62	55	Corrected monitoring requirement.	Correction.
63	56	Not applicable	Not applicable
64	--	Added monitoring requirement for 61.e.	Addition.
65	--	Add recordkeeping requirement for Condition 61.f.	Addition.
66	57	Not applicable	Not applicable
67	53	Not applicable	Not applicable
68	--	Add recordkeeping requirement for Condition 68.	Addition.
69	58	Not applicable	Not applicable
70	59	Not applicable	Not applicable
71-81	60-70	Not applicable	Not applicable
PSEL Emission Limit Table	PSEL Emission Limit Table	Updated PSEL table based on latest testing.	PSELs are reevaluated at every renewal.
83	--	Added explicit recordkeeping requirement for PSEL parameter monitoring.	Addition.
PSEL Parameter	--	Separated PSEL parameter monitoring list from PSEL emission factor table.	Update.

New Permit Condition Number	Old Permit Condition Number	Description of Change	Reason for Change
Monitoring Table			
84	73	Updated PSEL formula to include excess emissions and AIA emissions.	Clarification.
85	72.d	Split out old Condition 72.d. as a standalone condition.	Clarification.
PSEL Emission Factor Table	PSEL Emission Factor Table	Updated PSEL emission factor table based on latest testing.	Emission factors are reevaluated at every renewal.
86	--	Updated to reflect minor modification.	Addition.
87	--	Updated to reflect minor modification.	Addition.
--	74	Deleted unnecessary general language.	Deletion.
88-90	79-81	Not applicable	Not applicable
91	75	Not applicable	Not applicable
92	76	Updated to require testing at least once every 5 years instead of a static date. Clarified.	Update. Clarification
93	77	Updated to require testing at least once every 5 years instead of a static date. Removed VOC and SO_2 testing requirement. Clarified	Update. Deletion. Clarification
94	78	Updated to require testing at least once every 5 years instead of a static date. Clarified.	Update. Clarification.
95	--	Add reference to capture testing on Emissions Unit EU11.	Consistency.
96-99	82-85	Not applicable	Not applicable
100-103	86-89	Not applicable	Not applicable
104	--	Added a condition number for agency addresses.	Addition.
105-108	90-91	Separated out monitoring report requirements from procedural requirements. Separated annual reporting from semiannual reporting.	Clarification.
109	--	Added GHG annual reporting requirements.	Addition.
110	92	Clarified and reduced non-applicable requirement list.	Clarification. Deletion.
General Conditions	General Conditions	Added language about air emergency episodes.	Addition

GENERAL RECORDKEEPING REQUIREMENTS

98. 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 Operating Permit must be kept at the plant site for at least five (5) years.

GENERAL REPORTING REQUIREMENTS

99. 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 log attached to the annual report. Emissions fee reports are required annually.

COMPLIANCE HISTORY

100. This facility is regularly inspected by LRAPA. The following table indicates the compliance history of this facility since the issuance of the last Title V Operating Permit renewal:

Type of Inspection	Date / Time Period	Results
Full Compliance Evaluation	09/27/2021	No evidence of non-compliance
Full Compliance Evaluation	02/17/2022	No evidence of non-compliance

101. The facility was issued the following Notices of Non-Compliance (NON), Notices of Civil Penalty (NCP), and/or Stipulated and Final Orders (SFO) since the issuance of the last Title V Operating Permit renewal:

101.a. The facility was issued NON 3852 on March 15, 2022 and NCP 22-3852 on June 27, 2022 for exceeding the 20% opacity limitation for Emissions Unit EU03 during start-up and failure to notify LRAPA of the excess emissions event. The facility paid a civil penalty in the amount of $6,600.

COMPLIANCE TESTING

102. The following table provides a summary of emission factor verification testing conducted at the facility and used in the preparation of this renewal.

Emissions Unit EU03				
Pollutant	**Test Date**	**Result**	**Units**	**Comment**
PM	03/09/2009 - 03/11/2009	5.15	lb PM/ton char	--
PM	06/08/2009 - 06/11/2009	4.9	lb PM/ton char	--
PM	07/19/2010	5.28	lb PM/ton char	--
PM	07/19/2010	5.28	lb PM/ton char	--
PM	10/26/2015	4.53	lb PM/ton char	--
PM	09/18/2018 - 09/19/2018	5.75	lb PM/ton char	--
PM	11/29/2023-12/05/2023	1.87	lb PM/ton char	--
NO_X	06/01/2009	2.1	lb NOx/ton char	--
NO_X	10/26/2015	5.6	lb NOx/ton char	--
NO_X	11/29/2023-12/05/2023	3.7	lb NOx/ton char	--
CO	06/01/2009	1.1	lb CO/ton char	--
CO	10/26/2015	0.6	lb CO/ton char	--
CO	11/29/2023-12/05/2023	0.76	lb CO/ton char	--
VOC	06/01/2009	0.4	lb VOC/ton char	--
VOC	10/26/2015	0.2	lb VOC/ton char	--
VOC	11/29/2023-12/05/2023	0.21	lb VOC/ton char	--
SO_2	06/01/2009	0.17	lb SO_2/ton char	--
SO_2	10/26/2015	0.8	lb SO_2/ton char	--
SO_2	11/29/2023-12/05/2023	0.24	lb SO_2/ton char	--
Emissions Unit EU04				
Pollutant	**Test Date**	**Result**	**Units**	**Comment**

PM	06/08-11-2019	0.25	lb PM/ton char	--
PM	10/26/2015	0.33	lb PM/ton char	--
PM	11/29/2023-12/05/2023	0.14	lb PM/ton char	--
PM_{10}	06/08-11-2019	0.11	lb PM_{10}/ton char	--
PM_{10}	10/26/2015	0.09	lb PM_{10}/ton char	--
PM_{10}	11/29/2023-12/05/2023	0.095	lb PM_{10}/ton char	--
Emissions Unit EU08				
Pollutant	**Test Date**	**Result**	**Units**	**Comment**
PM	10/26/2015	0.060	lb PM/ton briquets	--
PM	11/29/2023-12/05/2023	0.026	lb PM/ton briquets	--
PM_{10}	10/26/2015	0.060	lb PM_{10}/ton briquets	--
PM_{10}	11/29/2023-12/05/2023	0.026	lb PM_{10}/ton briquets	--

103. The facility is required to perform compliance testing using the test methods (or alternate test methods approved in writing by LRAPA) at the frequency listed in the table below. The facility applied to reduce some of the emission factor verification testing previously required at this facility. LRAPA reviewed the request and removed the requirement to test SO_2 and PM_{10} from Emissions Unit EU03 and the requirement to test PM_{10} from Emissions Units EU03, EU04, and EU08. Previous testing has demonstrated that SO_2 emissions from combusting wood are consistent over time and independent of facility operations. In addition, testing SO_2 is not recommended under DEQ's "Emission Factor Guidance for NSR Regulated Pollutants" because the potential emissions of SO_2 are less than 10 TPY uncontrolled. PM_{10} emission testing is no longer required for Emissions Units EU03, EU04, and EU08 because of technical challenges related to performing EPA Test Method 201A. However, the emission factors developed from previous testing for PM_{10} and any assumptions related to particulate speciation will continue to be used for calculating compliance with the PSEL unless additional testing is performed by the facility. Additionally, DEQ's "Emission Factor Guidance for NSR Regulated Pollutants" does not recommend that PM_{10} testing be performed for these emissions units as long as one form of particulate matter is being tested. Emissions Units EU03, EU04, and EU08 are still required to measure total PM.

Emissions Unit	Pollutant / Testing	EPA/DEQ Test Method	Limitation	SIP / CAO/ NSPS / NESHAP	Minimum Frequency
EU03	Total PM	Method 5 and 202	10.0 lbs/hr PWR lbs/hr EF Verification	SIP SIP SIP	5 years
EU03	Visible Emissions	Method 9	20% opacity	SIP	5 years
EU03	Nitrogen Oxides	Method 7E	EF Verification	SIP	5 years
EU03	Carbon Monoxide	Method 10	EF Verification	SIP	5 years
EU03	Volatile Organic Compounds	Method 25A	EF Verification	SIP	5 years
EU04	Total PM	Method 5 and 202	0.10 gr/dscf PWR lbs/hr EF Verification	SIP SIP SIP	5 years
EU04	Visible Emissions	Method 9	20% opacity	SIP	5 years
EU08	Total PM	Method 5 and 202	0.10 gr/dscf PWR lbs/hr EF Verification	SIP SIP SIP	5 years
EU08	Visible Emissions	Method 9	20% opacity	SIP	5 years
EU11	Capture	Method 204	FV ≥ 200 fpm	SIP	5 years

PUBLIC NOTICE

104. The draft permit and review report were on public notice from October 11, 2024 to November 18, 2024. During the public comment period, 20 comments were received from the public. LRAPA also held a virtual informational meeting on this project on November 6, 2024. A public hearing was not requested on this project. After the public comment period ended, LRAPA responded to the comments received.

Informational Meeting Summary

On Wednesday, November 6, 2024, beginning at approximately 5:30 pm, a virtual informational meeting was held for the modification and renewal of the Title V Operating Permit for Kingsford Manufacturing Company (Source Number 204402) located at 3315 Marcola Road, Springfield, Oregon, 97478. Six (6) members of the public and one (1) facility representative were in attendance based upon a review of Zoom logs.

The LRAPA representatives participating in the informational meeting were Travis Knudsen – Executive Director, Matt Sorensen – Public Affairs & Project Manager, Max Hueftle – Operations Manager, Colleen Wagstaff – Enforcement Manager, Amanda Atkins – Permit & Public Outreach Coordinator and Jonathan Wright – Permit Writer.

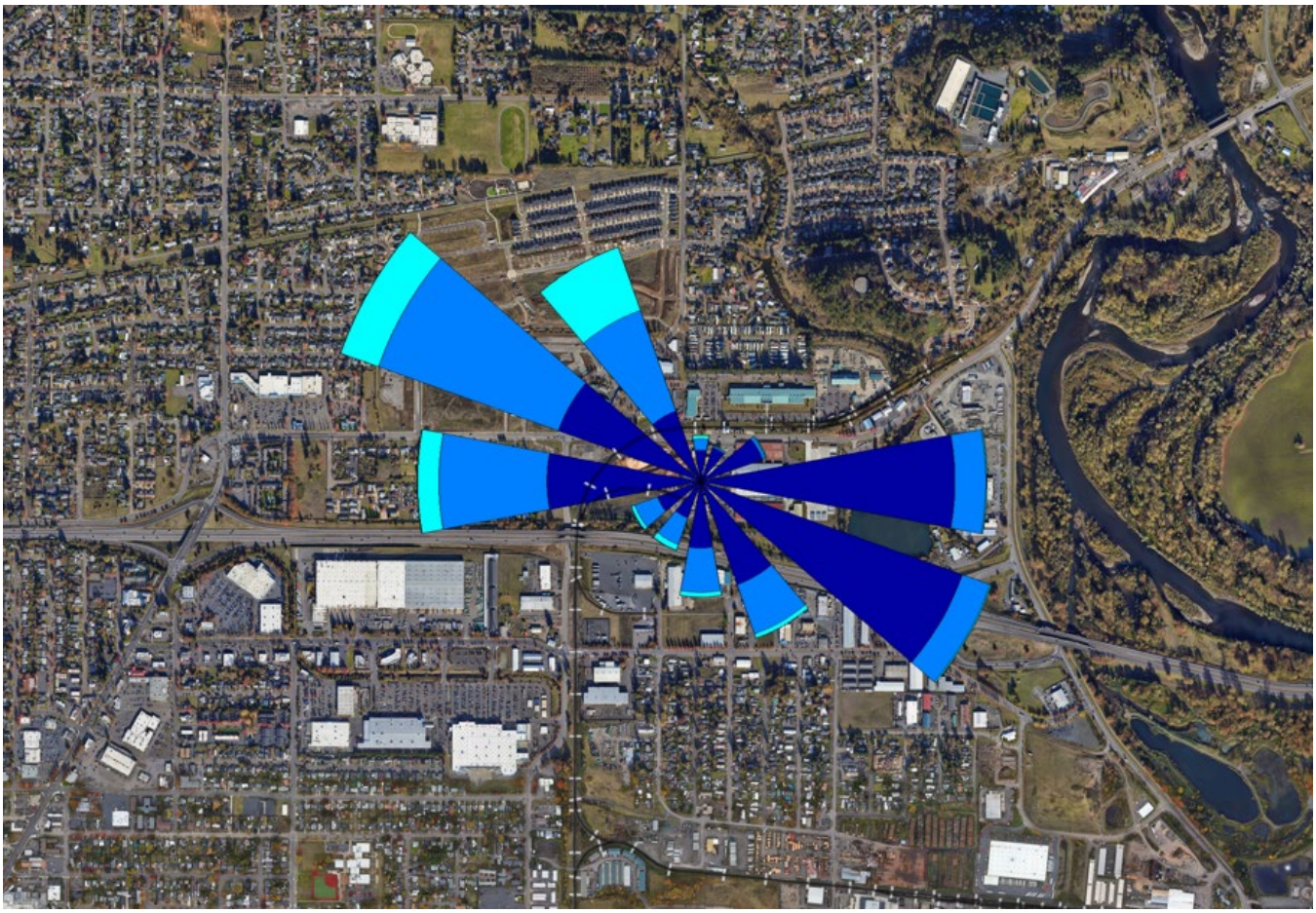
Matt Sorensen conducted an informational presentation that discussed the location and purpose of the facility, the types of emissions units at the facility, a summary of the emissions from the facility, and a summary of the proposed modifications to the permit. Following the presentation, Jonathan Wright answered technical and regulatory questions related to the operation of the facility, the air quality permit conditions, and the facility emission calculations. The informational meeting lasted about an hour.

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.]

Comment 1: A number of commenters in the River Heights neighborhood roughly 0.4 miles northeast of Kingsford mentioned being affected by intermittent particulate matter fallout. At least one commenter believes that this neighborhood is “directly downwind [of Kingsford] most days.”

Response 1: LRAPA attempts to respond to all complaints in Lane County potentially related to commercial and industrial sources. One of the tools LRAPA uses to determine what source may be the cause of a complaint, such as particulate matter fallout, is a graphical tool known as a wind rose. Wind roses are graphical charts that characterize the speed and direction of winds at a location. Presented in a circular format, the length of each "spoke" around the circle indicates the amount of time that the wind blows from a particular direction. Colors along the spokes indicate categories of wind speed. Below is a wind rose representing wind data for 2017 through 2021 for Springfield, Oregon overlayed on a satellite image, with the wind rose centered on top of the Kingsford facility. The winds in the McKenzie River valley through Springfield predominantly blow from the northwest and southeast. This information suggests that another source other than Kingsford may be causing the intermittent particulate matter fallout in the River Heights neighborhood because the predominant wind directions do not blow towards the River Heights neighborhood which is located northeast of the Kingsford facility.



Additionally, LRAPA relies on the public to provide the Agency with timely information if they are experiencing adverse air-related issues. The public can contact LRAPA 24 hours a day using either LRAPA's complaint line at (541) 726-1930 or LRAPA's on-line complaint form at https://www.lrapa.org/air-quality-protection/current-aqi/file-an-air-quality-complaint/air-quality-complaint-form/. It is important for the public to provide LRAPA with the date and time that the adverse air-related issue was first noticed. If particulate matter fallout is observed, LRAPA may need to take a sample of the material to help determine the source of the fallout.

As part of this response to comments, LRAPA reviewed our database for any complaints that mentioned Kingsford between 2000 and the present. Most of the complaints related to Kingsford were in regards to odors associated with the wood pile. Beginning in July of 2018, LRAPA began to receive complaints from the River Heights neighborhood related to particulate matter fallout. LRAPA determined that these complaints were the result of particulate matter fallout from a facility other than Kingsford.

Comment 2: A number of commenters expressed concerns about the proposed changes in monitoring in the draft permit for the facility. One commenter stated "it is my understanding that the Kingsford plant is asking to decrease monitoring of carbon monoxide, sulfur dioxide, particulate matter, and greenhouse gases." One commenter stated "please do not remove PM_{10} and SO_2 periodic testing requirements for any emission units."

Response 2: There is some confusion in the public as to what changes are proposed in the draft permit as related to compliance testing. For the purposes of this discussion, compliance testing involves the use of a

third-party firm by Kingsford to directly measure the emissions of a regulated pollutant at a given exhaust point in a process. Under the current permit, Kingsford is required to perform compliance testing once every 5 years for carbon monoxide, nitrogen oxides, total particulate matter (TPM), particulate matter less than 10 microns (PM_{10}), volatile organic compounds, and sulfur dioxide, from various processes. Not all processes are required to test the emission of these regulated pollutants.

LRAPA is proposing to remove the compliance testing for two pollutants – PM_{10} and sulfur dioxide. The facility has performed compliance testing of PM_{10} multiple times in the last 15 years, depending on the process. The ratio of the mass of the measured PM_{10} to the mass of the measured TPM for each process has been very consistent across each compliance test. LRAPA believes future TPM compliance testing in conjunction with historical PM_{10} to TPM ratios will provide LRAPA with the necessary information to determine whether Kingsford is in compliance with their PM_{10} Plant Site Emission Limit (PSEL). Sulfur dioxide emissions at Kingsford result from two sources – the combustion of natural gas and the combustion of gases from the pyrolysis of wood to make charcoal. Sulfur compounds known as mercaptans are added to natural gas in order to allow for the detection of leaks. When natural gas is combusted, the mercaptans are converted to sulfur dioxide. Similarly, wood contains naturally occurring sulfur compounds. When wood undergoes pyrolysis, the sulfur compounds are released in gaseous form. Kingsford uses an after combustion chamber (ACC) operating at more than 1400 ^{o}F to destroy volatile organic compounds released during the drying of wood and during pyrolysis. The sulfur compounds emitted from wood during pyrolysis are combusted in the ACC and converted to sulfur dioxide. Because the sulfur dioxide emissions have been consistent at this facility, as verified through multiple tests in the last 15 years, LRAPA does not believe additional compliance testing of this regulated pollutant is necessary.

Kingsford is not currently required to directly measure greenhouse gases. The facility is required to use the EPA methodologies listed in the Code of Federal Regulations (CFR) under 40 CFR part 98 to calculate their greenhouse gas emissions and demonstrate compliance with the GHG PSEL.

Comment 3: One commenter expressed concerns over fugitive dust from the facility's wood pile, stating "just walk down the sidewalk east of the factory where the wind blows the dust from that enormous pile of wood sawdust and you will see accumulation of the dust building up around the edges of the concrete sidewalk."

Response 3: Under the current permit, Kingsford is required to perform quarterly visible emission monitoring of the fugitive particulate matter emissions from the facility's wood pile as a means of demonstrating compliance with the visible emissions limit that applies at the property line. Based on potential emissions from this source and DEQ guidance, LRAPA has increased the frequency of these inspections from quarterly to monthly to more adequately demonstrate compliance and correct any fugitive particulate matter issues during the dry season.

Comment 4: One commenter stated that "oversight should be more strict for such a large producer of hazardous air pollutants."

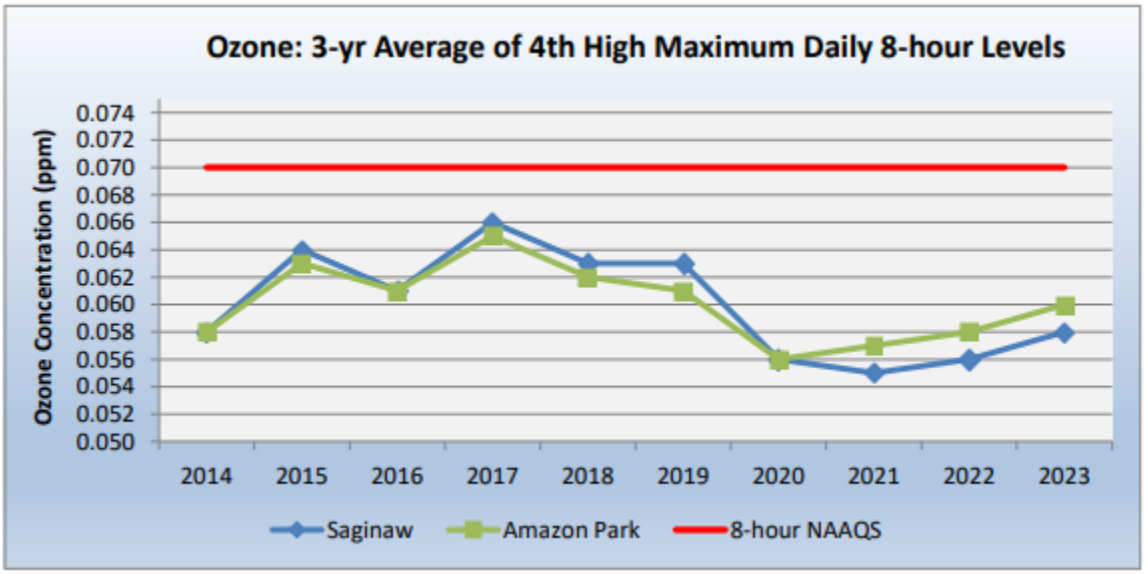
Response 4: Hazardous air pollutants, also known as toxic air pollutants or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. The Clean Air Act Amendments of 1990 define a list of 188 compounds or categories that are considered to be hazardous air pollutants. A major source of hazardous air pollutants is defined as any source that has the potential-to-emit of at least ten (10) tons per year of any single hazardous air pollutant or 25 tons per year from the total of all hazardous air pollutants. As discussed in the review report, Kingsford is considered an area source of hazardous air pollutants. Kingsford's potential-to-emit of a single hazardous air pollutant is 0.16 tons per year (methanol) and 0.21 tons per year from the total of all hazardous air pollutants. Thus, Kingsford is not a large emitter of hazardous air pollutants.

Comment 5: One commenter asked about the "amount of VOC that are released currently in an 8 hr. emissions" when the solvent treated briquet operation is operating while the after combustion chamber (ACC) is not operating. Other commenters requested that the permit not change the "maximum daily uncontrolled solvent discharge limit of 8 hours to extend to 12 hours."

Response 5: Kingsford operates a solvent treated briquette line that applies a mineral spirit to some briquettes prior to bagging to make the ignition of the briquettes easier for the consumer. This process is known as Emissions Unit EU11 – Solvent Treated Briquette (STB) Operation. The volatile organic compound (VOC) emissions from the spray application of the solvent that are not retained on the briquettes are controlled by the after combustion chamber (ACC). The current Title V operating permit allows up to 280 hours per year and 8 hours per day of uncontrolled operation of the STB line. Kingsford has requested a modification in the draft permit to allow the STB line to operate uncontrolled up to 12 hours per day, but has NOT requested any modification of the current annual limit of 280 hours per year operating uncontrolled. Thus, there is no increase in the total uncontrolled VOC emissions from the STB line. In an 8-hour period, the uncontrolled VOC emissions would be 329 pounds or 0.16 tons. In a 12-hour period, the uncontrolled VOC emissions would be 494 pounds or 0.25 tons.

Comment 6: Another commenter had additional thoughts on the solvent treated briquette (STB) line allowance of both the 12-hour period of uncontrolled emissions and the annual limit of 280 hours per year operating uncontrolled. "Why should the public be exposed to these uncontrolled emissions? What if these shut-down emissions occur during a thermal inversion that traps vapors in the local airshed? If another business such as an autobody paint shop or cabinet shop asked for permission to emit a similar amount of uncontrolled solvent vapors, they would likely be told no. Why should LRAPA give Kingsford this gift from the public's limited airshed? In our view, Kingsford needs to develop an alternative way to limit solvent vapor emissions during ACC shut-down, such as using carbon filters, or developing a way to hold briquets when the ACC is shutdown and apply solvent after the ACC is restarted. Another approach would be to allow these uncontrolled vapor emissions only when the local weather conditions are highly likely to disperse the vapors rapidly throughout the shut-down process, otherwise hold the briquets and apply solvent after ACC start-up. All of these approaches are reasonable and technologically feasible."

Response 6: For this discussion, it is important to put the uncontrolled operation of Emissions Unit EU11 – Solvent Treated Briquette (STB) Operation in context. Based on compliance testing results, the maximum amount of volatile organic compound emissions from the 280 hours of uncontrolled operation is 5.76 tons per year. In comparison, no autobody paint shop or cabinet shop regulated by LRAPA has a control device to reduce their volatile organic compound emissions. In regards to temperature inversions, the pollutant of concern in our portion of the Willamette Valley is particulate matter emissions. Volatile organic compounds are precursors to ground level ozone formation, especially in combination with nitrogen oxides in the presence of heat and sunlight. However, temperature inversions typically occur in the Willamette Valley during the winter months when ground level ozone formation is very low. Based on the most recent 10 years of ozone monitoring data as shown below, the Eugene-Springfield airshed is in compliance with the ozone National Ambient Air Quality Standard. The commenter provides a number of additional control options to reduce the volatile organic compound emissions from uncontrolled operation. While LRAPA agrees that these approaches may be technologically feasible, these approaches must also be economically feasible under the applicable regulations. The STB process line was originally permitted in 1999 and began operation in 2000. At that time, Typically Available Control Technology (TACT) under title 32 was determined to be the use of an After Combustion Chamber (ACC) with a maximum allowance of 280 hours per year of uncontrolled operation. Based on a review of similar facilities in the United States, LRAPA believes that the use of an ACC with a maximum allowance of 280 hours per year of uncontrolled operation continues to represent TACT.



Comment 7: One commenter alluded to proposed changes in the monitoring related to Emissions Unit EU10, a natural gas or propane-fired boiler with a maximum heat input of 3.345 million British thermal units (MMBtu) per hour by stating that "fuel consumption seems a very bad way to monitor." Another commenter stated "please do not remove record keeping of visible emission monitoring to just show documentation of fuel use capability" for this emissions unit.

Response 7: The commenters are referring to a proposed change in compliance monitoring for EU10 in the draft permit. Under the current permit, Kingsford must perform quarterly visible emission monitoring of the exhaust stack for EU10 to demonstrate compliance with the applicable visible and particulate matter emission limits. The facility has never detected any visible emissions from this emissions unit. Natural gas and propane are clean burning fuels for which an exceedance of a visible or particulate matter emission limit would be highly unlikely. LRAPA believes that requiring Kingsford to maintain documentation that EU10 is only capable of combusting natural gas or propane in this emissions unit is a reasonable method of demonstrating compliance with the applicable emission limits. While reviewing this comment, LRAPA realized that the facility had requested in their modification application that EU10 also be subject to an annual inspection as part of demonstrating compliance with the applicable emission limits. This requirement will be added to the draft permit prior to proposal to the US EPA for their 45-day review period.

Comment 8: One commenter stated "please do not allow any changes that would revise filters without trial periods or testing." One commenter approved of the changes to adjust calibration and maintenance intervals if appropriate.

Response 8: The first commenter is referring to a request from Kingsford to modify the frequency of the internal inspections of the fabric filter control devices associated with Emissions Unit EU08 – Briquet Handling System. The minimum fabric filter control device inspection frequency in the current permit is quarterly. The minimum fabric filter control device inspection frequency in the draft permit is semiannually. Kingsford is already required to monitor an operational parameter for the fabric filter control devices on a daily basis, the pressure drop across each control device, to verify the control devices are operating within a range that would indicate normal operation. The internal inspection requirement for the control devices ensures that Kingsford performs regular maintenance on these control devices to avoid control device malfunctions as much as possible. LRAPA agreed to reduce the frequency of internal

inspections because wood dust particulate is not particularly abrasive to fabric filter media, unlike particulate controlled in other industries such as metal foundries, and to align the inspection frequency with the baghouse control device on Emissions Unit EU01 – Wood Fuel Receipt and Storage tilt dump. As such, LRAPA believes it is appropriate to revise the frequency of the fabric filter control device inspections on Emissions Unit EU08.

Comment 9: One commenter stated "please do not allow any Compliance Monitoring (CAM) requirements to lessen."

Response 9: The commenter is referring to a request from Kingsford to modify the Compliance Assurance Monitoring (CAM) required under 40 CFR part 64 and LRAPA title 35 associated with Emissions Unit EU03 – Charring and Drying System. A CAM plan is required for any pollutant specific emission unit that has uncontrolled potential emissions more than the major source thresholds. In the case of particulate matter, particulate matter less than 10 microns, and particulate matter less than 2.5 microns, the major source threshold is 100 tons per year. Emissions Unit EU03 has uncontrolled emissions of at least one form of particulate matter greater than 100 tons per year and is required to have a CAM plan for this regulated pollutant. LRAPA inserted the CAM plan conditions into the Title V Operating Permit during previous permit actions. LRAPA routinely reviews all compliance monitoring requirements during the renewal of an air quality permit to ensure the compliance monitoring requirements provide adequate and timely information on a facility's compliance status. LRAPA may increase or decrease the frequency of the compliance requirements or change the compliance requirements based on a number of factors. In the case of Emissions Unit EU03, the current permit contains CAM requirements related to the after combustion chamber (ACC), retort furnace cyclones, and the hogfuel dryer cyclone bin. Upon consultation with Kingsford, LRAPA has determined that the retort furnace cyclones and the hogfuel dryer cyclone bin are process-related equipment that do not control emissions from Emissions Unit EU03. Only the ACC controls emissions from Emissions Unit EU03. While the temperature of the retort furnace cyclones and the level of the hogfuel dryer cyclone bin may provide important operational information to Kingsford in order to produce their product, these parameters do not provide LRAPA with important information related to Kingsford's compliance with the permit limitations applicable to Emissions Unit EU03. As such, LRAPA believes it is appropriate to remove the monitoring of this equipment from the CAM plan and the draft Title V Operating Permit.

Public Comment Receipt Log

Written comments were received from:

Thomas Baxter szabieste22@gmail.com	David Bartling dpbartling@yahoo.com	Ray Morton raywmorton@outlook.com
Flo Hoskinson Email address redacted	Yvonne Lyles ylyles.yl@gmail.com	Jacob McVicker jtmcvicker@hotmail.com
Sally Bornstein sallybornstein@gmail.com	Josh Woitalla joshwoitalla@yahoo.com	Nancy Brenaman nancyjbrenaman@gmail.com
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Marty James martyjames13@gmail.com	Doug Heiken dougheiken@gmail.com	--

EPA REVIEW

105. The proposed permit was sent to EPA on November 20, 2024 for a 45-day review period. The 45-day EPA review period ended on January 2, 2025 without an objection from EPA to the issuance of the proposed permit.

If the EPA does not object in writing to the issuance of the proposed permit, 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.

JJW/aa
01/02/2025

EMISSION DETAIL SHEETS

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - Particulate Matter

EU ID	EU Name	Device/Activity/Parameter	Annual Rate	Units	EF	Unit	TPY	Notes/Reference
EU01	Wood Fuel Receipt and Storage	Max Annual Throughput Wet	320,000	TPY	NA	NA	--	NA
		Max Annual Throughput Dry	160,000	TPY	0.10	lb/dry ton	8.00	KMC Estimate
EU02	Hogfuel Sizing and Infeed System	Sceener In (40 TPH, 2 drops)	8,088	Hr/Yr	9.600E-2	lb/hr-opr	0.39	AP42 - 13.2.4
		Sceener Out (8 TPH, 2 drops)	7,330	Hr/Yr	1.920E-2	lb/hr-opr	0.07	AP42 - 13.2.4
		Secondary Screen In (8 TPH 2 drops)	7,330	Hr/Yr	1.920E-2	lb/hr-opr	0.07	AP42 - 13.2.4
		Secondary Screen Out (2 TPH, 2 drops)	7,330	Hr/Yr	4.800E-3	lb/hr-opr	0.02	AP42 - 13.2.4
		Reject Diverter (8 TPH, 2 drops)	1,000	Hr/Yr	1.920E-2	lb/hr-opr	0.01	AP42 - 13.2.4
EU03	Charring and Drying System	Char Production	48,000	TPY	4.58	lb/ton char	109.92	Average of stack test results since 2009
	Charring and Drying System	ACC Burners (4) - Natural Gas	0.068	MMCF/hr	7.60	lb/MMCF	0.65	70 MMBtu/hr total; AP-42 Section 1.4
			2,500	Hr/Yr				
	Charring and Drying System	ACC Burners (4) - Propane	0.765	10^3 gal/hr	0.70	lb/10^3 gal	0.67	70 MMBtu/hr total; AP-42 Section 1.5
			2,500	Hr/Yr				
	Alt. Operating Scenario EU03-1	Auxiliary Burner Dryer Production	12,600	TPY	0.50	lb/ton char	3.15	KMC estimate
EU04	Briquet Cooling	Briquet Production	150,000	tons/year	0.24	lb/ton briquets	18.00	Avg. of 2009, 2015, 2023 stack test results
EU08	Briquet Handling System	Dust Collectors	150,000	tons/year	0.059	lb/ton briquets	4.43	Avg. of 2009/2010, 2015, 2023 stack test results
EU10	3.345 MMBtu/hr Boiler - Natural Gas	NA	3.26E-03	MMCF/hr	7.60	lb/MMCF	0.10	AP-42 Section 1.4
			8,230	Hr/Yr				
	3.345 MMBtu/hr Boiler - Propane	NA	3.66E-02	10^3 gal/hr	0.70	lb/10^3 gal	0.11	AP-42 Section 1.5
			8,230	Hr/Yr				
						Total =	145	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

Propane heat content: 91.5 MMBtu/10^3 gal

Total emissions based on highest emitting fuel for this pollutant

AP-42 13.2.4 equations use wind speed of 7.6 mph and a moisture content of 4.80 percent

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - PM_{10}

EU ID	EU Name	Device/Activity/Parameter	Annual Rate	Units	EF	Unit	TPY	Notes/Reference
EU01	Wood Fuel Receipt and Storage	Max Annual Throughput Wet	320,000	TPY	NA	NA	--	NA
		Max Annual Throughput Dry	160,000	TPY	0.05	lb/dry ton	3.76	KMC Estimate
EU02	Hogfuel Sizing and Infeed System	Sceener In (40 TPH, 2 drops)	8,088	Hr/Yr	0.048	lb/hr-opr	0.194	AP42 - 13.2.4
		Sceener Out (8 TPH, 2 drops)	7,330	Hr/Yr	0.010	lb/hr-opr	0.035	AP42 - 13.2.4
		Secondary Screen In (8 TPH 2 drops)	7,330	Hr/Yr	0.010	lb/hr-opr	0.035	AP42 - 13.2.4
		Secondary Screen Out (2 TPH, 2 drops)	7,330	Hr/Yr	0.002	lb/hr-opr	0.0088	AP42 - 13.2.4
		Reject Diverter (8 TPH, 2 drops)	1,000	Hr/Yr	0.010	lb/hr-opr	0.0048	AP42 - 13.2.4
EU03	Charring and Drying System	Char Production	48,000	TPY	3.09	lb/ton char	74.26	Average of PM/PM10 Ratios from stack tests * PM emission factor
	Charring and Drying System	ACC Burners (4) - Natural Gas	0.068	MMCF/hr	7.60	lb/MMCF	0.65	70 MMBtu/hr total; AP-42 Section 1.4
			2,500	Hr/Yr				
	Charring and Drying System	ACC Burners (4) - Propane	0.765	10^3 gal/hr	0.70	lb/10^3 gal	0.67	70 MMBtu/hr total; AP-42 Section 1.5
			2,500	Hr/Yr				
	Alt. Operating Scenario EU03-1	Auxiliary Burner Dryer Production	12,600	TPY	0.30	lb/ton char	1.89	KMC estimate
EU04	Briquet Cooling	Briquet Production	150,000	TPY	0.10	lb/ton briquets	7.50	Avg. of 2009, 2015, 2023 ST results
EU08	Briquet Handling System	Dust Collectors	150,000	tons/year	0.059	lb/ton briquets	4.43	Avg. of 2009/2010, 2015, 2023 stack test results
EU10	3.345 MMBtu/hr Boiler - Natural Gas	NA	3.26E-03	MMCF/hr	7.60	lb/MMCF	0.10	AP-42 Section 1.4
			8,230	Hr/Yr				
	3.345 MMBtu/hr Boiler - Propane	NA	3.66E-02	10^3 gal/hr	0.70	lb/10^3 gal	0.11	AP-42 Section 1.5
			8,230	Hr/Yr				
						Total =	93	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

Propane heat content: 91.5 MMBtu/10^3 gal

Total emissions based on highest emitting fuel for this pollutant

AP-42 13.2.4 equations use wind speed of 7.6 mph and a moisture content of 4.80 percent

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - PM2.5

EU ID		Device/Activity/Parameter	Annual Rate	Units	EF	Unit	Reference	$PM_{2.5}$ Fraction	Reference Fraction	$PM_{2.5}$ EF	PM_{10} TPY	$PM_{2.5}$ TPY
EU01	ceipt and Storage	Max Annual Throughput Wet	320,000	TPY	NA	NA	NA	NA	NA	NA	--	--
		Max Annual Throughput Dry	160,000	TPY	0.05	lb/dry ton	KMC Estimate	0.15	DEQ AQ-EF08 (Storage Piles)	0.01	3.76	0.56
EU02	and Infeed System	Sceener In (40 TPH, 2 drops)	8,088	Hr/Yr	0.048	lb/hr-opr	AP42 - 13.2.4	0.07	DEQ AQ-EF08 (Crushed Stone Screening)	0.003	0.194	1.4E-02
		Sceener Out (8 TPH, 2 drops)	7,330	Hr/Yr	0.010	lb/hr-opr	AP42 - 13.2.4			0.001	0.035	2.5E-03
		Secondary Screen In (8 TPH 2 drops)	7,330	Hr/Yr	0.010	lb/hr-opr	AP42 - 13.2.4			0.001	0.035	2.5E-03
		Secondary Screen Out (2 TPH, 2 drops)	7,330	Hr/Yr	0.002	lb/hr-opr	AP42 - 13.2.4			0.0002	0.0088	6.2E-04
		Reject Diverter (8 TPH, 2 drops)	1,000	Hr/Yr	0.010	lb/hr-opr	AP42 - 13.2.4			0.001	0.0048	3.4E-04
EU03	Drying System	Char Production	48,000	TPY	3.09	lb/ton char	Ratio of PM10/PM from 10/26/2015 stack test was 3.02/4.53=0.67	1.00	Stack test; PM_{10}=$PM_{2.5}$	3.09	74.26	74.26
	Drying System	ACC Burners (4) - Natural Gas	0.068	MMCF/hr	7.60	lb/MMCF	70 MMBtu/hr total; AP-42 Section 1.4	1.00	DEQ AQ-EF08	7.60	0.65	0.65
			2,500	Hr/Yr								
	Drying System	ACC Burners (4) - Propane	0.765	10^3 gal/hr	0.70	lb/10^3 gal	70 MMBtu/hr total; AP-42 Section 1.5	1.00	DEQ AQ-EF08	0.70	0.67	0.67
			2,500	Hr/Yr								
	Scenario EU03-1	Auxiliary Burner Dryer Production	12,600	TPY	0.30	lb/ton char	KMC estimate	0.70	KMC Estimate	0.21	1.89	1.32
EU04	g	Briquet Production	150,000	TPY	0.10	lb/ton briquets	Avg. of 2009, 2015, 2023 ST results	0.50	Stack test; PM_{10}=$PM_{2.5}$	0.050	7.50	3.75
EU08	ng System	Dust Collectors	150,000	tons/year	0.059	lb/ton briquets	Avg. of 2009/2010, 2015, 2023 stack test results	1.00	DEQ AQ-EF08 (Baghouse)	0.059	4.43	4.43
EU10	ır Boiler - Natural Gas	NA	3.26E-03	MMCF/hr	7.60	lb/MMCF	AP-42 Section 1.4	1.00	DEQ AQ-EF08	7.60	0.10	0.10
			8,230	Hr/Yr								
	ır Boiler - Propane	NA	3.66E-02	10^3 gal/hr	0.70	lb/10^3 gal	AP-42 Section 1.5	1.00	DEQ AQ-EF08	0.70	0.11	0.11
			8,230	Hr/Yr								
										Total =	93	85

Notes:

Natural gas heat content: 1026 MMBtu/MMCF
5 MMBtu/10^3 gal

Total emissions based on highest emitting fuel for this pollutant

KMC uses 0.2 lb/ton briquets to estimate PM2.5 emissions from briquet dryers at other plants based on limited stack test data and engineering estimates.

AP-42 13.2.4 equations use wind speed of 7.6 mph and a moisture content of 4.80 percent

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - Carbon Monoxide

EU ID		Description	Annual Rate	Units	EF	Units	TPY	Notes/Reference
EU03		Char Production - Normal Op	48,000	TPY	0.82	lb/ton char	19.7	Average of stack test results since 2009
	)peration	Existing ACC Burners (2) - Natural Gas	0.029	MMCF/hr	84	lb/MMCF	3.07	15 MMBtu/hr each
			2,500	Hr/Yr				AP-42 Section 1.4
	)peration	Existing ACC Burners (2) - Propane	0.328	10^3 gal/hr	7.5	lb/10^3 gal	3.07	15 MMBtu/hr each
			2,500	Hr/Yr				AP-42 Section 1.5
	)peration	New ACC Burners (2) - Natural Gas	0.039	MMCF/hr	0.059	lb/MMBtu	2.93	20 MMBtu/hr each
			2,500	Hr/Yr				AP-42 Section 1.4
	)peration	New ACC Burners (2) - Propane	0.437	10^3 gal/hr	7.5	lb/10^3 gal	4.10	20 MMBtu/hr each
			2,500	Hr/Yr				AP-42 Section 1.5
	o EU03-1	Dryer Auxilary Burners (2) - Natural Gas	0.039	MMCF/hr	84	lb/MMCF	0.98	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.4
	o EU03-1	Dryer Auxilary Burners (2) - Propane	0.437	10^3 gal/hr	7.5	lb/10^3 gal	0.98	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.5
EU10	- Natural Gas	NA	3.26E-03	MMCF/hr	84	lb/MMCF	1.13	AP-42 Section 1.4
			8,230	Hr/Yr				
	- Propane	NA	3.66E-02	10^3 gal/hr	7.5	lb/10^3 gal	1.13	AP-42 Section 1.5
			8,230	Hr/Yr				
						Total =	29	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

)tu/10^3 gal

Total emissions based on highest emitting fuel for this pollutant

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - Nitrogen Oxides

EU ID		Description	Annual Rate	Units	EF	Units	TPY	Notes/Reference
EU03	rying	Char Production - Normal Op Scenario	48,000	TPY	3.80	lb/ton char	91.20	Average of stack test results since 2009
	rying Operation	Existing ACC Burners (2) - Natural Gas	0.029	MMCF/hr	100	lb/MMCF	3.65	15 MMBtu/hr each
			2500	Hr/Yr				AP-42 Section 1.4
	rying Operation	Existing ACC Burners (2) - Propane	0.328	10^3 gal/hr	13	lb/10^3 gal	5.33	15 MMBtu/hr each
			2500	Hr/Yr				AP-42 Section 1.5
	rying Operation	New ACC Burners (2) - Natural Gas	0.039	MMCF/hr	0.085	lb/MMBtu	4.23	20 MMBtu/hr each
			2500	Hr/Yr				AP-42 Section 1.4
	rying Operation	New ACC Burners (2) - Propane	0.437	10^3 gal/hr	13	lb/10^3 gal	7.10	20 MMBtu/hr each
			2500	Hr/Yr				AP-42 Section 1.5
	cenario EU03-1	Dryer Auxilary Burners (2) - Natural Gas	0.039	MMCF/hr	100	lb/MMCF	1.17	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.4
	cenario EU03-1	Dryer Auxilary Burners (2) - Propane	0.437	10^3 gal/hr	13	lb/10^3 gal	1.70	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.5
EU10	r Boiler - Natural Gas	NA	3.26E-03	MMCF/hr	100	lb/MMCF	1.34	AP-42 Section 1.4
			8,230	Hr/Yr				
	r Boiler - Propane	NA	3.66E-02	10^3 gal/hr	13	lb/10^3 gal	1.96	AP-42 Section 1.5
			8,230	Hr/Yr				
						Total =	107	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

.5 MMBtu/10^3 gal

Total emissions based on highest emitting fuel for this pollutant

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - Sulfur Dioxide

EU ID		escription	Annual Rate	Units	EF	Units	TPY	Notes/Reference
EU03		har Production - Normal Op Scenario	48,000	TPY	0.40	lb/ton char	9.68	Average of stack test results since 2009
		CC Burners (4) - Natural Gas	0.068	MMCF/hr	0.60	lb/MMCF	0.05	70 MMBtu/hr total
			2,500	Hr/Yr				AP-42 Section 1.4
		CC Burners (4) - Propane	0.765	10^3 gal/hr	1.50	lb/10^3 gal	1.43	70 MMBtu/hr total
			2500	Hr/Yr				AP-42 Section 1.5
		ryer Auxilary Burners (2) - Natural Gas	0.039	MMCF/hr	0.60	lb/MMCF	0.01	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.4
		ryer Auxilary Burners (2) - Propane	0.437	10^3 gal/hr	1.50	lb/10^3 gal	0.20	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.5
EU10		A	3.26E-03	MMCF/hr	0.60	lb/MMCF	0.01	AP-42 Section 1.4
			8,230	Hr/Yr				
		A	3.66E-02	10^3 gal/hr	1.50	lb/10^3 gal	0.23	AP-42 Section 1.5
			8,230	Hr/Yr				
						Total =	12	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

Total emissions based on highest emitting fuel for this pollutant

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - Volatile Organic Compounds

EU ID		Description	Annual Rate	Units	EF	Units	TPY	Notes/Reference
EU03		Char Production - Normal Op	48,000	TPY	0.27	lb/ton char	6.48	Average of stack test results since 2009
		ACC Burners (4) - Natural Gas	0.068	MMCF/hr	5.50	lb/MMCF	0.47	70 MMBtu/hr total
			2,500	Hr/Yr				AP-42 Section 1.4
		ACC Burners (4) - Propane	0.765	10^3 gal/hr	0.80	lb/10^3 gal	0.77	70 MMBtu/hr total
			2,500	Hr/Yr				AP-42 Section 1.5
		Dryer Auxilary Burners (2) - Natural Gas	0.039	MMCF/hr	5.50	lb/MMCF	0.06	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.4 w/ 99% DE
		Dryer Auxilary Burners (2) - Propane	0.437	10^3 gal/hr	0.80	lb/10^3 gal	0.10	40 MMBtu/hr total
			600	Hr/Yr				AP-42 Section 1.5 w/ 99% DE
EU10	ɜas	NA	3.26E-03	MMCF/hr	5.50	lb/MMCF	0.07	AP-42 Section 1.4
			8,230	Hr/Yr				
		NA	3.66E-02	10^3 gal/hr	0.80	lb/10^3 gal	0.12	AP-42 Section 1.5
			8,230	Hr/Yr				
EU11	s	ACC Control of VOC	67,160	TPY	0.10	lb/ton STB	3.22	1.92 lb/ton STB EF controlled by 95%
		ACC Upset Operations	6,000	TPY	1.92	lb/ton STB	5.76	Source Test Data
		STB Fines	73,160	TPY	1.20	lb/ton STB	43.9	Source Test Data
		Fixed VOC Emissions (Tanks, Fugitives)	8,760	Hr/Yr	0.30	lb/hour	1.31	Original application
						Total =	62	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

Total emissions based on highest emitting fuel for this pollutant

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Pollutant - GHG (as CO_2e)

EU ID	EU Name	Description	Annual Rate	Units	EF	Units	TPY	Notes/Reference
EU03	Charring and Drying	Wood Combusted	109,200	TPY	206.80	lb/MMBtu	197,372	Biogenic
					2.76	lb/MMBtu	2,634	40 CFR 98, Table C-1, C-2
	Charring and Drying Opreration	ACC Burners (4) - Natural Gas	0.068	MMCF/hr	117.1	lb/MMBtu	10,246	70 MMBtu/hr total
			2,500	Hr/Yr				40 CFR 98, Table C-1, C-2
	Charring and Drying Opreration	ACC Burners (4) - Propane	0.765	10^3 gal/hr	139.2	lb/10^3 gal	12,180	70 MMBtu/hr total
			2,500	Hr/Yr				40 CFR 98, Table C-1, C-2
	Alt. Operating Scenario EU03-1	Dryer Auxilary Burners (2) - Natural Gas	0.039	MMCF/hr	117.1	lb/MMCF	2,459	40 MMBtu/hr total
			600	Hr/Yr				40 CFR 98, Table C-1, C-2
	Alt. Operating Scenario EU03-1	Dryer Auxilary Burners (2) - Propane	0.437	10^3 gal/hr	139.2	lb/10^3 gal	2,923	40 MMBtu/hr total
			600	Hr/Yr				40 CFR 98, Table C-1, C-2
EU10	3.345 MMBtu/hr Boiler - Natural Gas	NA	3.26E-03	MMCF/hr NG	117.1	lb/MMCF	1,612	40 CFR 98, Table C-1, C-2
			8,230	Hr/Yr				
	3.345 MMBtu/hr Boiler - Propane	NA	3.66E-02	10^3 gal/hr	139.2	lb/10^3 gal	1,916	40 CFR 98, Table C-1, C-2
			8,230	Hr/Yr				
						Total =	217,025	

Notes:

Natural gas heat content: 1026 MMBtu/MMCF

Propane heat content: 91.5 MMBtu/10^3 gal

Wood heat contct: 17.48 MMBtu/ton

Total emissions based on highest emitting fuel for this regulated pollutant

Kingsford Manufacturing Co. - 204402

Emission Detail Sheets

Aggregate Inisgnificant Emissions

Source	Pollutant	Exhaust Flowrate (dcsfm)	Exhaust PM[a] (gr/dscf)	Hours of Operation[b] (hr/yr)	Emission Rate (TPY)
Starch Silo Vent	$PM/PM_{10}/PM_{2.5}$	300	0.001	480.00	0.001
Lime Silo Vent	$PM/PM_{10}/PM_{2.5}$	1,680	0.001	520.00	0.004
Flavor Dust Blower Exhaust	$PM/PM_{10}/PM_{2.5}$	300	0.001	480.00	0.001
Flavor Dust Tank Vent	$PM/PM_{10}/PM_{2.5}$	1,680	0.001	726.00	0.005
Flavor Dust Truck Unloader	$PM/PM_{10}/PM_{2.5}$	1,100	0.001	500.00	0.002
Starch Filter/Receiver	$PM/PM_{10}/PM_{2.5}$	385	0.001	8,400.00	0.014
Starch Transfer Vent	$PM/PM_{10}/PM_{2.5}$	300	0.001	7,500.00	0.010
Hammermill Blending Bin Vent[c]	$PM/PM_{10}/PM_{2.5}$	4,000	0.001	7,500.00	0.064
Briquet Press Dust Collector[c]	$PM/PM_{10}/PM_{2.5}$	2,600	0.001	1,000.00	0.006
Rerun Storage Dust Collector[c]	$PM/PM_{10}/PM_{2.5}$	4,000	0.001	7,500.00	0.064
Blend I/F Tramco Bin Vent	$PM/PM_{10}/PM_{2.5}$	2,300	0.001	7,500.00	0.074
New Vacuum System Blower	$PM/PM_{10}/PM_{2.5}$	900	0.001	3,650.00	0.014
Fugitive Dust Sources[d]	$PM/PM_{10}/PM_{2.5}$	N/A	N/A	8,760.00	0.040
				Total =	0.30

Notes

[a]Typical fabric filter exhaust PM concentrations

[b]Hours of operation based on maximum daily operating schedules

[c]Exhausts into building - 50% control efficiency assumed

[d]Fugitive dust sources includes emissions from Railcar/Truck Unloading and Rerun Handling

Kingsford Manufacturing Co. - 204402
Emission Detail Sheets
Federal HAPs

Natural Gas HAP Emission Calculations

Maximum Heat Input Rate	113.35	mmBtu/hr
Fuel Heating Value	1026	mmBtu/mmcf
Potential Hours of Operation	8760	hours/year

Pollutant	CAS / TAC	NG Emission Factor (lb/MMCF)	Units	Potential Hourly Emissions (lbs/hr)	Potential Daily Emissions (lbs/day)	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic
Organics								
Acetaldehyde	75-07-0	0.0031	lb/MMcf	3.4E-04	8.2E-03	1.5E-03	Yes	Yes
Acrolein	107-02-8	0.0027	lb/MMcf	3.0E-04	7.2E-03	1.3E-03	Yes	Yes
Benzene	71-43-2	0.0058	lb/MMcf	6.4E-04	1.5E-02	2.8E-03	Yes	Yes
Benzo[a]pyrene	50-32-8	0.0000012	lb/MMcf	1.3E-07	3.2E-06	5.8E-07	Yes	Yes
Ethyl Benzene	100-41-4	0.0069	lb/MMcf	7.6E-04	1.8E-02	3.3E-03	Yes	Yes
Formaldehyde	50-00-0	0.0123	lb/MMcf	1.4E-03	3.3E-02	6.0E-03	Yes	Yes
Hexane	110-54-3	0.0046	lb/MMcf	5.1E-04	1.2E-02	2.2E-03	Yes	Yes
Naphthalene	91-20-3	0.0003	lb/MMcf	3.3E-05	8.0E-04	1.5E-04	Yes	Yes
PAHs	401	0.0001	lb/MMcf	1.1E-05	2.7E-04	4.8E-05	Yes	Yes
Toluene	108-88-3	0.0265	lb/MMcf	2.9E-03	7.0E-02	1.3E-02	Yes	Yes
Xylenes	1330-20-7	0.0197	lb/MMcf	2.2E-03	5.2E-02	9.5E-03	Yes	Yes
Inorganic Gases								
Ammonia	7664-41-7	3.2000	lb/MMcf	3.5E-01	8.5E+00	1.5E+00	No	Yes
Metals								
Arsenic and compounds	7440-38-2	0.0002	lb/MMcf	2.2E-05	5.3E-04	9.7E-05	Yes	Yes
Barium and compounds	7440-39-3	0.0044	lb/MMcf	4.9E-04	1.2E-02	2.1E-03	No	Yes
Beryllium and compounds	7440-41-7	0.000012	lb/MMcf	1.3E-06	3.2E-05	5.8E-06	Yes	Yes
Cadmium and compounds	7440-43-9	0.0011	lb/MMcf	1.2E-04	2.9E-03	5.3E-04	Yes	Yes
Chromium VI, chromate/dichromate	18540-29-9	0.0014	lb/MMcf	1.5E-04	3.7E-03	6.8E-04	Yes	Yes
Cobalt and compounds	7440-48-4	0.000084	lb/MMcf	9.3E-06	2.2E-04	4.1E-05	Yes	Yes
Copper and compounds	7440-50-8	0.00085	lb/MMcf	9.4E-05	2.3E-03	4.1E-04	No	Yes
Lead and compounds	7439-92-1	0.0005	lb/MMcf	5.5E-05	1.3E-03	2.4E-04	Yes	Yes
Manganese and compounds	7439-96-5	0.00038	lb/MMcf	4.2E-05	1.0E-03	1.8E-04	Yes	Yes
Mercury and compounds	7439-97-6	0.00026	lb/MMcf	2.9E-05	6.9E-04	1.3E-04	Yes	Yes
Molybdenum trioxide	1313-27-5	0.00165	lb/MMcf	1.8E-04	4.4E-03	8.0E-04	No	Yes
Nickel compounds, insoluble	365	0.0021	lb/MMcf	2.3E-04	5.6E-03	1.0E-03	Yes	Yes
Selenium and compounds	7782-49-2	0.000024	lb/MMcf	2.7E-06	6.4E-05	1.2E-05	Yes	Yes
Vanadium (fume or dust)	7440-62-2	0.0023	lb/MMcf	2.5E-04	6.1E-03	1.1E-03	No	Yes
Zinc and compounds	7440-66-6	0.029	lb/MMcf	3.2E-03	7.7E-02	1.4E-02	No	Yes
					Total (TPY) =	1.61	4.3E-02	1.61
						Max Indvidual (TPY) =	1.3E-02	1.55

Notes:
Toxics emission factors are based on the Oregon DEQ 2020 ATEI Combustion EF Tool

ACC Methanol Emission Calculations

Methanol Emission Factor =	68.7	pounds of methanol per ton of char
ACC Methanol Destruction Efficiency =	99.99%	
Maximum Char Production Rate =	48,000	tons of char per year
Potential Methanol Emissions =	0.16	tons of methanol per year