MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

June 30, 2011

PERMIT TO INSTALL
166-09A

ISSUED TO
Frontier Kinross, LLC

LOCATED AT
5019 West Airport Drive, Building 119
Kincheloe, Michigan

IN THE COUNTY OF
Chippewa

STATE REGISTRATION NUMBER
N8301

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **May 3, 2011**	
DATE PERMIT TO INSTALL APPROVED: **June 30, 2011**	SIGNATURE: **G. Vinson Hellwig**
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM10	PM less than or equal to 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than or equal 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
TEQ	Toxicity Equivalence Quotient	yr	Year
VE	Visible Emissions		

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EULOGRECEIVE	Logs are received by truck and rail. Daily average of 1560 tons of dry wood (2800 tons of 45% moisture green wood). There is capacity to store logs after receipt in the 15 acre wood yard.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUDEBARK	Enclosed bark hog rated at 300 bone dry tons of wood per day, with dust pick up aspirated to fabric filter CE001.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUBARKSILO	180,000 ft^3 bark storage silo. Bark is mechanically conveyed into and out of the silo.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUBARKLOAD	Loading trucks with bark from the bark silo.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUWOODCHIP	One whole log chipping train rated at 1540 bone dry tons of wood per day. The chips will be screened and pneumatically conveyed to a cyclone for separation. Emissions from the wood chipper and cyclone are controlled by fabric filter CE001.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUCHIPRECEIVE	Wood chips are received by truck and off-loaded into a dump pit. The dump pit emissions are controlled by a fabric filter, CE002.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUSILOA	Wood chip storage silo A with a capacity of 124,000 cubic feet.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUSILOB	Wood chip storage silo B with a capacity of 124,000 cubic feet.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUSILOC	Wood chip storage silo C with a capacity of 124,000 cubic feet.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUCHIPCONVEY	Mechanical wood chip conveyor and surge bin to transfer wood chips from the silos to the pre-treatment trains.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUPRETREAT	Wood chip pre-treatment train, with a capacity of 1540 bone dry tons of wood per day. Hot water and/or steam are used to make the cellulosic material available for fermentation. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUYEASTPROP	Yeast propagation system where yeast is propagated and fed to the fermentation system. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUFERM	Fermentation process consisting of multiple fermentation vessels. Water, yeast, and enzymes (if needed) are added to the pre-treated wood to convert the fermentable material into ethanol. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUBEERWELL	The beer well receives “beer”, the product of the fermentation system, and holds it prior to the distillation process. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUBEERCOLUMN	The beer column is the first stage of the ethanol distillation system. The beer column separates most of the solid material left from fermentation from the liquid. Non-condensable gases from top of the column pass through wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EURECTIFIER	The rectifier column separates the ethanol from the water. Non-condensable gases from top of the column pass through wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUMOLSIEVE	Two vapor phase molecular sieves to produce 200 proof ethanol. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUCENTRIFUGES	Centrifuges used to concentrate the solid content of the beer column bottom stream. The capacity is 526,198,273 gallons per year. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUEVAPORATOR	Multi-effect evaporator train with integrated condensers used to reduce the water content of the liquid produced in the centrifuges. Emissions are controlled by wet scrubber CE003.	June 30, 2011	FGSCRUBBER FGFACIILTY
EUDRYER	Hot water or steam heated lignin (wet cake) dryer with a feed rate of 66 tons of solids per hour at a 65% moisture content. The dryer exhaust discharges to a condenser and then 1,000 acfm of non-condensable vapors are ducted to wet scrubber CE003. 50% moisture content lignin is mechanically conveyed from the dryer.	June 30, 2011	FGSCRUBBER FGFACIILTY
EULIGNINSTORE	Lignin will be stored in a fuel storage silo next to the boiler building or in the loadout shed.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EULIGNINLOAD	A drive under enclosed shed to load lignin into trucks. The lignin will be about 50% moisture content.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUTANK1	120,000 gallon internal floating roof 200 proof ethanol storage tank.	June 30, 2011	FGTANKS FGFACIILTY
EUTANK2	120,000 gallon internal floating roof 200 proof ethanol storage tank.	June 30, 2011	FGTANKS FGFACIILTY
EUTANK3	120,000 gallon internal floating roof 200 proof ethanol storage tank.	June 30, 2011	FGTANKS FGFACIILTY
EUTANK4	600,000 gallon internal floating roof denatured ethanol storage tank. This tank is subject to NSPS Kb.	June 30, 2011	FGTANKS FGFACIILTY
EUTANK5	600,000 gallon internal floating roof denatured ethanol storage tank. This tank is subject to NSPS Kb.	June 30, 2011	FGTANKS FGFACIILTY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUTANK6	45,000 gallon internal floating roof denaturant storage tank. This tank is subject to NSPS Kb.	June 30, 2011	FGTANKS FGFACIILTY
EUETHLOADTRK	Denatured ethanol (70% ethanol or higher) truck load out. Emissions are controlled by flare CE004.	June 30, 2011	FGETHLOAD FGFACIILTY
EUETHLOADRAIL	Denatured ethanol (70% ethanol or higher) rail load out. Emissions are controlled by flare CE004	June 30, 2011	FGETHLOAD FGFACIILTY
EUFLARE	Flare CE004 used to control emissions from filling trucks and rail cars with denatured ethanol.	June 30, 2011	FGETHLOAD FGFACIILTY
EUBOILER	Bubbling fluidized bed boiler burning biomass to produce steam, hot water, and electricity for the facility. The nominal total heat input rate is 535 million BTU per hour. Startup fuel is natural gas. The nominal natural gas heat input rate is 245 million BTU per hour. Emission controls include a multiclone and fabric filter, selective non-catalytic reduction (SNCR), low NOx burners, and overfire air.	June 30, 2011	FGFACIILTY
EUGEN	Natural gas fired 1,500 HP generator used for emergency backup, subject to NSPS JJJJ.	June 30, 2011	FGENGINES FGFACIILTY
EUFIREPUMP	Natural gas fired 500 HP emergency fire pump engine, subject to NSPS JJJJ.	June 30, 2011	FGENGINES FGFACIILTY
EUSANDSILO	Storage silo for sand used as bed material in the boiler. Emissions are controlled by fabric filter CE007.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EULIMESILO	Storage silo for limestone used for acid gas control in the boiler. Emissions are controlled by fabric filter CE008.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUASHSILO	Ash from the boiler is stored in a silo. Emissions are controlled by fabric filter CE006.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUASHLOAD	Ash is loaded into trucks in a drive under enclosed shed. Emissions are controlled by fabric filter CE006.	June 30, 2011	FGMTRLHANDLING FGFACIILTY
EUMETHANATOR	Methanator used to treat organic laden process water. The methane produced is used in the boiler for fuel. In addition, the biosolids produced are combusted in the boiler.	June 30, 2011	FGFACIILTY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to: EUBOILER

DESCRIPTION: Bubbling fluidized bed boiler burning biomass to produce steam, hot water, and electricity for the facility. The nominal total heat input rate is 535 million BTU per hour. Startup fuel is natural gas. The nominal natural gas heat input rate is 245 million BTU per hour.

Flexible Group ID: FGFACILITY

POLLUTION CONTROL EQUIPMENT:
Emission controls include a multiclone and fabric filter CE004, selective non-catalytic reduction (SNCR), and low NOx combustion with staged overfire air.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Opacity	10% opacity on a six-minute average, except for one six-minute average per hour of not more than 20% opacity	Six-minute average	EUBOILER	SC VI.1, VI.2	R 336.1301(1)(c) 40 CFR 63.11201 40 CFR 60.43b(f)
2. PM	0.030 lb/MMBTU heat input	Test protocol*	EUBOILER	SC V.1, V.3	R 336.1205(1), R 336.1331, 40 CFR 60.43b(h)(1) 40 CFR 63.11201
3. PM10	0.065 lb/MMBTU heat input	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1)
4. PM10	34.8 lb/hr	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
5. PM2.5	0.065 lb/MMBTU heat input	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1)
6. PM2.5	34.8 lb/hr	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
7. NO_X	0.12 lb/MMBTU heat input	30-day rolling average, determined each day EUBOILER operates	EUBOILER	SC VI.3	R 336.1205(1)
8. NO_X	64.2 lb/hr	Test protocol*	EUBOILER	SC VI.3	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
9. CO	0.106 lb/MMBTU heat input	Test protocol*	EUBOILER	SC V.5, VI.3	R 336.1205(1)
10. CO	56.71 lb/hr	Test protocol*	EUBOILER	SC V.5, VI.3	R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
11. SO_2	0.025 lb/MMBTU heat input	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1)
12. SO_2	13.4 lb/hr	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
13. VOC	0.01 lb/MMBTU heat input	Test protocol*	EUBOILER	SC V.2, V.3	R 336.1205(1), R 336.1702(a)
* Test protocol will specify the averaging time.					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural gas	10% of annual operating capacity*	12 month rolling average	EUBOILER	SC VI.4	40 CFR 60.44b(d)
* The annual capacity factor shall be determined consistent with 40 CFR 60.49b(d), which states that the "annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month."					

2. The permittee shall only combust natural gas, biogas, or biomass in EUBOILER. Biomass for this boiler means bark, lignin, and biomass from the methanator. This definition of biomass is not intended to suggest that these materials are or are not solid waste. **(R 336.1205, R 336.1225, R 336.1702, R 336.1901, 40 CFR 63.11237)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall conduct a biennial performance tune-up of EUBOILER as specified in 40 CFR §63.11223(b). **(40 CFR 63.11214(b))**

2. The permittee shall submit an acceptable plan that describes how EUBOILER emissions will be minimized during all startups, shutdowns and malfunctions (SSM) to the AQD District Supervisor and receive approval of the plan prior to startup of EUBOILER. The SSM plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices, and shall describe at what operating conditions solid fuel is introduced to the boiler during startup and at what operating conditions solid fuel feed is stopped during shutdown. **(R 336.1205(1), R 336.1911, R 336.1912)**

3. The permittee shall submit a malfunction abatement plan (MAP) for EUBOILER to the AQD District Supervisor. The initial MAP and any future amended MAP shall be subject to review and approval, as provided in Rule 911. The permittee shall not operate EUBOILER unless the MAP, amended as necessary according to the procedures of Rule 911, is implemented and maintained. The MAP shall include procedures for maintaining and operating equipment in a satisfactory manner, including during malfunction events, and a program for corrective action for such events. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. **(R 336.1911)**
   a. The permittee shall submit an initial MAP to the AQD District Supervisor before beginning operation of EUBOILER.
   b. No later than 270 days after commencing operation of EUBOILER, the permittee shall amend the MAP, based on equipment operating history and the results of the emission testing, and submit the amended MAP to the AQD District Supervisor.

IV. DESIGN/EQUIPMENT PARAMETERS

1. The natural gas burner for startup of EUBOILER shall not exceed a maximum heat input rating of 245 million Btu per hour. **(R336.1205(1)(a), 40 CFR 60.40Da(a)(1))**

2. The permittee shall not operate EUBOILER unless the multiclone and fabric filter dust collector are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1224, R 336.1301(1), R 336.1331(1), R 336.1910)**

3. The permittee shall not operate EUBOILER unless the selective non-catalytic reduction system (SNCR system) and low NOx combustion with staged overfire air are installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the SNCR system includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

4. The permittee shall not operate EUBOILER unless the limestone injection system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the system includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the emissions of NO_X and either oxygen or carbon dioxide, and the exhaust gas temperature and flow rate from EUBOILER on a continuous basis. **(R 336.1205(1))**

6. If the permittee does not conduct the CO emission testing required by SC V.5, the permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the emissions of CO from EUBOILER on a continuous basis. **(R 336.1205(1))**

7. The permittee shall install, calibrate, maintain and operate in a satisfactory manner one of the following:
   a. A device to monitor and record the visible emissions from EUBOILER on a continuous basis. **(40 CFR 60.48b(a), 40 CFR 63.11224(e))**
   b. A bag leak detection system according to the most recent requirements in 40 CFR 60.48Da and 40 CFR 63.11224. **(40 CFR 60.48b(j)(5), 40 CFR 63.11224(f))**

8. The permittee shall equip and maintain EUBOILER with devices to monitor the operational parameters identified in the approved MAP as being used to determine whether the multiclone and fabric filter dust collector, the SNCR system, and the limestone injection system are operating in a satisfactory manner. **(R 336.1205(1), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup, the permittee shall verify PM emission rates from EUBOILER, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and Db. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of trial operation in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1), R 336.1331(1), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.46b(b))**

2. Within 180 days after commencement of trial operation, the permittee shall verify PM10, PM2.5, SO_2, and VOC emission rates from EUBOILER by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004)**

3. No later than five years after completing the last of the stack tests required by SC V.1 and V.2, and every five years thereafter, the permittee shall verify PM, PM10, PM2.5, SO_2, and VOC emission rates from EUBOILER by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve

the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1), R 336.1331(1); R 336.1702(a); R 336.2001; R 336.2003; R 336.2004)**

4. Within 180 days after commencement of trial operation, the permittee shall confirm HAP emission rates from EUBOILER by testing at owner's expense, in accordance with Department requirements. The compounds to be tested are acetaldehyde, acrolein, benzene, chlorine, formaldehyde, hydrogen chloride, methanol, methyl isobutyl ketone, n-hexane, and styrene. If the results of the HAP testing indicate total HAP emissions greater than 2.7 lb/hr, then the permittee shall repeat the test annually for the next two years, for a total of three tests. If the results of the HAP testing indicate total HAP emissions are less than 2.7 lb/hr, no further stack testing will be required. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final test plan prior to testing. Determination of emission rates shall include a complete report of the test results to the AQD within 60 days following the date of the test. **(R336.205(1), R336.1224, R336.1225, R336.2001, R336.2003, R336.2004)**

5. Within 180 days after commencement of trial operation, unless a continuous CO emission monitor has been installed as required by SC IV.6, the permittee shall verify CO emission rates from EUBOILER by testing at owner's expense, in accordance with Department requirements. If the test results indicate CO emissions greater than 0.096 pound per MMBTU heat input, the permittee shall repeat the testing at least once every 12 months. If the test results indicate CO emissions greater than 0.080 pound per MMBTU heat input but less than or equal to 0.096 pound per MMBTU heat input, the permittee shall repeat the testing at least once every 36 months. If the test results indicate CO emissions less than or equal to 0.080 pound per MMBTU heat input, the permittee shall repeat the testing at least once every 60 months. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If the permittee installs a continuous opacity monitoring system (COMS), the permittee shall continuously monitor and record, in a satisfactory manner, the visible emissions from EUBOILER. The permittee shall operate the COMS to meet the timelines, requirements and reporting detailed in Appendix A and shall use the COMS data for determining compliance with SC I.1. **(R 336.1301(1), R 336.1331(1), 40 CFR 60.48b(a))**

2. If the permittee installs a bag leak detection system, the permittee shall monitor fabric filter CE004 for leaking bags in accordance with the requirements of 40 CFR Part 60 Subpart Db. **(R 336.1301(1), R 336.1331(1), 40 CFR 60.48b(j)(5), 40 CFR 63.11224(f))**

3. The permittee shall continuously monitor and record, in a satisfactory manner, the emissions of NO_X, CO (if a continuous CO emission monitor has been installed as required by SC IV.6), and either oxygen or carbon dioxide, and the exhaust temperature and flow rate, from EUBOILER. The permittee shall operate each Continuous Emission Rate Monitoring System (CERMS) to meet the timelines, requirements and reporting detailed in Appendix B. **(R 336.1205(1))**

4. The permittee shall keep, in a manner acceptable to the AQD District Supervisor, records of the amount of each fuel combusted during each day and calculate the annual capacity factor individually for each fuel type and for natural gas, as required by 40 CFR 60.49b(d). The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 60.49b(d))**

5. The permittee shall keep, in a manner acceptable to the AQD District Supervisor, records of the occurrence and duration of each start-up, shutdown, or malfunction of EUBOILER, any malfunction of the air pollution control equipment, and any periods during which a continuous monitoring system or monitoring device is inoperative. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.2810)**

6. The permittee shall monitor, in a manner acceptable to the AQD District Supervisor, the process variables described in EUBOILER SC IV.8. The permittee shall monitor the process variables at the respective frequencies described in the approved MAP. **(R 336.1205(1), R 336.1910)**

7. The permittee shall keep, in a manner acceptable to the AQD District Supervisor, all records of process variables for EUBOILER, as required by EUBOILER SC IV.8, on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.1910)**

8. If a bag leak detection system is installed, the permittee shall keep the records specified in 40 CFR 60.48Da and 40 CFR 63.11225(c)(7). **(R 336.1301, 40 CFR 60.48b(j)(5), 40 CFR 63.11224(f))**

VII. REPORTING

1. The permittee shall submit all quarterly "Excess Emissions and Monitoring Systems Performance Report" and "Summary Report" records for EUBOILER, as required by Appendix A and Appendix B, to the AQD District Supervisor in an acceptable format within 30 days following the end of the calendar quarter in which the records were collected. **(40 CFR Part 60 Subparts A & Db)**

2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUBOILER. **(R 336.1201(7)(a))**

3. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BOILER	120	175	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all of the applicable requirements contained in the Clean Air Interstate Rule, as it applies to EUBOILER. **(40 CFR Part 97)**

2. The permittee shall comply with all of the applicable requirements contained in the federal Acid Rain Program, as it applies to EUBOILER. **(40 CFR Parts 72-76)**

3. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Db, as they apply to EUBOILER. **(40 CFR Part 60 Subparts A & Db)**

4. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and JJJJJJ, as they apply to EUBOILER. **(40 CFR Part 63 Subparts A & JJJJJJ)**

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMTRLHANDLING	Wood/biomass receiving, processing, and storage, lignin storage and load out, sand and limestone storage and handling, and ash storage and loadout.	EULOGRECEIVE, EUDEBARK, EUBARKSILO, EUBARKLOAD, EUWOODCHIP, EUCHIPRECEIVE, EUSILOA, EUSILOB, EUSILOC, EUCHIPCONVEY, EULIGNINSTORE, EULIGNINLOAD, EUSANDSILO, EULIMESILO, EUASHSILO, EUASHLOAD
FGSCRUBBER	All equipment controlled by wet scrubber CE003.	EUPRETREAT, EUYEASTPROP, EUFERM, EUBEERWELL, EUBEERCOLUMN, EURECTIFIER, EUMOLSIEVE, EUEVAPORATOR, EUCENTRIFUGES, EUDRYER
FGTANKS	Denaturant, ethanol, and denatured ethanol storage tanks equipped with internal floating roofs.	EUTANK1, EUTANK2, EUTANK3, EUTANK4, EUTANK5, EUTANK6
FGETHLOAD	Denatured ethanol loadout into trucks and rail cars. Emissions from truck loading are controlled by a flare.	EUETHLOADTRK, EUETHLOADRAIL, EUFLARE
FGENGINES	All natural gas fired engines.	EUGEN, EUFIREPUMP
FGNSPSVVa	All pumps, valves, and pressure relief devices in light liquid and heavy liquid service; all valves and pressure relief devices in gas/vapor service; each sampling connection; and each open ended valve or line and all associated closed vent systems and control devices.	All equipment subject to 40 CFR 60 Subpart VVa
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	All emission units at the facility.

The following conditions apply to: FGMTRLHANDLING

DESCRIPTION: Various material storage and handling processes.

Emission Units: EULOGRECEIVE, EUDEBARK, EUBARKSILO, EUBARKLOAD, EUWOODCHIP, EUCHIPRECEIVE, EUSILOA, EUSILOB, EUSILOC, EUCHIPCONVEY, EULIGNINSTORE, EULIGNINLOAD, EUSANDSILO, EULIMESILO, EUASHSILO, EUASHLOAD

POLLUTION CONTROL EQUIPMENT:

EUDEBARK – The bark hog is enclosed. Emissions are controlled by fabric filter CE001.
EUWOODCHIP – Wood chipping is done in an enclosed building. Emissions are controlled by fabric filter CE001.
EUCHIPRECEIVE – Wood chip receiving emissions are controlled by fabric filter CE002.
EULIGNINSTORE - Lignin will be stored in a silo next to the boiler building.
EULIGNINLOAD – Loading lignin into trucks will be conducted inside a closed shed.
EUSANDSILO – Emissions are controlled by fabric filter CE007.
EULIMESILO – Emissions are controlled by fabric filter CE008.
EUASHSILO – Emissions are controlled by fabric filter CE006.
EUSASHLOAD – Ash is loaded into trucks in an enclosed shed. Emissions are controlled by fabric filter CE006.
EUBARKSILO, EUSILOA, EUSILOB, and EUSILOC – No control equipment.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.04 lb /1000 lb of exhaust gas	According to method	EUDEBARK and EUWOODCHIP	GC 13	R 336.1331
2. PM10	1.63 pph	According to method	EUDEBARK and EUWOODCHIP	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
3. Acetaldehyde	0.07 pph	According to method	EUDEBARK and EUWOODCHIP	SC V.1	R 336.1205(1), R 336.1225
4. Acrolein	0.067 pph	According to method	EUDEBARK and EUWOODCHIP	SC V.1	R 336.1205(1), R 336.1225
5. PM	0.10 lb /1000 lb of exhaust gas	According to method	EUSILOA, EUSILOB, and EUSILOC	GC 13	R 336.1331
6. PM10	1.17 pph	According to method	EUSILOA, EUSILOB, and EUSILOC	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
7. PM	0.01 lb /1000 lb of exhaust gas	According to method	EUCHIPRECEIVE	GC 13	R 336.1331
8. PM10	0.01 pph	According to method	EUCHIPRECEIVE	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
9. PM	0.01 lb /1000 lb of exhaust gas	According to method	EUSANDSILO	GC 13	R 336.1331
10. PM10	0.01 pph	According to method	EUSANDSILO	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
11. PM	0.01 lb /1000 lb of exhaust gas	According to method	EULIMESILO	GC 13	R 336.1331

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
12. PM10	0.01 pph	According to method	EULIMESILO	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
13. PM	0.10 lb /1000 lb of exhaust gas	According to method	EUASHSILO and EUASHLOAD emissions vented through stack SV009	GC 13	R 336.1331
14. PM10	0.21 pph	According to method	EUASHSILO and EUASHLOAD emissions vented through stack SV009	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
15. Opacity	10%	6 minute average	Each emission unit in FGMTRLHANDLING	SC VI.1, VI.2, VI.3, VI.4, VI.5, VI.6	R 336.1301

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not use a pneumatic conveyor system to transfer wood chips into EUSILOA, EUSILOB, or EUSILOC. **(R 336.1205(1), R 336.1301)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUDEBARK unless the equipment is located in an enclosed building and fabric filter CE001 is installed, maintained, and operated in a satisfactory manner. . Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

2. The permittee shall not operate EUWOODCHIP unless the equipment is located in an enclosed building and fabric filter CE001 is installed, maintained, and operated in a satisfactory manner. . Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

3. The permittee shall not receive biomass in EUCHIPRECEIVE unless fabric filter CE002 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

4. The permitee shall not load out lignin in EULIGNINLOAD unless the enclosed shed is installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1), R 336.1301)**

5. The permittee shall not load sand into EUSANDSILO unless fabric filter CE007 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

6. The permittee shall not load sand into EUSANDSILO unless fabric filter CE007 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters

within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

7. The permittee shall not load limestone into EULIMESILO unless fabric filter CE008 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

8. The permittee shall not load ash into EUASHSILO unless fabric filter CE006 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

9. The permittee shall not operate EUASHLOAD unless the enclosed shed and fabric filter CE006 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining all operational parameters within the ranges identified in the approved MAP as constituting satisfactory operation. **(R 336.1205(1), R 336.1301)**

10. The permittee shall equip and maintain each fabric filter in FGMTRLHANDLING with a pressure drop gauge. **(R 336.1205(1), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after commencement of trial operation, the permittee shall verify acetaldehyde and acrolein emission rates from EUDEBARK and EUWOODCHIP by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1), R 336.1225, R 336.2001, R336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall conduct a monthly visible emissions check of the fabric filter CE001 vent during routine operating conditions. For the purpose of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from the vent (other than uncombined water vapor), the permittee shall inspect the particulate control system and perform any maintenance required to eliminate visible emissions as specified in the MAP. **(R 336.1205(1), R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

2. The permittee shall conduct a monthly visible emissions check of EUCHIPRECEIVE during routine operating conditions. For the purpose of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from the vent (other than uncombined water vapor), the permittee shall inspect the particulate control system and perform any maintenance required to eliminate visible emissions as specified in the MAP. **(R 336.1205(1), R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

3. The permittee shall conduct a monthly visible emissions check of the EUBARKSILO, EUSILOA, EUSILOB, EUSILOC, EUSANDSILO, EULIMESILO, and EUASHSILO vents during routine operating conditions. For the purpose of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from the vent (other than uncombined water vapor), the permittee shall inspect the particulate control system and perform any maintenance required to eliminate visible emissions as specified in the MAP. **(R 336.1205(1), R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

4. The permittee shall conduct a monthly visible emissions check of EULIGNINLOAD during routine operating conditions. For the purpose of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from the vent (other than uncombined water vapor), the permittee shall inspect the particulate control system and perform any maintenance required to eliminate visible emissions as specified in the MAP. **(R 336.1205(1), R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

5. The permittee shall conduct a monthly visible emissions check of EUASHLOAD during routine operating conditions. For the purpose of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from the vent (other than uncombined water vapor), the permittee shall inspect the particulate control system and perform any maintenance required to eliminate visible emissions as specified in the MAP. **(R 336.1205(1), R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

6. The permittee shall keep, in a satisfactory manner, records of all visible emission readings required in SC VI.1 through 5. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

7. The permittee shall monitor, in a satisfactory manner, the differential pressure drop across each fabric filter in FGMTRLHANDLING on a daily basis. **(R 336.1205(1), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV001	36	95	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
2. SV002	48	68	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
3. SV003	36	33	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
4. SV009	36	40	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
5. SV010	36	25	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
6. SV011	36	25	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FGSCRUBBER

DESCRIPTION: All equipment controlled by wet scrubber CE003.

Emission Units: EUPRETREAT, EUYEASTPROP, EUFERM, EUBEERWELL, EUBEERCOLUMN, EURECTIFIER, EUMOLSIEVE, EUEVAPORATOR, EUCENTRIFUGES, EUDRYER

POLLUTION CONTROL EQUIPMENT: Wet scrubber CE003 with sodium bisulfite injection

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	9.5 pph	According to method	FGSCRUBBER	SC V.1	R 336.1205(1), R 336.1702(a), R 336.1901
2. Acetaldehyde	0.26 pph	According to method	FGSCRUBBER	SC V.1	R 336.1205(1), R 336.1225

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUDRYER unless the temperature inside the dryer is maintained at 185°F (85°C) or less. **(R 336.1205(1), R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910)**

2. The permittee shall maintain a minimum moisture content of 30% in the lignin produced in EUDRYER. **(R 336.1205(1), R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any equipment in FGSCRUBBER unless wet scrubber CE003 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the scrubber liquid flow rate and sodium bisulfite flow rate in the ranges at which the VOC and acetaldehyde emission limits were met during the most recent compliance test, identified in the MAP as constituting satisfactory operation. Prior to completion of a satisfactory compliance test, the scrubber liquid flow rate and sodium bisulfite flow rate shall be not less than the rates specified in the MAP for initial operation. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

2. The permittee shall equip and maintain wet scrubber CE003 with a liquid flow rate indicator capable of accurately indicating the scrubber liquid flow rate over the entire range of flow rates that constitutes satisfactory operation, as described in the MAP. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

3. The permittee shall equip and maintain wet scrubber CE003 with a device to measure the sodium bisulfite flow rate over the entire range of flow rates that constitutes satisfactory operation, as described in the MAP. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after commencement of trial operation, the permittee shall verify VOC (calculated on a total mass basis) and acetaldehyde emission rates from FGSCRUBBER by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2001, R336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901)**

2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record, on a continuous basis, the temperature inside EUDRYER during operation of EUDRYER. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. The temperature monitoring device shall be calibrated once per calendar year. **(R 336.1205(1), R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910)**

3. The permittee shall keep, in a satisfactory manner, daily records of the scrubber liquid flow rate and sodium bisulfite flow rate. The permittee shall keep all records on file and make them available to the Department upon request.

4. The permittee shall keep, in a satisfactory manner, records of the moisture content of the lignin produced in EUDRYER. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

5. The permittee shall keep, in a satisfactory manner, records of the EUDRYER lignin production rate. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV004	48	60	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FGTANKS

DESCRIPTION: Denaturant, ethanol, and denatured ethanol storage tanks. The denaturant tank (EUTANK6) and denatured ethanol tanks (EUTANK4 and EUTANK5) are subject to 40 CFR 60 Subpart Kb.

Emission Units: EUTANK1, EUTANK2, EUTANK3, EUTANK4, EUTANK5, EUTANK6

POLLUTION CONTROL EQUIPMENT: Internal floating roofs on each tank

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb, as they apply to EUTANK4, EUTANK5, and EUTANK6. **(40 CFR Part 60 Subparts A and Kb)**

2. The permittee shall not load EUTANK6 with gasoline from a delivery vessel unless EUTANK6 is equipped with a permanent submerged fill pipe. **(R 336.1205(1), R 336.1225, R 336.1704, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip EUTANK1, EUTANK2, EUTANK3 as follows: **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910)**
   a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
   b) Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the edge of the internal floating roof that meets the requirements of 40 CFR 60.112b(a)(1)(ii).
   c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
   d) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
   e) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
   f) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
   g) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

h) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

2. The permittee shall equip EUTANK4, EUTANK5, and EUTANK6 according to the requirements of 40 CFR 60.112b(a)(1) through (4). These requirements include, but are not limited to, the following: **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**
   a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. **(40 CFR 60.112b(a)(1)(i))**
   b) Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the edge of the internal floating roof that meets the requirements of 40 CFR 60.112b(a)(1)(ii). **(40 CFR 60.112b(a)(1)(ii))**
   c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. **(40 CFR 60.112b(a)(1)(iii))**
   d) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. **(40 CFR 60.112b(a)(1)(iv))**
   e) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. **(40 CFR 60.112b(a)(1)(v))**
   f) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. **(40 CFR 60.112b(a)(1)(vi))**
   g) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. **(40 CFR 60.112b(a)(1)(vii))**
   h) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. **(40 CFR 60.112b(a)(1)(viii))**
   i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. **(40 CFR 60.112b(a)(1)(ix))**

3. The permittee shall equip and maintain EUTANK1, EUTANK2, EUTANK3, EUTANK4, EUTANK5, and EUTANK6 with the deck and seal configuration listed in the following table, or a deck and seal configuration that results in the same or lower VOC emissions from the tank.

Equipment	Deck Type	Primary Seal	Secondary Seal	Applicable Requirement
Each tank	Welded	Mechanical Shoe	Rim-mounted	R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall perform inspections and monitor operating information for EUTANK1, EUTANK2, and EUTANK3 as follows: **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910)**

a) Visually inspect the internal floating roof, the primary seal, and the secondary seal prior to filling the storage vessel with volatile organic liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
b) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting an annual visual inspection of the internal floating roof and the primary or secondary seal through manholes and roof hatches on the fixed roof and at intervals no greater than five years in the case of vessels not conducting annual visual inspections.

2. The permittee shall perform inspections and monitor operating information for EUTANK4, EUTANK5, and EUTANK6 as required by 40 CFR 60.113b. These requirements include, but are not limited to, the following: **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**
   a) Visually inspect the internal floating roof, the primary seal, and the secondary seal prior to filling the storage vessel with volatile organic liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel. **(40 CFR 60.113b(a)(1))**
   b) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in 40 CFR 60.113b(a)(2) and 40 CFR 60.113b(a)(3)(ii) and at intervals no greater than five years in the case of vessels specified in 40 CFR 60.113b(a)(3)(i). **(40 CFR 60.113b(a)(4))**

3. The permittee shall keep records of inspections and operating information for EUTANK1, EUTANK2, and EUTANK3 as follows. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910)**
   a) Keep a record of each inspection performed as required by SC VI.1. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
   b) For each storage vessel, keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the storage vessel.
   c) For each storage vessel, the permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

4. The permittee shall keep records of inspections and operating information for EUTANK4, EUTANK5, and EUTANK6 as required by 40 CFR Part 60 Subparts A and Kb. The permittee shall keep all records on file and make them available to the Department upon request. These requirements include, but are not limited to, the following: **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**
   a) Keep a record of each inspection performed as required by 40 CFR 60.113b(a). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). **(40 CFR 60.115b(a)(2))**

b) For each storage vessel as specified in 40 CFR 60.110b(a), keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the storage vessel. **(40 CFR 60.116b(b))**
c) For each storage vessel, the permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. **(40 CFR 60.116b(c))**

VII. REPORTING

1. The permittee shall submit reports for EUTANK4, EUTANK5, and EUTANK6 as required by 40 CFR 60.115b. These requirements include, but are not limited to, the following: **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**
   a) A report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1) shall be furnished to the USEPA as an attachment to the notification required by 40 CFR 60.7(a)(3). **(40 CFR 60.115b(a)(1))**
   b) If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the USEPA within 30 days of the inspection, identifying the tank, the nature of the defects, and the date the tank was emptied or the nature of and date the repair was made. **(40 CFR 60.115b(a)(3))**
   c) After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the USEPA within 30 days of the inspection, identifying the tank and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 40 CFR 60.113b(a)(3), and list each repair made. **(40 CFR 60.115b(a)(4))**

2. The permittee shall submit notifications for EUTANK4, EUTANK5, and EUTANK6 as required by 40 CFR Part 60 Subparts A and Kb. These requirements include, but are not limited to, notifying the AQD in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(a)(1) and (a)(4) to afford the AQD the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the permittee could not have known about the inspection 30 days in advance or refilling the tank, the permittee shall notify the AQD at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the AQD at least 7 days prior to the refilling. **(40 CFR 60.113b(a)(5))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FGETHLOAD

DESCRIPTION: Denatured ethanol (70% ethanol or higher) truck and rail car loadout.

Emission Units: EUETHLOADTRK, EUETHLOADRAIL, EUFLARE

POLLUTION CONTROL EQUIPMENT: Trucks and railcars must be filled using submerged fill. Emissions from truck loadout are controlled by flare CE004.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Total ethanol and denaturant throughput	42.5 million gallons per year	12-month rolling time period*	FGETHLOAD	SC VI.2	R 336.1205(1), R 336.1225, R 336.1702(a)
2. Denaturant throughput	2.5 million gallons per year	12-month rolling time period*	FGETHLOAD	SC VI.2	R 336.1205(1), R 336.1225, R 336.1702(a)
* 12-month rolling time period as determined at the end of each calendar month.					

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only load rail cars in EUETHLOADRAIL that are dedicated to carrying ethanol. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUETHLOADTRK or EUETHLOADRAIL unless EUFLARE is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the flare includes maintaining it according to the MAP. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall equip all loading and vapor return lines with fittings that are designed to be vapor tight. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall design and operate EUFLARE to comply with applicable requirements of 40 CFR 60.18, including: **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 60.18(b))**
   a) The permittee shall operate EUFLARE with no visible emissions as determined by the methods specified in 40 CFR 60.18(f)(1), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 60.18(c)(1))**
   b) The permittee shall design and operate EUFLARE with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f)(2) or with an interlocked loadout system with an electronic pilot and flame detection system. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910)**
   c) The permittee shall operate EUFLARE with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified 40 CFR 60.18(f)(3). **(40 CFR 60.18(c)(3))**

d) If steam assisted or nonassisted, the permittee shall design and operate EUFLARE with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), as follows: **(40 CFR 60.18(c)(4))**
   i) Less than 60 ft/sec, except if the net heating value of the gas being combusted is greater than 1,000 Btu/scf, the exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), shall be less than 400 ft/sec, and
   ii) Less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18(f)(5) and less than 400 ft/sec.

e) If air-assisted, the permittee shall design and operate EUFLARE with an exit velocity less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18(f)(6): **(40 CFR 60.18(c)(5))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor EUFLARE to ensure that it is operated and maintained in conformance with the manufacturer's design, as required by 40 CFR 60.18(d). **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 60.18(d))**

2. The permittee shall keep, in a satisfactory manner, records of the monthly and 12-month rolling time period, as determined at the end of each calendar month, denaturant and combined ethanol and denaturant throughput for FGETHLOAD. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

3. The permittee shall keep, in a satisfactory manner, records for each rail car loaded in EUETHLOADRAIL that it is dedicated to carrying ethanol. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

4. The permittee shall keep records necessary to demonstrate that EUFLARE is designed and operated in accordance with CFR 60.18. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60.18)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV011	NA	20	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FGENGINES

DESCRIPTION: One natural gas fired 1,500 HP generator used for emergency backup and one natural gas fired 500 HP emergency fire pump engine. These engines are subject to 40 CFR Part 60 Subparts A and JJJJ.

Emission Units: EUGEN1, EUFIREPUMP

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	1.0 g/HP-hr	According to method	EUGEN EUFIREPUMP	GC 13, SC V.1, VI.2	40 CFR 60.4233(e) and Table 1, R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
2. CO	2.0 g/HP-hr	According to method	EUGEN EUFIREPUMP	GC 13, SC V.1, VI.2	40 CFR 60.4233(e) and Table 1, R 336.1205(1), R 336.2804, 40 CFR 52.21(d)
3. VOC	0.70 g/HP-hr	According to method	EUGEN EUFIREPUMP	GC 13, SC V.1, VI.2	40 CFR 60.4233(e) and Table 1, R 336.1205(1)
4. PM10	0.04 pph	According to method	EUFIREPUMP	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
5. SO_2	0.04 pph	According to method	EUFIREPUMP	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
6. PM10	0.12 pph	According to method	EUGEN	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
7. SO_2	0.12 pph	According to method	EUGEN	GC 13	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline quality natural gas, in FGENGINES. **(R 336.1205(1)(a), 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate each of the engines in FGENGINES for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

2. The permittee may operate each of the engines in FGENGINES for no more than 100 hours per 12-month rolling time period as determined at the end of each calendar month for the purpose of necessary

maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per year. **(40 CFR 60.4243(d))**

3. The permittee shall install, maintain, and operate each of the engines in FGENGINES and any control device according to the manufacturer's emission-related written instructions, over the entire life of the engine. In addition, the permittee may only change those settings that are permitted by the manufacturer. The permittee shall also meet the applicable requirements of 40 CFR part 1068. **((R 336.1205(1)(a) & (3), R 336.1225, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR 60.4234, 40 CFR 60.4243(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. Each of the engines in FGENGINES shall be certified to meet the applicable emission standard of 40 CFR 60.4233. The permittee shall install and configure each engine according to the manufacturer's specifications. **(40 CFR 60.4243(b))**

2. The permittee shall equip and maintain each of the engines in FGENGINES with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4237)**

3. The nameplate capacity of EUGEN1 shall not exceed 1,500 brake horsepower per hour. **(R 336.1205(1)(a) & (3), 60.4230(a)(4)(iv))**

3. The nameplate capacity of EUFIREPUMP shall not exceed 500 brake horsepower. **(R 336.1205(1)(a) & (3), 60.4230(a)(4)(iv))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If the permittee does not purchase a certified engine according to the emission standards in 40 CFR 60.4231, then within 180 days after commencement of trial operation, the permittee shall verify NOx, CO, and VOC emission rates from each engine in FGENGINES, by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee must submit a complete stack-testing plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4244)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

2. The permittee shall keep manufacture's certification documentation indicating that each engine in FGENGINES meet the applicable emission limitations contained in 40 CFR 60.4233. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4245(a))**

3. The permittee shall monitor and record the hours of operation for each engine in FGENGINES on a monthly and 12-month rolling time period basis. The records shall include the hours of operation during

emergencies and non-emergencies and the reason the engine was in operation, in a manner that is acceptable to the District Supervisor, Air Quality Division. **(R 336.1205(1)(a) & (3), 40 CFR 60.4243(d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of each engine in FGENGINES. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV007	8.0	10	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
2. SV008	8.0	10	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and JJJJ, as they apply to each engine in FGENGINES. **(40 CFR Part 60 Subparts A & JJJJ, 40 CFR 63.6590(c))**

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FGNSPSVVa

DESCRIPTION: All pumps, valves, and pressure relief devices in light liquid and heavy liquid service; all valves and pressure relief devices in gas/vapor service; each sampling connection; and each open ended valve or line and all associated closed vent systems and control devices.

Emission Units: All equipment subject to 40 CFR 60 Subpart VVa

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and VVa, as they apply to the equipment in FGNSPSVVa **(40 CFR Part 60 Subparts A and VVa)**

2. The permittee shall operate each pressure relief device in gas/vapor service with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485a(c), except during pressure releases and as provided in 40 CFR 60.482-4a(c) and (d). After each pressure release, the permittee shall return the pressure relief device to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than five calendar days after the pressure release, except as provided in 40 CFR 60.482-9a. No later than five calendar days after the pressure release, the permittee shall monitor the pressure relief device to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.482-4a(a) and (b))**

3. The permittee shall design and operate vapor recovery systems (for example, condensers and absorbers) used to comply with 40 CFR 60 subpart VVa to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. **(40 CFR 60.482-10a(b))**

4. The permittee shall design and operate enclosed combustion devices used to comply with 40 CFR 60 subpart VVa to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 ºC. **(40 CFR 60.482-10a(c))**

5. The permittee shall, if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, follow either one of the following procedures: **(40 CFR 60.482-8a(a))**
   a) Monitor the equipment within five days by the method specified in 40 CFR 60.485a(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. **(40 CFR 60.482-8a(a)(1))**
      i) When a leak is detected, the permittee shall repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9a. The first attempt at repair shall be made no later than five calendar days after each leak is detected. First attempts at

repair include, but are not limited to, the best practices described in 40 CFR 60.482-2a(c)(2) and 40 CFR 60.482-7a(e). **(40 CFR 60.482-8a(b) through (d))**

b) Eliminate the visual, audible, olfactory, or other indication of a potential leak within five calendar days of detection. **(40 CFR 60.482-8a(a)(2))**

6. The permittee may delay repair of equipment for which leaks have been detected if: **(40 CFR 60.482-9a)**
   a) Repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. **(40 CFR 60.482-9a(a))**
   b) The equipment is isolated from the process and does not remain in VOC service. **(40 CFR 60.482-9a(b))**
   c) For valves and connectors, the permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and, when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10a. **(40 CFR 60.482-9a(c))**
   d) For pumps, repair requires the use of a dual mechanical seal system that includes a barrier fluid system and repair is completed as soon as practicable, but not later than six months after the leak was detected. **(40 CFR 60.482-9a(d))**
   e) For a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted, then delay of repair beyond a process unit shutdown will be allowed. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than six months after the first process unit shutdown. **(40 CFR 60.482-9a(e))**
   f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition. **(40 CFR 60.482-9a(f))**

7. The permittee shall repair leaks of a closed vent system, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, as soon as practicable except as provided below. A first attempt at repair shall be made no later than five calendar days after the leak is detected. Repair shall be completed no later than 15 calendar days after the leak is detected. **(40 CFR 60.482-10a(g))**
   a) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. **(40 CFR 60.482-10a(h))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip each sampling connection system with a closed-purged, closed-loop, or closed vent system, except as provided in 40 CFR 60.482-1a(c) and 40 CFR 60.482-5a(c). Each closed-purge, closed-loop, or closed-vent system shall comply with the requirements specified in 40 CFR 60.482-5a(b). **(40 CFR 60.482-5a)**

2. The permittee shall equip each open-ended valve or line with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1a(c), 40 CFR 60.482-6a(d), or 40 CFR 60.482-6a(e). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. In addition, the permittee shall ensure that: **(40 CFR 60.482-6a)**
   a) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. **(40 CFR 60.482-6a(b))**
   b) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 61.482-6a(a) at all other times. **(40 CFR 60.482-6a(c))**

3. The permittee shall operate closed vent systems and control devices used to comply with 40 CFR 60 subpart VVa at all times when emissions may be vented to them. **(40 CFR 60.482-10a(m))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall demonstrate compliance with the requirements of 40 CFR Part 60 subparts A and VVa within 180 days of initial startup. All required testing shall be at owner's expense. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of trial operation in accordance with 40 CFR 60.7(a)(3). Performance testing procedures shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Compliance with 40 CFR 60.482-1a through 40 CFR 60.482-11a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485a. Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-2a to 40 CFR 60.482-10a if it is identified as required in 40 CFR 60.486a(e)(5). **(R 336.1225, R 336.1702(b), 40 CFR Part 60 Subparts A and VVa, 40 CFR 60.482-1a, 40 CFR 60.485a)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor each pump in light liquid service as follows:
   a) Check, by visual inspection, each calendar week for indications of liquids dripping from the pump seal, except as provided in 40 CFR 60.482-2-1a(f). If there are indications of liquids dripping from the pump seal, the permittee shall follow either of the following procedures. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in 40 CFR 60.482-2a(b)(1)(i) or (ii), whichever is applicable. **(40 CFR 60.482-2a(a)(2) and (b)(2))**
      i) Monitor the pump within five days as specified in 40 CFR 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in 40 CFR 60.482-2a(b)(1)(i) or (ii), whichever is applicable. The leak shall be repaired using the procedures in 40 CFR 60.482-2a(c).
      ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in 40 CFR 60.482-2a(c) or by eliminating the visual indications of liquids dripping.
   b) Monitor monthly to detect leaks by the methods specified in 40 CFR 60.485a(b), except as provided in 40 CFR 60.482-1a(c) and (f) and 40 CFR 60.482-2a(d), (e), and (f). A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in 40 CFR 60.482-1a(c) and 40 CFR 60.482-2a(d), (e) and (f). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in 40 CFR 60.482-2a(b)(1)(i) or (ii), whichever is applicable. **(40 CFR 60.482-2a(a)(1) and (b)(1))**

   When a leak is detected, the permittee shall repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Sec. 60.482-9a. A first attempt at repair shall be made no later than five calendar days after each leak is detected. First attempts at repair include, but are not limited to, tightening the packing gland nuts and ensuring that the seal flush is operating at design pressure and temperature. **(40 CFR 60.482-2a(c))**

2. The permittee shall monitor each valve in gas/vapor service and in light liquid service monthly to detect leaks by the methods specified in 40 CFR 60.485a(b) and shall comply with the following, except as provided in 40 CFR 60.482-7a(f), (g), and (h), 40 CFR 60.483-1a, 40 CFR 60.483-2a, and 40 CFR 60.482-1a(c) and (f): **(40 CFR 60.482-7a)**
   a) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored as follows, except for a valve that replaces a leaking valve and except as provided in 40 CFR 60.482-7a(f), (g), and (h), 40 CFR 60.482-1a(c), 40 CFR 60.483-1a, and 40 CFR 60.483-2a. **(40 CFR 60.482-7a(a)(2))**

i) Monitor the valve monthly to detect leaks by the methods specified in 40 CFR 60.485a(b). The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.
ii) If the existing valves on the process unit are monitored in accordance with 40 CFR 60.483-1a or 40 CFR 60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in 40 CFR 60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

b) If an instrument reading of 500 ppm or greater is measured, a leak is detected. **(40 CFR 60.482-7a(b))**
c) Any valve for which a leak is not detected for two successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. As an alternative to monitoring all of the valves in the first month of a quarter, the permittee may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every three months. The permittee must keep records of the valves assigned to each subgroup. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months. **(40 CFR 60.482-7a(c))**
d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9a. A first attempt at repair shall be made no later than five calendar days after each leak is detected. **(40 CFR 60.482-7a(d))**
e) First attempts at repair include, but are not limited to, the following best practices where practicable: **(40 CFR 60.482-7a(e))**
   i) Tightening of bonnet bolts;
   ii) Replacement of bonnet bolts;
   iii) Tightening of packing gland nuts;
   iv) Injection of lubricant into lubricated packing.
f) Any valve that is designated, as described in 40 CFR 60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the monthly monitoring if the valve has no external actuating mechanism in contact with the process fluid, is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR60.485a(c), and is tested for compliance with the 500 ppm above background instrument reading initially upon designation, annually, and at other times requested by the ADQ District Supervisor. **(40 CFR 60.482-7a(f))**
g) Any valve that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the monthly monitoring if the permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of performing monthly monitoring, and the permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. **(40 CFR 60.482-7a(g))**
h) Any valve that is designated, as described in 40 CFR60.486a(f)(2), as a difficult-to-monitor valve is exempt from the monthly monitoring if: **(40 CFR 60.482-7a(g))**
   i) the permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface,
   ii) the process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 and was constructed on or before January 5, 1981, or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and
   iii) the permittee follows a written plan that requires monitoring of the valve at least once per calendar year.

3. The permittee shall monitor control devices used to comply with 40 CFR 60 subpart VVa to ensure that they are operated and maintained in conformance with their designs. **(40 CFR 60.482-10a(e))**

4. The permittee shall inspect each closed vent system according to the procedures and schedule specified in 40 CFR 60.482-10a(f), except as follows: **(40 CFR 60.482-10a(f))**
   a) The vapor collection system or closed vent system is operated under a vacuum. **(40 CFR 60.482-10a(i))**
   b) Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10a(l)(1), as unsafe to inspect are exempt from the inspection requirements if they comply with the following: **(40 CFR 60.482-10a(j))**

i) The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger; and
ii) The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

c) Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10a(l)(2), as difficult to inspect are exempt from the inspection requirements if they comply with the following: **(40 CFR 60.482-10a(k))**
i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and
ii) The process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 or 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and
iii) The permitee has a written plan that requires inspection of the equipment at least once every five years. A closed vent system is exempt from inspection if it is operated under a vacuum.

5. The permittee shall record the following information: **(40 CFR 60.482-10a(l))**
a) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.
b) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.
c) For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486a(c).
d) For each inspection conducted in accordance with 40 CFR 60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
e) For each visual inspection conducted in accordance with paragraph 40 CFR 60.482-10a(f)(1)(ii) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

6. The permittee shall monitor all connectors in gas and vapor and light liquid service, by the method specified in 40 CFR 60.485a(b) and, as applicable, 40 CFR 60.485a(c), as specified in 40 CFR 60.482-11a(b)(3), except as allowed in 40 CFR 60.482-1a(c), 60.482-10a, or 40 CFR 60.482-11a(e). **(40 CFR 60.482-11a(b))**
a) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected. **(40 CFR 60.482-11a(b)(2))**
b) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482–9a. A first attempt at repair as defined in 40 CFR 60 subpart VVa shall be made no later than 5 calendar days after the leak is detected. **(40 CFR 60.482-11a(d))**
c) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of 40 CFR 60.482-11a(b), from the leak repair requirements of 40 CFR 60.482-11a(d), and from the recordkeeping and reporting requirements of 40 CFR 63.1038 and 40 CFR 63.1039. An inaccessible connector is one that meets any of the provisions specified in 40 CFR 60.482-11a(f). **(40 CFR 60.482-11a(f))**
d) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of 40 CFR 60.482-11a(f), the permittee shall identify connectors subject to 40 CFR 60 subpart VVa. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to 40 CFR 60 subpart VVa are identified as a group, and the number of connectors subject is indicated. **(40 CFR 60.482-11a(g))**

7. The permittee shall, when each leak is detected as specified in 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, do the following:
a) Attach a weatherproof and readily visible identification, marked with the equipment identification number, to the leaking equipment. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7a(c) and no leak has been detected during those 2 months. The identification on a connector may be removed after it has been monitored as specified in 40 CFR 60.482–11a(b)(3)(iv) and no leak has been detected during that monitoring. The identification on equipment, except on a valve or connector, may be removed after it has been repaired. **(40 CFR 60.486a(b))**

b) Record the following information in a log that and shall be kept for five years in a readily accessible location: **(40 CFR 60.486a(c))**
   i) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.
   ii) The date the leak was detected and the dates of each attempt to repair the leak.
   iii) Repair methods applied in each attempt to repair the leak.
   iv) Maximum instrument reading measured by Method 21 of appendix A–7 of 40 CFR Part 60 at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.
   v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
   vi) The signature of the permittee (or designate) whose decision it was that repair could not be effected without a process shutdown.
   vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
   viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
   ix) The date of successful repair of the leak.

8. The permittee shall record the following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10a. This information shall be kept in a readily accessible location: **(40 CFR 60.486a(d))**
   a) Detailed schematics, design specifications, and piping and instrumentation diagrams.
   b) The dates and descriptions of any changes in the design specifications.
   c) A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
   d) Periods when the closed vent systems and control devices required in 40 CFR 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a are not operated as designed, including periods when a flare pilot light does not have a flame.
   e) Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482-2a, 60.482-3a, 60.482-4a, and 60.482-5a.

9. The permittee shall record the following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1a to 60.482-11a. This information shall be kept in a readily accessible location: **(40 CFR 40.486a(e))**
   a) A list of identification numbers for equipment subject to the requirements of 40 CFR part 60 subpart VVa.
   b) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2a(e), 60.482-3a(i) and 60.482-7a(f). The designation of this equipment shall be signed by the permittee. Alternatively, the permitee may establish a mechanism with the AQD that satisfies this requirement.
   c) A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4a.
   d) The dates of each compliance test as required in 40 CFR 60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f), the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test.
   e) A list of identification numbers for equipment in vacuum service.
   f) A list of identification numbers for equipment that the permitee designates as operating in VOC service less than 300 hr/yr in accordance with 40 CFR 60.482-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.
   g) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.
   h) Records of the information specified in 40 CFR 60.486a(e)(8)(i) through (vi) for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A–7 of 40 CFR Part 60 this part and 40 CFR 60.485a(b).
   i) The connector monitoring schedule for each process unit as specified in 40 CFR 60.482–11a(b)(3)(v).
   j) Records of each release from a pressure relief device subject to 40 CFR 60.482–4a.

10. The permittee shall record the following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7a(g) and (h), all pumps subject to the requirements of 40 CFR 60.482-2a(g), and all connector subject to the requirements of 40 CFR 60.482-11a(e). This information shall be kept in a readily accessible location: **(40 CFR 40.486a(f))**
    a) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.
    b) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

11. The permittee shall record a schedule of monitoring and the percent of valves found leaking during each monitoring period valves complying with Sec. 60.483-2a. **(40 CFR 40.486a(g))**

12. The permittee shall record the design criterion required in 40 CFR 60.482-2a(d)(5) and 60.482-3a(e)(2) and an explanation of the design criterion and any changes to this criterion and the reasons for the changes. This information shall be kept in a readily accessible location. **(40 CFR 60.486a(h))**

13. The permittee shall record the following information for use in determining exemptions as provided in 40 CFR 60.480a(d). This information shall be kept in a readily accessible location: **(40 CFR 60.486a(i))**
    a) An analysis demonstrating the design capacity of the affected facility,
    b) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
    c) An analysis demonstrating that equipment is not in VOC service.

14. The permittee shall record information and data used to demonstrate that a piece of equipment is not in VOC service. This information shall be kept in a readily accessible location. **(40 CFR 60.486a(j))**

VII. REPORTING

1. The permittee shall submit reports as required to comply with the federal NSPS as specified in 40 CFR Part 60 Subparts A and VVa. Information required to be submitted to the Administrator shall be submitted to the AQD District Supervisor in an acceptable format within 30 days following the end of the semiannual period in which the data were collected. Information required to be submitted includes semiannual reports, beginning six months after the initial startup date. The initial semiannual report shall include the information listed in 40 CFR 60.487a(b) and all semiannual reports shall include the information listed in 40 CFR 60.487a(c). The permittee shall keep all required records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.487a)**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply Source-Wide to: FGFACILITY

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	218.6 tpy	12-month rolling time period*	FGFACILITY	SC VI.2a	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
2. VOC	83.2 tpy	12-month rolling time period*	FGFACILITY	SC VI.2b	R 336.1205(1)
3. CO	234 tpy	12-month rolling time period*	FGFACILITY	SC VI.2c	R 336.1205(1), R 336.2804, 40 CFR 52.21 (d)
4. PM	90 tpy	12-month rolling time period*	FGFACILITY	SC VI.2d	R 336.1205(1)
5. PM10	151.9 tpy	12-month rolling time period*	FGFACILITY	SC VI.2e	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
6. PM2.5	141.5 tpy	12-month rolling time period*	FGFACILITY	SC VI.2e	R 336.1205(1), R 336.2804, 40 CFR 52.21 (d)
7. SO_2	53.4 tpy	12-month rolling time period*	FGFACILITY	SC VI.2f	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
8. HAPs	Less than 10 tpy of any individual HAP	12-month rolling time period*	FGFACILITY	SC VI.2g	R 336.1205(1)
9. HAPs	Less than 25 tpy of aggregate of HAPs	12-month rolling time period*	FGFACILITY	SC VI.2h	R 336.1205(1)
*12-month rolling time period as determined at the end of each calendar month					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Total natural gas combusted	312 million standard cubic feet	12-month rolling time period*	FGFACILITY	SC VI.3	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
2. 30% moisture lignin produced	193,158 tons per year	12-month rolling time period*	FGFACILITY	SC VI.4	R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
3. Total ethanol and denaturant throughput	42.5 million gallons per year	12-month rolling time period*	FGFACILITY	SC VI.5	R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
4. Denaturant throughput	2.5 million gallons per year	12-month rolling time period*	FGFACILITY	SC VI.5	R 336.1205(1), R 336.1225, R 336.1702(a)
5. Wood throughput	562,100 bone dry tons per year	12-month rolling time period*	FGFACILITY	SC VI.6	R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
* 12-month rolling time period as determined at the end of each calendar month.					

6. The permittee shall not burn any sour natural gas in FGFACILITY. Sour gas is defined as any gas containing more than 1 grain of hydrogen sulfide or more than 10 grains of total sulfur per 100 standard cubic feet. **(R 336.1205(1)(a) and (b), R 336.1205(3))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall submit a malfunction abatement plan (MAP) for FGFACILITY to the AQD District Supervisor. The interim MAP and any future revised MAP shall be subject to review and approval, as provided in Rule 911. The permittee shall not operate any equipment in FGFACILITY unless the MAP, revised as necessary according to the procedures of Rule 911, is implemented and maintained. The MAP shall include procedures for maintaining and operating equipment in a satisfactory manner, including procedures for minimizing emissions during malfunction events, and a program for corrective action for such events. If the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the MAP within 45 days after such an event occurs. **(R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**
   a) The permittee shall submit an interim MAP to the AQD District Supervisor before beginning operation of any equipment in FGFACILITY. **(R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**
   b) No later than 270 days after commencing operation of any equipment in FGFACILITY, the permittee shall revise the MAP, based on equipment operating history and the results of the emission testing, and submit the revised MAP to the AQD District Supervisor. **(R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

2. The permittee shall submit an odor management plan (OMP) for FGFACILITY to the AQD District Supervisor. The OMP shall include procedures for maintaining and operating equipment in a manner that minimizes the release of odors to the outside air, and a program for corrective action for such events. If the OMP fails to address or inadequately addresses an event that results in an odor release to the outside air at the time the plan is initially developed, the owner or operator shall revise the OMP within 45 days after such an event occurs. **(R 336.1901)**
   a) The permittee shall submit an interim OMP to the AQD District Supervisor before beginning operation of any equipment in FGFACILITY. **(R 336.1901)**
   b) No later than 270 days after commencing operation of any equipment in FGFACILITY, the permittee shall revise the OMP based on equipment operating history and submit the revised OMP to the AQD District Supervisor. **(R 336.1901)**

3. The permittee shall submit a fugitive dust control plan for all plant roadways, the plant yard, all material storage piles, and all material handling operations to the AQD District Supervisor for review and approval. The fugitive dust control plan shall be considered approved if it is not acted on by the department within 90 days of submittal. The permittee shall not operate any equipment in FGFACILITY unless the fugitive dust control plan, revised as necessary, is implemented and maintained. The fugitive dust control plan shall include the following: **(R 336.1371, R 336.1372, Act 451 324.5524)**
   a) The name and address of the facility and the owner or operator responsible for implementation of the fugitive dust control plan.
   b) A map or diagram of the facility showing the approximate locations of storage piles, conveyor loading operations, and all traffic patterns within the facility.
   c) The location of unloading and transporting operations with pollution control equipment.
   d) A detailed description of the best management practices utilized to achieve compliance with this section, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals, and dust suppressants utilized, and equivalent methods utilized.
   e) A test procedure, including record keeping, for testing all waste or recycled oils used for fugitive dust control for toxic contaminants.
   f) The frequency of application, application rates, and dilution rates if applicable, of dust suppressants by location of materials.
   g) The frequency of cleaning paved traffic pattern roads and parking facilities.

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Verification of H_2S and/or sulfur content of the natural gas burned in FGFACILITY may be required upon request by the AQD District Supervisor. **(R 336.1205(1)(a) and (b), R 336.1205(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the emissions of the following pollutants from FGFACILITY to demonstrate compliance with the emission rate limits specified in the corresponding special conditions. The permittee shall keep all records on file and make them available to the Department upon request.

Pollutant	Emission Limit Special Condition	Applicable Requirement
a. NOx	I.1	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
b. VOC	I.2	R 336.1205(1)
c. CO	I.3	R 336.1205(1), R 336.2804, 40 CFR 521.21 (d)
d. PM	I.4	R 336.1205(1)
e. PM10	I.5	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 521.21 (c) and (d)
f. PM2.5	I.6	R 336.1205(1), R 336.2804, 40 CFR 521.21 (d)
g. SO_2	I.7	R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 521.21 (c) and (d)
h. Individual HAP, including fugitives	I.8	R 336.1205(1)
i. Total HAPs, including fugitives	I.9	R 336.1205(1)

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of natural gas combusted for FGFACILITY. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of lignin produced. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

5. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of ethanol and denaturant shipped from the facility. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

6. The permittee shall keep, in a satisfactory manner, separate monthly and 12-month rolling time period records of the amount of logs received, the amount of wood chips received, the amount of bark shipped from the facility, and the amount of lignin shipped from the facility. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation for FGFACILITY to comply with the federal NSPS, 40 CFR 60.7. This notification shall be submitted to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGFACILITY. **(R 336.1216(1), R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A
Continuous Opacity Monitoring System (COMS) Requirements
(This appendix only applies of a COMS is installed)

1. Within 30 calendar days after initial startup of EUBOILER, the permittee shall submit two copies of a Monitoring Plan to the AQD for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required COMS.

2. Within 150 calendar days after initial startup of EUBOILER, the permittee shall submit two copies of a complete test plan for the COMS to the AQD for approval.

3. Within 180 calendar days after initial startup of EUBOILER, the permittee shall complete the installation and testing of the COMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the COMS complies with the requirements of Performance Specification (PS) 1.

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The COMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1 of Appendix B, 40 CFR Part 60.

7. Until such time as the US EPA promulgates quality assurance requirements for COMS under Appendix F to 40 CFR Part 60, the permittee shall perform an annual audit of the COMS using the procedures set forth in USEPA Publication 450/4-92-010, “Performance Audits Procedures for Opacity Monitors”, or a procedure acceptable to AQD. The results of the annual audit shall be submitted to the AQD within the quarterly EER for the quarter in which the annual audit is conducted. Upon promulgation of COMS quality assurance requirements under Appendix F of Part 60, the permittee shall follow such procedures.

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the Air Quality Division within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of COMS downtime and corrective action.
   c) A report of the total operating time of EUBOILER during the reporting period.
   d) If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.

   The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

APPENDIX B
NO_X, CO, and Either Oxygen or Carbon Dioxide Monitoring
Continuous Emission Rate Monitoring System (CERMS) Requirements

1. Within 30 calendar days after initial startup of EUBOILER, the permittee shall submit two copies of a Monitoring Plan to the AQD for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CERMS.

2. Within 150 calendar days after initial startup of EUBOILER, the permittee shall submit two copies of a complete test plan for the CERMS to the AQD for approval.

3. Within 180 calendar days after initial startup of EUBOILER, the permittee shall complete the installation and testing of the CERMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NO_X	2
CO	4
Oxygen or Carbon Dioxide	3
CERMS	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3, 4, and 6 of Appendix B to 40 CFR Part 60.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CERMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CERMS downtime and corrective action.
   c) A report of the total operating time of EUBOILER during the reporting period.
   d) A report of any periods that the CERMS exceeds the instrument range.
   e) If no exceedances or CERMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.