

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

October 20, 2020

**PERMIT TO INSTALL
49-20**

**ISSUED TO
PFARMACIA & UPJOHN COMPANY, LLC**

**LOCATED AT
7000 PORTAGE ROAD
KALAMAZOO, MICHIGAN 49001**

**IN THE COUNTY OF
KALAMAZOO**

**STATE REGISTRATION NUMBER
B3610**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. 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:	
DATE PERMIT TO INSTALL APPROVED:	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS2
POLLUTANT / MEASUREMENT ABBREVIATIONS.....3
GENERAL CONDITIONS4
EMISSION UNIT SPECIAL CONDITIONS.....6
 EMISSION UNIT SUMMARY TABLE6
FLEXIBLE GROUP SPECIAL CONDITIONS..... 11
 FLEXIBLE GROUP SUMMARY TABLE 11
 FGEBLR43-1-6-S1.....21
APPENDIX A25

COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 condition 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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT 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 (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUEBLR43-9-S1	One 120,000 pound steam/hr boiler with a maximum nameplate heat input capacity of 144.5 MMBtu/hr for natural gas and 138.3 MMBtu/hr for #2 fuel oil. The boiler primarily burns natural gas with #2 fuel oil as a back-up fuel. The boiler will utilize low NOx burners (LNB) and flue gas recirculation (FGR).	12/3/2015	FGBOILERMACT
EUEBLR43-10-S1	One 120,000 pound steam/hr boiler with a maximum nameplate heat input capacity of 143.2 MMBtu/hr for natural gas and 138.5 MMBtu/hr for #2 fuel oil. The boiler primarily burns natural gas with #2 fuel oil as a back-up fuel. The boiler will utilize low NOx burners (LNB) and flue gas recirculation (FGR).	To Be Determined	FGEBLR43-10&11, FGBOILERMACT
EUEBLR43-11-S1	One 120,000 pound steam/hr boiler with a maximum nameplate heat input capacity of 143.2 MMBtu/hr for natural gas and 138.5 MMBtu/hr for #2 fuel oil. The boiler primarily burns natural gas with #2 fuel oil as a back-up fuel. The boiler will utilize low NOx burners (LNB) and flue gas recirculation (FGR).	To Be Determined	FGEBLR43-10&11, FGBOILERMACT
EUTANK8500	20,000 gallon horizontal fixed roof #2 fuel oil storage tank	To Be Determined	FGB43OILTANKS
EUTANK8600	20,000 gallon horizontal fixed roof #2 fuel oil storage tank	To Be Determined	FGB43OILTANKS
EUTANK8700	20,000 gallon horizontal fixed roof #2 fuel oil storage tank	To Be Determined	FGB43OILTANKS
EUEBLR43-5-S1	One 90,000 pound steam/hr coal fired boiler, 110.81 MMBTU. The boiler is equipped with flue gas recirculation and cyclonic separator for particulate control. (PTI 234-15)	01-01-60/ 12-06-83/ 08-06-07 01-29-16	FGEBLR43-1-6-S1
EUEBLR43-6-S1	One 90,000 pound steam/hr coal fired boiler, 110.81 MMBTU. The boiler is equipped with flue gas recirculation and cyclonic separator for particulate control. (PTI 234-15)	01-01-62/ 12-06-83/ 08-06-07 01-29-16	FGEBLR43-1-6-S1

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 336.1291.

**EUEBLR43-9-S1
 EMISSION UNIT CONDITIONS**

DESCRIPTION

One 120,000 pound steam/hr boiler with a maximum nameplate heat input capacity of 144.7 MMBtu/hr for natural gas and 138.3 MMBtu/hr for #2 fuel oil. The boiler primarily burns natural gas with #2 fuel oil as a back-up fuel.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Low NOx burner, flue gas recirculation

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	0.20 lb/MMBtu	30 day rolling average time period	EUEBLR43-9-S1	SC VI.2	40 CFR 60.44b(a) 40 CFR 52.21(c) & (d),
2. NOx	32.0 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEBLR43-9-S1	SC VI.2	R336.1205(1)

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas or #2 fuel oil in EUEBLR43-9-S1. **(R 336.1201(3), 40 CFR 60.44b(a))**
2. Prior to July 1, 2021, the permittee shall not burn more than 1,261,860 gallons of #2 fuel oil fuel in EUEBLR43-9-S1 per 12-month rolling time period. After June 30, 2021, the permittee shall not burn more than 1,614,170 gallons of #2 fuel oil in EUEBLR43-9-S1 per 12-month rolling time period. **(R336.1205(1), R 336.1225, 40 CFR 52.21(c) & (d))**
3. The permittee shall only burn #2 fuel oil that contains no more than 0.0015 weight percent sulfur. **(40 CFR 60.42b(j), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate a continuous oxygen trim system on EUEBLR43-9-S1 that maintains an optimum air to fuel ratio and conduct a tune-up of EUEBLR43-9-S1 every 5 years as follows:
 - a. The permittee shall inspect the burner, and clean or replace any components of the burner, as necessary. The permittee may delay the burner inspection until the next scheduled unit shutdown. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment.
 - b. The permittee shall inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
 - c. The permittee shall inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The permittee may delay the inspection until the next scheduled unit shutdown.

- d. The permittee shall optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject.
 - e. The permittee shall measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
 - i. The permittee shall maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 - ii. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater.
 - iii. A description of any corrective actions taken as a part of the tune-up.
 - iv. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540 (a) (12))**
2. The permittee shall not burn liquid fuel in EUEBLR43-9-S1 except for the following circumstances:
- a. Periodic testing of liquid fuel, maintenance, or operator training.
 - b. Periods of gas curtailment or supply interruptions as defined below.
 - i. Periods of gas curtailment or supply interruption means periods of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the permittee
 - ii. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of the permittee.
 - iii. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption.
 - iv. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the permittee. **(40 CFR 63.7575)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for each boiler of EUEBLR43-9-S1 shall not exceed 144.5 MMBTU/hr for natural gas and 138.3 MMBtu/hr for #2 fuel oil on a fuel heat input basis. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 52.21(c) & (d), R 336.2810, 40 CFR 52.21(j), 40 CFR Part 60 Subpart Db)**
2. The permittee shall not operate EUEBLR43-9-S1 unless the low NO_x burners and flue gas recirculation system are installed, maintained, and operated in a satisfactory manner. **(R 336.1205, 40 CFR 52.21(c) & (d))**
3. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the fuel usage rate for EUEBLR43-9-S1 on a continuous basis, for both natural gas and #2 fuel oil. **(40 CFR 60.49b(d)(1))**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the NO_x emissions, and oxygen (O₂), or carbon dioxide (CO₂), content of the exhaust gas from each boiler of FGEBLR43-10&11 on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d), R 336.2810, 40 CFR 60.48b(b))**

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 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 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.44b(i), 40 CFR 60.49b(d), (g), & (w))**
2. The permittee shall continuously monitor and record, in a satisfactory manner, the NO_x emissions and the O₂, or CO₂, emissions from EUEBLR43-9-S1. The permittee shall operate each Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A and shall use the CEMS data for determining compliance with SC I.1 & I.2. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR 60.48b(b))**
3. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average NO_x emission rate records for EUEBLR43-9-S1, from the data collected from the CEMS. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR 60.44b(i), 40 CFR 60.49b(g))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of the 12-month rolling emissions for NO_x from the data collected from the CEMS. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
5. The permittee shall keep, in a satisfactory manner, records of the daily, monthly, and 12-month rolling natural gas and #2 fuel oil usage records for EUEBLR43-9-S1. The records must indicate the total amount of natural gas used in cubic feet and total amount of #2 fuel oil in gallons. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.49b(d))**
6. The permittee shall calculate and keep, in a satisfactory manner, records of the individual 12-month rolling annual capacity factors for natural gas and #2 fuel oil for EUEBLR43-9-S1. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.49b(d))**
7. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:
 - a. Compliance tests and any testing required under the special conditions of this permit.
 - b. Monitoring data.
 - c. Documentation of heat input capacity required to show compliance with SC IV.1.
 - d. All records required by 40 CFR 60.7 and 60.49b.
 - f. All calculations or documents necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f). The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1912, 40 CFR 52.21(c) & (d), 40 CFR 60.7(f), 40 CFR Part 60 Subpart Db)**

8. The permittee shall keep, in a satisfactory manner, #2 fuel oil supplier receipts from the fuel supplier to certify that the fuel meets the definition of distillate oil and the sulfur content limit of 0.0015 percent by weight. (40 CFR 60.41b, 40 CFR 60.42b, 40 CFR 60.49b(r)(1))
9. The permittee shall continuously monitor and record, in a satisfactory manner, the NO_x emissions from EUEBLR43-9-S1. The permittee shall operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A and shall use the CEMS data for determining compliance with SC I.1, I.2, and I.3. **(R 336.1205, R 336.2802)**

10. The permittee shall maintain a record of the following for EUEBLR43-9-S1:
- a. The reason for burning of #2 fuel oil (natural gas curtailment or periodic testing of liquid fuels/ maintenance/operator training) and the number of hours for each occurrence.
 - b. The total number of hours of operation while burning #2 fuel oil for each month for any reason.
 - c. The total number of hours of operation while burning #2 fuel oil for the purpose of performance testing, maintenance, or operator training.
 - d. The 12-month rolling total number of hours of operation while burning #2 fuel oil for any reason
 - e. The total number of hours of operation while burning #2 fuel oil for the purpose of performance testing, maintenance, or operator training in the last calendar year.
- (R 336.1205, 40 CFR 63.7575, 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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. SVEBLR43-9-S1	48	127	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

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 Db, as they apply to EUEBLR43-9-S1. **(40 CFR Part 60 Subparts A & Db)**

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

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
FGEBLR43-10&11	Two (2) 120,000 pound steam/hr boilers, each with a maximum nameplate heat input capacity of 143.2 MMBtu/hr for natural gas and 138.5 MMBtu/hr for #2 fuel oil. The boilers primarily burn natural gas with #2 fuel oil as a back-up fuel.	EUEBLR43-10-S1, EUBLR43-11-S1
FGBOILERMACT	Boilers subject to National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subpart DDDDD.	EUEBLR43-9-S1, EUEBLR43-10-S1, EUBLR43-11-S1
FGB43OILTANKS	Three (3) 20,000 gallon #2 fuel oil storage tanks providing fuel to FGEBLR43-10&11 and EUEBLR43-9-S1.	EUTANK8500 EUTANK8600 EUTANK8700
FGEBLR43-1-6-S1	<p>This flexible group is comprised of two 90,000 lb steam per hr coal fired boilers. The boilers are arranged as pairs with a flue, bag house, and stack for the pair.</p> <p>EUEBLR43-6-S1, EUEBLR43-5-S1: These boilers are in Building 43 and are existing coal fired boilers with a rated heat input capacity of 110.81 MMBTU per hour with an economizer for waste heat recovery and exhaust gas temperature reduction. Emission control equipment includes multiclones and fabric filters for PM emission control, and flue gas recirculation (FGR) to reduce NO_x emissions. The FGR is primarily considered a thermal NO_x control technique, reducing NO_x by lowering the peak furnace temperature. (PTI 234-15)</p>	EUEBLR43-5-S1 EUEBLR43-6-S1

FGEBLR43-10&11
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two (2) 120,000 pound steam/hr boilers, each with a maximum nameplate heat input capacity of 143.2 MMBtu/hr for natural gas and 138.5 MMBtu/hr for #2 fuel oil. The boilers primarily burn natural gas with #2 fuel oil as a back-up fuel.

Emission Unit: EUEBLR43-10-S1, EUEBLR43-11-S1

POLLUTION CONTROL EQUIPMENT

Low NOx burners and flue gas recirculation for NOx control.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	0.2 lb/MMBTU (each unit)	30-day rolling average time period	FGEBLR43-10&11	SC VI.2, SC VI.3, SC VI.7	40 CFR 52.21(c) & (d) , 40 CFR 60.44b(l)(1)
2. NO _x	33.6 tpy (each unit)	12-month rolling time period as determined at the end of each calendar month	FGEBLR43-10&11	SC VI.2, SC VI.4, SC VI.7	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas or #2 fuel oil in FGEBLR43-10&11. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60 Subpart Db)**
2. Prior to July 1, 2021, the permittee shall not burn more than 2,527,380 gallons of #2 fuel oil per 12-month rolling time period in FGEBLR43-10&11. After June 30, 2021, the permittee shall not burn more than 3,839,580 gallons per 12-month rolling time period in FGEBLR43-10&11. **(R336.1205(1), R 336.1225, 40 CFR 52.21(c) & (d))**
3. The permittee shall only burn #2 fuel oil that contains no more than 0.0015 weight percent sulfur. **(40 CFR 60.42b(j), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Within 180 days of trial operation, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement plan (MAP) as described in Rule 911(2) for FGEBLR43-10&11. The permittee shall not operate either EUEBLR43-10-S1 or EUEBLR43-11-S1 of FGEBLR43-10&11 unless the approved MAP, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The MAP shall include the following:
 - a. Recordkeeping of repairs and maintenance of each boiler.
 - b. Procedures for maintaining and operating each boiler and any monitoring equipment in a satisfactory manner during malfunction events.
 - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(1)(a) & (3), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall not operate EUEBLR43-10-S1 or EUEBLR43-11-S1 of FGEBLR43-10&11 unless an acceptable plan that describes how emissions will be minimized during all startups, shutdowns and malfunctions has been submitted to the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. **(R 336.1205(1)(a) & (3), R 336.1912(1), 40 CFR 52.21(c) & (d))**

3. The permittee shall operate a continuous oxygen trim system on EUEBLR43-10-S1 or EUEBLR43-11-S1 of FGEBLR43-10&11 that maintains an optimum air to fuel ratio and conduct a tune-up every 5 years as follows:

- a. The permittee shall inspect the burner, and clean or replace any components of the burner as necessary. The permittee may delay the burner inspection until the next scheduled unit shutdown. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment.
- b. The permittee shall inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
- c. The permittee shall inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The permittee may delay the inspection until the next scheduled unit shutdown.
- d. The permittee shall optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject.
- e. The permittee shall measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
- f. The permittee shall maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater.
 - ii. A description of any corrective actions taken as a part of the tune-up.
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(40 CFR 63.7540 (a)(12))

4. The permittee shall not burn liquid fuel in EUEBLR43-10-S1 or EUEBLR43-11-S1 of FGEBLR43-10&11 except for the following circumstances:

- a. Periodic testing of liquid fuel, maintenance, or operator training
- b. Periods of gas curtailment or supply interruptions as defined below
 - i. Periods of gas curtailment or supply interruption means periods of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the permittee
 - ii. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of the permittee
 - iii. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption.
- iv. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the permittee.

(40 CFR 63.7575)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for each boiler of FGEBLR43-10&11 shall not exceed 143.2 MMBTU per hour for natural gas and 138.5 MMbtu/hr for fuel oil on a fuel heat input basis. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 52.21(c) & (d), R 336.2810, 40 CFR 52.21(j), 40 CFR Part 60 Subpart Db)**
2. The permittee shall not operate EUEBLR43-10-S1 or EUEBLR43-11-S1 of FGEBLR43-10&11 unless the low NO_x burners and flue gas recirculation system are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the equipment in accordance with the MAP required in SC III.1. **(R 336.1205(1)(a) & (3), R 336.191040 CFR 52.21(c) & (d))**
3. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the fuel usage rate for FGEBLR43-10&11 on a continuous basis, for both natural gas and No. 2 fuel oil. **(40 CFR 60.49b(d)(1))**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the NO_x emissions, and oxygen (O₂), or carbon dioxide (CO₂), content of the exhaust gas from each boiler of FGEBLR43-10&11 on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d), R 336.2810, 40 CFR 60.48b(b))**

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 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 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.44b(i), 40 CFR 60.49b(d), (g), & (w))**
2. The permittee shall continuously monitor and record, in a satisfactory manner, the NO_x emissions and the O₂, or CO₂, emissions from FGEBLR43-10&11. The permittee shall operate each Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A and shall use the CEMS data for determining compliance with SC I.1 & I.2. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR 60.48b(b))**
3. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average NO_x emission rate records for FGEBLR43-10&11, as required by SC I.1. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR 60.44b(i), 40 CFR 60.49b(g))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of the monthly and 12-month rolling emissions for NO_x. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**
5. The permittee shall keep, in a satisfactory manner, records of the daily, monthly, and 12-month rolling natural gas and fuel oil burned in each boiler in FGEBLR43-10&11. The records must indicate the total amount of natural gas used in cubic feet and number of fuel oil in gallons. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.49b(d))**
6. The permittee shall calculate and keep, in a satisfactory manner, records of the monthly and 12-month rolling annual capacity factor for natural gas for FGEBLR43-10&11. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.49b(d))**

7. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:
 - a. Compliance tests and any testing required under the special conditions of this permit.
 - b. Monitoring data.
 - c. Documentation of heat input capacity required to show compliance with SC IV.1.
 - d. Identification, type and the amounts of fuel combusted in FGEBLR43-10&11 on an hourly basis, calendar day basis, and calendar month basis.
 - e. All records required by 40 CFR 60.7 and 60.49b.
 - f. All calculations or documents necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f). The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1912, 40 CFR 52.21(c) & (d), 40 CFR 60.7(f), 40 CFR Part 60 Subpart Db)**

8. The permittee shall keep, in a satisfactory manner, No. 2 fuel oil supplier receipts from the fuel supplier to certify that the fuel meets the definition of distillate oil and the sulfur content limit of 0.0015 percent by weight. **(40 CFR 60.41b, 40 CFR 60.42b, 40 CFR 60.49b(r)(1))**

VII. REPORTING

1. 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 the notification(s) to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7(a))**
2. The permittee shall provide written notification of the actual date of initial startup to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.49b(a). The notification shall include:
 - a. The design heat input capacity of each boiler of FGEBLR43-10&11 and identification of the fuels to be combusted in FGEBLR43-10&11.
 - b. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

The permittee shall submit this notification to the AQD District Supervisor within 15 days after initial startup occurs. **(R 336.1201(7)(a), 40 CFR 60.7(a)(3), 40 CFR 60.49b(a))**

3. The permittee shall submit all reports required by the federal Standards of Performance for New Stationary Sources, 40 CFR 60.49b, as applicable. The permittee shall submit these reports to the AQD District Supervisor within the time frames specified in 40 CFR 60.49b and/or 40 CFR 60.7. **(40 CFR 60.7, 40 CFR 60.49b(b), (h) & (i))**

VIII. STACK/VENT RESTRICTION(S)

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. SVEBLR43-10-S1	48	128	R 336.1225, 40 CFR 52.21(c) & (d)
1. SVEBLR43-11-S1	48	128	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

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 Db, as they apply to FGEBLR43-10&11. **(40 CFR Part 60 Subparts A & Db)**
2. 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 DDDDD, as they apply to FGEBLR43-10&11. **(40 CFR Part 63 Subparts A & DDDDD)**

Footnotes:

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

FGBOILERMACT FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Requirements for new and existing boilers and process heaters that are designed to burn gas 1 subcategory fuel with a heat input capacity of 10 MMBTU/hr or greater at major sources of HAP emissions per 40 CFR Part 63, Subpart DDDDD (Boiler MACT). Units designed to burn gas 1 subcategory fuels include boilers or process heaters that burn only natural gas, refinery gas, and/or Other Gas 1 fuels. Units that burn liquid fuel for testing or maintenance purposes for less than a total of 48 hours per year, or that burn liquid fuel during periods of curtailment or supply interruptions are included in this definition.

Emission Unit: EUEBLR43-9-S1, EUEBLR43-10-S1, EUBLR43-11-S1

POLLUTION CONTROL EQUIPMENT

Low NOx burner and flue gas recirculation to control NOx emissions.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must complete an initial tune-up of each emission unit installed after June 4, 2010 that has a continuous oxygen trim system as specified in SC III.2 by no later than 61 months after startup. **(40 CFR 63.7510(g))**
2. If the unit is not operated on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
3. The permittee shall conduct a tune-up of the burner(s) and combustion controls of each emission unit that has an oxygen trim system installed in FGBOILERMACT as applicable, every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi). **(40 CFR 63.7500(d), 40 CFR 63.7540(a)(12), Table 3 of 40 CFR Part 63, Subpart DDDDD)**
 - a. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. **(40 CFR 63.7515(d))**
 - b. The permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but each burner must be inspected at least once every 72 months. **(40 CFR 63.7540(a)(12))**
 - c. If the unit is not operating on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
4. At all times, the permittee must operate and maintain each existing gas 1 boiler or process heater, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**
5. The permittee shall not burn #2 fuel oil in each boiler in FGBOILERMACT for performance testing, maintenance, or operator training in excess of a combined total of 48 hours during any calendar year. **(40 CFR 63.7575)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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 must keep a copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or annual compliance report that the permittee submitted. **(40 CFR 63.7555(a)(1))**
2. If the permittee uses an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under 40 CFR Part 63, Other Gas 1 fuel, or gaseous fuel subject to another subpart of 40 CFR Part 60 or Part 61, or Part 65, the permittee must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies. **(40 CFR 63.7555(h))**
3. The permittee shall maintain on-site and submit, if requested by the AQD, an annual tune-up report containing the information listed below.
 - a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
 - b. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
 - c. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
4. The permittee's records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). **(40 CFR 63.7560(a))**
5. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**
6. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2-years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.7560(c))**
7. The permittee shall maintain a record of the following for FGBOILERMACT:
 - a. The reason for burning of #2 fuel oil (natural gas curtailment or periodic testing of liquid fuels/maintenance/operator training) and the number of hours for each occurrence
 - b. The total number of hours of operation while burning #2 fuel oil for the purpose of periodic testing, maintenance, or operator training in the last calendar year.**(R 336.1205, 40 CFR 63.7575, 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. The permittee must submit an Initial Notification not later than 15-days after the actual date of startup of the affected source. **(40 CFR 63.7545(c))**

2. If the permittee intends to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of 40 CFR Part 63, Part 60, Part 61, or Part 65, or Other Gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575, the permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575. The notification must include the information as listed below.
 - a. Company name and address. **(40 CFR 63.7545(f)(1))**
 - b. Identification of the affected unit. **(40 CFR 63.7545(f)(2))**
 - c. Reason the permittee is unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began. **(40 CFR 63.7545(f)(3))**
 - d. Type of alternative fuel that the permittee intends to use. **(40 CFR 63.7545(f)(4))**
 - e. Dates when the alternative fuel use is expected to begin and end. **(40 CFR 63.7545(f)(5))**
3. The permittee must submit boiler and process heater tune-up compliance reports to the appropriate AQD District Office. The reports must be postmarked or submitted by March 15th and must cover the period of January 1 through December 31 of the reporting year. For new units, the first report should cover the period of startup to December 31 of the reporting year. Compliance reports must also be submitted to EPA using the Compliance and Emissions Data Reporting Interface (CEDRI), which is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). **(40 CFR 63.7550(b))**
4. The permittee must submit a compliance report containing the following information.
 - a. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
 - b. Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
 - c. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
 - d. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
 - e. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
5. The permittee must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time the report is due, submit the report to the EPA Region 5 at the appropriate address listed in 40 CFR 63.13 and to the appropriate AQD District Office. **(40 CFR 63.7550(h)(3))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

2. The permittee shall comply with all applicable provisions of the National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters as specified in 40 CFR Part 63, Subparts A and DDDDD. **(40 CFR Part 63, Subparts A and DDDDD)**

Footnotes:

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

**FGB43OILTANKS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Three (3) 20,000 gallon #2 fuel oil storage tanks providing fuel to FGEBLR43-10&11 and EUEBLR43-9-S1

Emission Unit: EUTANK8500, EUTANK8600, EUTANK8700

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only store #2 fuel oil in FGB43OILTANKS for use only in FGEBLR43-10 & 11 and EUEBLR43-9-S1. **(R 336.1225, R 336.1702, 40 CFR 60.110b)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not install any tank in FGB43OILTANKS with a capacity over 20,000 gallons. **(R 336.1702, R 336.1225)**

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 maintain records of the specifications of each tank in FGB43OILTANKS. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

**FGEBLR43-1-6-S1
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

This flexible group is comprised of two 90,000 lb steam per hr coal fired boilers

EUEBLR43-6-S1, EUEBLR43-5-S1: These boilers are in Building 43 and are existing coal fired boilers with a rated heat input capacity of 110.81 MMBTU per hour with an economizer for waste heat recovery and exhaust gas temperature reduction. Emission control equipment includes multiclones and fabric filters for PM emission control, and flue gas recirculation (FGR) to reduce NO_x emissions. The FGR is primarily considered a thermal NO_x control technique, reducing NO_x by lowering the peak furnace temperature.

Emission Units: EUEBLR43-5-S1, EUEBLR43-6-S1

POLLUTION CONTROL EQUIPMENT

Baghouse and flue gas recirculation on EUEBLR43-5-S1 and EUEBLR43-6-S1; multiclones on each boiler.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO ₂	2.50 lbs / MMBTU heat input ²	Based upon a 24-hour average during periods when EUEBLR43-7-S1 and EUEBLR43-8-S1 are not being fired on fuel oil	FGEBLR43-1-6-S1	SC II.1 SC VI.1	R 336.1401
2. SO ₂	2.08 lbs / MMBTU heat input ²	Based upon a 24-hour average, during periods when EUEBLR43-7-S1 and EUEBLR43-8-S1 are both being fired on fuel oil	FGEBLR43-1-6-S1	SC II.2 SC VI.1	R 336.1205
3. Particulate	0.30 lb / 1000 lbs of exhaust gases, corrected to 50% excess air ²	Hourly	FGEBLR43-1-6-S1	SC IV.1	R 336.1331(1), Table 31

II. MATERIAL LIMITS

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Coal	The sulfur content shall not exceed an equivalent of 1.5% by weight calculated on the basis of 12,000 BTU per lb ²	Continuous*, during periods when EUEBLR43-7-S1 and EUEBLR43-8-S1 are not being fired on fuel oil	FGEBLR43-1-6-S1	SC VI.1*	R 336.1401
2. Coal	The sulfur content shall not exceed an equivalent of 1.25% by weight calculated on the basis of 12,000 BTU per lb ²	Continuous*, during periods when boilers #7 and #8 (EUEBLR43-7-S1 and EUEBLR43-8-S1) are both being fired on fuel oil	FGEBLR43-1-6-S1	SC VI.1*	R 336.1205
* Continuous compliance is determined by the annual fuel analysis required in section VI.2 of this permit and the recordkeeping requirement in section VI.1 of this permit, records of the annual fuel analysis, and the supplier's certificate of analysis for each load of coal.					

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the six boilers unless the respective multiclone is installed, maintained, and operated properly.² **(R 336.1910)**
2. The permittee shall not operate FGEBLR43-1-6-S1 unless the fabric filter is installed, maintained, and operated in a satisfactory manner. For a fabric filter, satisfactory operation means that the bag leak detector alarm does not sound more than 5 percent of the operating time during a 6-month period.² **(R 336.1910, 40 CFR 64.6(c)(1)(iii))**
3. The permittee shall not operate FGEBLR43-1-6-S1 unless a fabric filter bag leak detection system is installed, and maintained and operated in a satisfactory manner, in accordance with the manufacturers' recommendations.² **(R 336.1910, 40 CFR 64.6(c)(1)(i and ii))**
4. The permittee shall not operate EUEBLR43-5 and EUEBLR43-6-S1 unless the respective FGR equipment is installed, maintained, and operated properly.² **(R 336.1910)**
5. The permittee shall control fugitive dust emissions from the coal pile. **(R 336.1205)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install and operate a bag leak detection system in accordance with the manufacturers' recommendations, and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5% of the operating time during each 6-month period.² **(R 336.1910)**
2. The permittee shall operate and maintain FGEBLR43-1-6-S1, including air pollution control equipment and monitoring equipment.² **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records of the coal analysis including the percent sulfur content by weight and the heat content in BTU per pound for each delivery. The supplier's specification sheet may be kept to satisfy this requirement. **(R 336.1205)**
2. The permittee shall perform annual composite coal sampling and analytical testing for sulfur content. This sampling shall be repeated annually within 30 days following a 12-month period after the previous sampling. **(R 336.1205)**
3. An excursion is a when the bag leak detector alarm is activated. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction, and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Upon detecting an excursion, the permittee shall implement the Malfunction Abatement Plan described in SC IX.1. **(40 CFR 64.7(d)), 40 CFR 64.6(c)(2)**
4. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, in frequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Each semiannual report of monitoring and deviations shall include summary information on the number, duration, and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**
3. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
4. The permittee shall provide written notification of the first combustion of fuel oil in EUEBLR43-9-S1 or initial startup of FGEBLR43-10&11, whichever occurs first. The permittee shall submit the notification to the AQD District Supervisor within 15 days of the occurrence. **(40 CFR 60.7(a))**

See Appendix 8-S1

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. SVEBLR43-FLUE1	60 ²	129 ²	40 CFR 52.21(c) & (d)
2. SVEBLR43-FLUE2	60 ²	129 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. The permittee shall implement and document the results of the following malfunction abatement program, as appropriate, when a 6-minute average visible emission reading exceeds the limits in R 336.1301, or the conditions detailed in VI.3. or when the bag leak detector alarm is activated **(R 336.1213(3))**:
 - a. Adjust O₂ level through control system.
 - b. Adjust draft.
 - c. Adjust balance between stokers.
 - d. Adjust grate speed.
 - e. Adjust coal mix.
 - f. Adjust master to shift load from offending boiler to another.
 - g. Check multiclone for malfunction.
 - h. Check FGR fans and dampers for malfunction.
 - i. Check bag house and bag leak detector system.
2. The permittee shall comply with all applicable requirements of 40 CFR, Part 64. **(40 CFR Part 64)**
3. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and, if necessary, submit a proposed modification to the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
4. Upon first combusting of #2 fuel oil in EUEBLR43-9-S1 or startup of FGEBLR43-10&11, whichever occurs first, the permittee may not combust more than a combined 3,700 tons of coal per 12-month rolling time period in FGEBLR43-1-6-S1. **(R336.1205(3))**
5. The permittee shall not combust coal in FGEBLR43-1-6-S1 after June 30, 2021. **(R336.1205(3))**

Footnotes:

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

APPENDIX A
NOx and CO Monitoring for Boilers #9, 10, and #11
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of initial start-up, 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 CEMS.
2. Within 150 calendar days after commencement of initial start-up, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of initial start-up, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS
NOx	2
CO ₂ /O ₂	3

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3, and Appendix B to 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS 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 of 40 CFR Part 60).
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 Emission Limits 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 CEMS downtime and corrective action.
 - c. A report of the total operating time of EUEBLR43-10-S1 and EUEBLR43-11-S1 during the reporting period.
 - d. A report of any periods that the CEMS exceeds the instrument range.
 - e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.
9. 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.