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

October 9, 2024

PERMIT TO INSTALL
88-13D

ISSUED TO
Abbott Nutrition

LOCATED AT
901 North Centerville Road
Sturgis, Michigan 49091

IN THE COUNTY OF
St. Joseph

STATE REGISTRATION NUMBER
A6380

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: **October 1, 2024**	
DATE PERMIT TO INSTALL APPROVED: **October 9, 2024**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS 2
POLLUTANT / MEASUREMENT ABBREVIATIONS 3
GENERAL CONDITIONS 4
EMISSION UNIT SPECIAL CONDITIONS 6
EMISSION UNIT SUMMARY TABLE 6
EUBLR04 7
EUBLR05 10
EUBLRTEMP 13
EUWWPTS 16
FLEXIBLE GROUP SPECIAL CONDITIONS 18
FLEXIBLE GROUP SUMMARY TABLE 18
FGBOILERS 19
FGDRYERS 21
FGSCB0108 24
FGFACILITY CONDITIONS 27
APPENDIX 1 29

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_2e	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_2S	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
EUBLR04	Natural gas and fuel oil fired boiler with a maximum capacity of 98 MMBTU per hour. Equipped with low NOx burners and flue gas recirculation.	06/01/1994	FGBOILERS
EUBLR05	Natural gas and fuel oil fired boiler with a maximum capacity of 98 MMBTU per hour. Equipped with low NOx burners and flue gas recirculation.	10/14/2003	FGBOILERS
EUBLRTEMP	Natural gas and diesel-fired temporary boiler with a maximum fuel usage of 99,900 scf/hr and 675 gal/hr, respectively. Equipped with low NOx burners and flue gas recirculation.	TBD	FGBOILERS
EUDRY03	Nutritional products spray dryer including four cyclones integral for product recovery. Controlled by a wet scrubber with mist eliminator.	01/01/1964 10/20/1993	FGDRYERS
EUDRY04	Nutritional products spray dryer including five cyclones integral for product recovery. Controlled by two wet scrubbers operating in parallel each with a mist eliminator. The Dryer Main scrubber exhausts to SVDRY04a & Dryer FB scrubber (installed in 2006) exhausts to SVDRY04b.	04/01/1982 07/31/1995 06/2006 07/31/2017	FGDRYERS
EUSCB01	Venturi-type wet scrubber for material dump station PIF No. 1.	07/01/1989 11/30/1994	FGSCB0108
EUSCB02	Venturi-type wet scrubber for material dump station PIF No. 2.	07/01/1989 11/30/1994	FGSCB0108
EUSCB03	Venturi-type wet scrubber for material dump station Tank No. 24.	07/01/1989 11/30/1994	FGSCB0108
EUSCB04	Venturi-type wet scrubber for material dump station Tank No. 25.	07/01/1989 11/30/1994	FGSCB0108
EUSCB05	Venturi-type wet scrubber for material dump station Triblender-Fristan.	07/01/1989 11/30/1994	FGSCB0108
EUSCB06	Venturi-type wet scrubber for material dump station Tank No. 64.	02/01/1991 11/30/1994	FGSCB0108
EUSCB08	Venturi-type wet scrubber for material dump station Casein.	07/01/1987 11/30/1994	FGSCB0108
EUWWPTS	Duall single-bed carbon adsorption system for odor control on exhaust from two influent equalization tanks & one sludge storage tank in the WW pretreatment system.	02/22/2011	NA

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.

EUBLR04
EMISSION UNIT CONDITIONS

DESCRIPTION

Natural gas and fuel oil fired boiler with a maximum capacity of 98 MMBTU per hour. Equipped with low NOx burners and flue gas recirculation.

Flexible Group ID: FGBOILERS

POLLUTION CONTROL EQUIPMENT

Low NOx burners and flue gas recirculation.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	0.08 lb/MMBTU when firing natural gas	Hourly	EUBLR04	SC V.1	R 336.1205(1)(a)
2. NOx	7.84 pph when firing natural gas	Hourly	EUBLR04	SC V.1	R 336.1205(1)(a)
3. NOx	0.14 lb/MMBTU when firing fuel oil	Hourly	EUBLR04	SC V.1	R 336.1205(1)(a)
4. NOx	13.72 pph when firing fuel oil	Hourly	EUBLR04	SC V.1	R 336.1205(1)(a)
5. PM	2.22 pph	Hourly	EUBLR04	SC V.1	R 336.1331(1)(c)
6. SO_2	4.79 pph	Hourly	EUBLR04	SC V.1	R 336.1205(1)(a), R 336.1402(1), 40 CFR 60.42c(d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Fuel Oil	0.05% Sulfur	As calculated on the basis of 140,000 BTU per gallon of liquid fuel	EUBLR04	SC VI.2	R 336.1205(1)(a), R 336.1402(1), 40 CFR 60.42c(d), 40 CFR 60.43c(e)(4)

2. The permittee shall only burn natural gas or fuel oil in EUBLR04. **(R 336.1205(1)(a), R 336.1331(1)(c), R 336.1402(1))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not fire natural gas and fuel oil simultaneously in EUBLR04, except as may be routinely necessary during changeover from one fuel to the other. **(R 336.1205(1)(a))**

2. The permittee shall perform routine preventative maintenance on EUBLR04 at least once each calendar year. Routine maintenance shall include calibration of all controls, gauges, and monitors. **(R 336.1910)**

3. The permittee shall also perform the routine preventative maintenance in SC III.2 when abnormal visible emissions are observed. **(R 336.1910)**

4. The permittee shall maintain and operate EUBLR04 according to the procedures outlined in the approved preventative maintenance plan. **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUBLR04 unless the low NOx burners and flue gas recirculation are installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a), R 336.1910)**

V. TESTING/SAMPLING

1. Upon the request of the AQD District Supervisor, the permittee shall verify NOx when firing natural gas, NOx when firing fuel oil, PM, and SO_2 emission rates from EUBLR04 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NO_x	40 CFR Part 60, Appendix A
SO_2	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the natural gas and fuel oil consumption rates from EUBLR04 for each calendar month. The records shall be kept at the facility and made available to the Department upon request. (**R 336.1205(1)(a), 40 CFR 60.48c(g)(2))**

2. The permittee shall keep records of the maximum sulfur content in the fuel oil for each delivery. Records of certification must also contain the name of the supplier and a statement from the supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1205(1)(a) & (b), 40 CFR 60.42c(h)(1), 40 CFR 60.48c(f)(1))**

3. The permittee shall keep a record of the measures taken and results of implementing the Preventative Maintenance Program. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1910)**

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. SVBLR04	42.0	60.0	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 Dc, as they apply to EUBLR04. **(40 CFR Part 60 Subparts A & Dc)**

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 JJJJJJ, as they apply to EUBLR04. **(40 CFR Part 63 Subparts A & JJJJJJ)**

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

EUBLR05
EMISSION UNIT CONDITIONS

DESCRIPTION

Natural gas and fuel oil fired boiler with a maximum capacity of 98 MMBTU per hour. Equipped with low NOx burners and flue gas recirculation.

Flexible Group ID: FGBOILERS

POLLUTION CONTROL EQUIPMENT

Low NOx burners and flue gas recirculation.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	0.08 lb/MMBTU when firing natural gas	Hourly	EUBLR05	SC V.1	R 336.1205(1)(a)
2. NOx	7.84 pph when firing natural gas	Hourly	EUBLR05	SC V.1	R 336.1205(1)(a)
3. NOx	0.14 lb/MMBTU when firing fuel oil	Hourly	EUBLR05	SC V.1	R 336.1205(1)(a)
4. NOx	13.72 pph when firing fuel oil	Hourly	EUBLR05	SC V.1	R 336.1205(1)(a)
5. PM	2.22 pph	Hourly	EUBLR05	SC V.1	R 336.1331(1)(c)
6. SO_2	4.79 pph	Hourly	EUBLR05	SC V.1	R 336.1205(1)(a), R 336.1402(1), 40 CFR 60.42c(d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Fuel Oil	0.05% Sulfur	As calculated on the basis of 140,000 BTU per gallon of liquid fuel	EUBLR05	SC VI.2	R 336.1205(1)(a), R 336.1402(1), 40 CFR 60.42c(d), 40 CFR 60.43c(e)(4)

2. The permittee shall only burn natural gas or fuel oil in EUBLR05. **(R 336.1205(1)(a), R 336.1331(1)(c), R 336.1402(1))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not fire natural gas and fuel oil simultaneously in EUBLR05, except as may be routinely necessary during changeover from one fuel to the other. **(R 336.1205(1)(a) & (b))**

2. The permittee shall perform routine preventative maintenance on EUBLR05 at least once each calendar year. Routine maintenance shall include calibration of all controls, gauges, and monitors. **(R 336.1910)**

3. The permittee shall also perform the routine preventative maintenance in III.2 on EUBLR05 when abnormal visible emissions are observed. **(R 336.1910)**

4. The permittee shall maintain and operate EUBLR05 according to the procedures outlined in the approved preventative maintenance plan. **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUBLR05 unless the low NOx burners and flue gas recirculation are installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a), R 336.1910)**

V. TESTING/SAMPLING

1. Upon the request of the AQD District Supervisor, the permittee shall verify NOx when firing natural gas, NOx when firing fuel oil, PM, and SO_2 emission rates from EUBLR05 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NO_x	40 CFR Part 60, Appendix A
SO_2	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the natural gas and fuel oil consumption rates from EUBLR05 for each calendar month. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 60.48c(g)(2))**

2. The permittee shall keep records of the maximum sulfur content in the fuel oil for each delivery. Records of certification must also contain the name of the supplier and a statement from the supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1205(1)(a) & (b), 40 CFR 60.42c(h)(1), 40 CFR 60.48c(f)(1))**

3. The permittee shall keep a record of the measures taken and results of implementing the Preventative Maintenance Program. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1910)**

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. SVBLR05	42.0	60.0	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 Dc, as they apply to EUBLR05. **(40 CFR Part 60 Subparts A & Dc)**

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 JJJJJJ, as they apply to EUBLR05. **(40 CFR Part 63 Subparts A & JJJJJJ)**

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

EUBLRTEMP
EMISSION UNIT CONDITIONS

DESCRIPTION

Natural gas and diesel-fired temporary boiler with a maximum fuel usage of 99,900 scf/hr and 675 gal/hr, respectively. Equipped with low NOx burners and flue gas recirculation.

Flexible Group ID: FGBOILERS

POLLUTION CONTROL EQUIPMENT

Low NOx burners and flue gas recirculation.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	48.0 lb/MMscf	Hourly	EUBLRTEMP	SC V.1, SC VI.5	40 CFR 52.21(c) & (d)
2. NOx	18.5 lb/ 1,000 gallons	Hourly	EUBLRTEMP	SC V.1, SC VI.5	40 CFR 52.21(c) & (d)
3. NOx	9.9 tpy	12-month rolling time period as determined at the end of each calendar month	EUBLRTEMP	SC VI.4	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas or ultra-low sulfur diesel in EUBLRTEMP. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1401, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The maximum design fuel input for EUBLRTEMP shall not exceed 99,900 scf per hour while burning natural gas. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

3. The maximum design fuel input for EUBLRTEMP shall not exceed 675 gal per hour while burning ultra-low sulfur diesel. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

4. The maximum natural gas usage for EUBLRTEMP shall not exceed 412 MMcf per year on a 12-month rolling time period basis as determined at the end of each calendar month. The maximum ultra-low sulfur diesel usage for EUBLRTEMP shall not exceed 1,069,000 gal per year on a 12-month rolling time period basis as determined at the end of each calendar month. When burning both fuels in a 12-month rolling time period, the following equation shall be used to determine maximum allowed fuel usages:

   NOx Emission Rate in tpy = (48/2000)*N + (18.5/2000)*D

   Where N is the natural gas usage in MMscf per 12-month rolling time period and D is the ultra-low sulfur diesel usage in 1,000 gallons per 12-month rolling time period. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUBLRTEMP unless the low NO_x burners and flue gas recirculation are installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a) & (3), R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall install, calibrate, maintain, and operate, in a satisfactory manner, a device to monitor and record the natural gas usage rate when in operation for EUBLRTEMP on a continuous basis. **(R 336.1205(1)(a) & (3), 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 ultra-low sulfur diesel usage rate when in operation for EUBLRTEMP on a continuous basis. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

1. Upon the request of the AQD District Supervisor, the permittee shall verify NOx when firing natural gas and NOx when firing fuel oil emission rates from EUBLRTEMP by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

Pollutant	Test Method Reference
NO_x	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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), 40 CFR 52.21(c) & (d))**

2. The permittee shall keep, in a format acceptable to the AQD District Supervisor, monthly and 12-month rolling natural gas usage records in million cubic feet for EUBLRTEMP. 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), 40 CFR 52.21(c) & (d))**

3. The permittee shall keep, in a format acceptable to the AQD District Supervisor, monthly and 12-month rolling ultra-low sulfur diesel usage records in gallons for EUBLRTEMP. 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), 40 CFR 52.21(c) & (d))**

4. The permittee shall calculate and keep, in a satisfactory manner, monthly and 12-month rolling NO_x, mass emission records for EUBLRTEMP, as required by SC I.3. 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))**

5. The permittee shall keep, in a satisfactory manner, records from the vendor of the maximum design fuel input for natural gas and ultra-low sulfur diesel, and records from the vendor that the boiler demonstrates compliance with the emission limits in SC I.1 and/or SC I.2, for each boiler brought on site during a rolling five year period. 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))**

VII. REPORTING

1. The permittee shall provide written notification of when the boiler is placed at the site to demonstrate the temporary status of EUBLRTEMP. The permittee shall submit this notification to the AQD District Supervisor within 15 days of placement or removal. **(40 CFR Part 60 Subpart Dc, 40 CFR Part 63 Subpart JJJJJJ)**

2. The permittee shall provide written notification of when the boiler is removed from the site and how long it was on-site to demonstrate the temporary status of EUBLRTEMP. The permittee shall submit this notification to the AQD District Supervisor within 15 days of placement or removal. **(40 CFR Part 60 Subpart Dc, 40 CFR Part 63 Subpart JJJJJJ)**

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. SVBLRTEMP	52	24.25	R 336.1225, 40 CFR 52.2(c) & (d)

IX. OTHER REQUIREMENT(S)

1. In the event that a boiler complying with EUBLRTEMP is removed from this location, the permittee may install and operate a boiler complying with EUBLRTEMP at this location pursuant to this Permit to Install. **(R 336.1205, 40 CFR Part 60 Subpart Dc, 40 CFR Part 63 Subpart JJJJJJ)**

2. If EUBLRTEMP remains on-site for more than 180 consecutive days, the permittee shall comply with the applicable provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to EUBLRTEMP. **(40 CFR Part 60 Subparts A & Dc)**

3. If EUBLRTEMP remains on-site for more than 12 consecutive months, the permittee shall comply with the applicable provisions of the federal National Emissions Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and DDDDD, as they apply to EUBLRTEMP. **(40 CFR Part 63 Subpart JJJJJJ)**

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

EUWWPTS
EMISSION UNIT CONDITIONS

DESCRIPTION

Duall single-bed carbon adsorption system for odor control on exhaust from two influent equalization tanks & one sludge storage tank in the WW pretreatment system.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Duall single-bed carbon adsorption system.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall maintain and operate EUWWPTS according to the procedures outlined in the preventative maintenance plan that has been approved by the AQD District Supervisor. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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 and record all operation and maintenance activities in accordance with the preventative maintenance plan for EUWWPTS. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

2. The permittee shall monitor and record any carbon change-outs for EUWWPTS. The records shall be kept at the facility and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

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. SVWWPTS	10.75	22.1	R 336.1225, R 336.1901

IX. OTHER REQUIREMENT(S)

NA

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
FGBOILERS	Boilers that generate steam for process equipment.	EUBLR04, EUBLR05, EUBLRTEMP
FGDRYERS	Nutritional products spray dryers including cyclones integral for product recovery.	EUDRY03, EUDRY04
FGSCB0108	Material dump stations each controlled by a venturi-type wet scrubber.	EUSCB01, EUSCB02, EUSCB03, EUSCB04, EUSCB05, EUSCB06, EUSCB08

FGBOILERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Boilers that generate steam for process equipment.

Emission Unit: EUBLR04, EUBLR05, EUBLRTEMP

POLLUTION CONTROL EQUIPMENT

Low NOx burners and flue gas recirculation.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	12.8 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)
2. PM10	12.8 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)
3. PM2.5	12.8 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)
4. NOx	Less than 90 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)
5. SO_2	68.8 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)
6. CO	76.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)
7. CO_2e	87,562 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2, SC VI.3	R 336.1205(3)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Fuel	1,071,435 MMBTU/yr	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	SC VI.2	R 336.1205(1)(a) & (b)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 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(3))**

2. The permittee shall keep, in a format acceptable to the AQD District Supervisor, total combined calendar month and 12-month rolling fuel usage records in MMBTU for FGBOILERS. 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) & (b))**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period PM, NO_X, SO_2, CO, and CO_2e emission calculations for the previous year for FGBOILERS, as required by SC I.1, SC I.2, SC I.3, SC I.4, and SC I.5. The permittee shall use a calculation method as described in Appendix 1. 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))**

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).

FGDRYERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Nutritional products spray dryers including cyclones integral for product recovery.

Emission Unit: EUDRY03, EUDRY04

POLLUTION CONTROL EQUIPMENT

Wet impingement scrubbers each with a water based mist eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.042 lb/1,000 lb of exhaust gases*	Instantaneous	EUDRY03	SC V.1, SC VI.3, SC VI.4, SC VI.5	R 336.1331(1)(c)
2. PM	4.5 pph*	Hourly	EUDRY03	SC V.1, SC VI.3, SC VI.4, SC VI.5	R 336.1331(1)(c)
3. PM	0.015 lb/1,000 lb of exhaust gases*	Instantaneous	EUDRY04: Dryer Main – SVDRY04a	SC V.1, SC VI.3, SC VI.4, SC VI.5	R 336.1331(1)(c)
4. PM10	3.7 pph	Hourly	EUDRY04: Dryer Main – SVDRY04a	SC V.1, SC VI.3, SC VI.4, SC VI.5	40 CFR 52.21(c) & (d)
5. PM10	16.2 tpy	Annual	EUDRY04: Dryer Main – SVDRY04a	SC VI.2	R 336.1205, 40 CFR 52.21(c) & (d)
6. PM	0.010 lb/1,000 lb of exhaust gases*	Instantaneous	EUDRY04: Dryer FB – SVDRY04b	SC V.1, SC VI.3, SC VI.4, SC VI.5	R 336.1331(1)(c), 40 CFR 52.21(c) & (d)
7. PM10	0.6 pph	Hourly	EUDRY04: Dryer FB – SVDRY04b	SC V.1,, SC VI.3, SC VI.4, SC VI.5	40 CFR 52.21(c) & (d)
8. PM10	2.6 tpy	Annual	EUDRY04: Dryer FB – SVDRY04b	SC VI.2	R 336.1205, 40 CFR 52.21(c) & (d)
9. Visible Emissions	10% opacity	6-minute average	FGDRYERS	SC VI.5	R 336.1301, R 336.1301(1)(c)

*Calculated on a dry gas basis.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUDRY03 unless the associated product recovery cyclones and scrubber with mist eliminator pads are operating properly. **(R 336.1910)**

2. The permittee shall not operate EUDRY04 unless the associated product recovery cyclones and scrubber with mist eliminator pads are installed, maintained and operating properly. **(R 336.1910)**

3. The permittee shall perform routine preventative maintenance on the wet scrubbers at least once per calendar month. The permittee shall also conduct an annual cleaning of the scrubbers, including a visible inspection to ensure that the screens and/or plates are properly cleaned. **(R 336.1910)**

4. The permittee shall also perform routine preventative maintenance on the appropriate unit, including its cyclone and the wet impingement scrubber, when the differential pressure drop across a scrubber reaches 0 inches of water or is greater than 5.0 inches of water, or when abnormal visible emissions are observed on that unit. **(R 336.1910)**

5. The permittee shall maintain and operate FGDRYERS according to the procedures outlined in the approved preventative maintenance plan. **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. EUDRY03 shall be equipped with four product recovery cyclones and a wet impingement scrubber with a mist eliminator system. **(R 336.1205, R 336.1331, R 336.1910)**

2. EUDRY04 shall be equipped with five product recovery cyclones followed by two wet impingement scrubbers installed in parallel each equipped with mist eliminator control. **(R 336.1205, R 336.1331, R 336.1910)**

3. Each scrubber shall be equipped with liquid flow indication and measurement devices. **(R 336.1910)**

4. Each scrubber shall be equipped with a pressure differential gauge. **(R 336.1910)**

V. TESTING/SAMPLING

1. Upon the request of the AQD District Supervisor, the permittee shall verify PM and PM10 emission rates from FGDRYERS by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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), 40 CFR 52.21(c) & (d))**

2. The permittee shall calculate and keep, in a satisfactory manner, annual PM10 mass emission records for Dryer Main and Dryer FB of EUDRY04, as required by SC I.5 and SC I.8. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) & (d))**

3. The permittee shall monitor and record the pressure drop across each scrubber/mist eliminator at least once per calendar day. These records shall be maintained on-site and made available to Department personnel upon request. **(R 336.1910)**

4. The permittee shall monitor and record the liquid flow rate through each scrubber at least once per calendar day. These records shall be maintained on-site and made available to Department personnel upon request. **(R 336.1910)**

5. The permittee shall perform and record the results of a weekly visible emission observation performed on FGDRYERS during peak operating conditions. These records shall be maintained on-site and made available to Department personnel upon request. **(R 336.1301)**

6. The permittee shall keep a record of the measures taken and results of implementing the Preventative Maintenance Program. These records shall be maintained on-site and made available to Department personnel upon request. **(R 336.1910)**

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. SVDRY03	44.0	88.0	40 CFR 52.21(c) & (d)
2. SVDRY04a	71	148.5	40 CFR 52.21(c) & (d)
3. SVDRY04b	18.0	130	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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

FGSCB0108
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Material dump stations each controlled by a venturi-type wet scrubber.

Emission Unit: EUSCB01, EUSCB02, EUSCB03, EUSCB04, EUSCB05, EUSCB06, EUSCB08

POLLUTION CONTROL EQUIPMENT

Venturi-type wet scrubbers, one for each station.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VE	5% opacity	6-minute average	Each unit of FGSCB0108	SC VI.2	R 336.1301(1)(c)
2. PM	0.04 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB01	SC VI.1, SC VI.2	R 336.1331(1)(c)
3. PM	0.223 pph	Hourly	EUSCB01	SC VI.1, SC VI.2	R 336.1331(1)(c)
4. PM	0.04 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB02	SC VI.1, SC VI.2	R 336.1331(1)(c)
5. PM	0.223 pph	Hourly	EUSCB02	SC VI.1, SC VI.2	R 336.1331(1)(c)
6. PM	0.001 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB03	SC V.1,SC VI.1, SC VI.2	R 336.1331(1)(c)
7. PM	0.009 pph	Hourly	EUSCB03	SC V.1, SC VI.1, SC VI.2	R 336.1331(1)(c)
8. PM	0.001 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB04	SC V.1,SC VI.1, SC VI.2	R 336.1331(1)(c)
9. PM	0.009 pph	Hourly	EUSCB04	SC V.1,SC VI.1, SC VI.2	R 336.1331(1)(c)
10. PM	0.10 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB05	SC VI.1, SC VI.2	R 336.1331(1)(c)
11. PM	0.475 pph	Hourly	EUSCB05	SC VI.1, SC VI.2	R 336.1331(1)(c)
12. PM	0.001 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB06	SC V.1,SC VI.1, SC VI.2	R 336.1331(1)(c)
13. PM	0.009 pph	Hourly	EUSCB06	SC V.1,SC VI.1, SC VI.2	R 336.1331(1)(c)
14. PM	0.01 lb/1000 lb exhaust gases[a]	Instantaneous	EUSCB08	SC VI.1, SC VI.2	R 336.1331(1)(c)
15. PM	0.059 pph	Hourly	EUSCB08	SC VI.1, SC VI.2	R 336.1331(1)(c)

[a]Calculated on a dry gas basis.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate each of the emission units listed in FGSCB0108 unless the venturi-type wet scrubber for each individual emission unit is operating properly. **(R 336.1910)**

2. The permittee shall perform routine preventative maintenance on each venturi-type wet scrubber once each calendar year. Routine maintenance shall include annual cleaning of each scrubber and a visual inspection of each scrubber to ensure that it is properly cleaned. **(R 336.1910)**

3. The permittee shall also perform the above routine preventative maintenance on FGSCB0108, including each venturi-type wet scrubber when the liquid flow indicator indicates no flow or when abnormal visible emissions are observed. **(R 336.1910)**

4. The permittee shall maintain and operate FGSCB0108 according to the procedures outlined in the approved preventative maintenance plan. **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Each emission unit included in FGSCB0108 shall be equipped with a venturi-type wet scrubber. **(R 336.1331(1)(c), R 336.1910)**

2. Each scrubber shall be equipped with a liquid flow indicator. **(R 336.1910)**

V. TESTING/SAMPLING

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

1. Upon the request of the AQD District Supervisor, the permittee shall verify PM emission rates from EUSCB03, EUSCB04, and EUSCB06 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall verify the liquid flow through each scrubber, while operating, on a daily basis. **(R 336.1910)**

2. The permittee shall record the results of a weekly visible emission observation taken from each stack for each emission unit included in FGSCB0108 during peak operating conditions. If a stack is in compliance with SC I.1 for 6 months, then the permittee may monitor visible emissions from that stack a minimum of once per month. If during the monthly monitoring, the permittee observes visible emissions in excess of SC I.1, the permittee shall take weekly visible emission observation for the next two months for that stack. The permittee shall submit any request for a change in the monitoring frequency to the AQD District Supervisor for review and approval. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301(1)(c))**

3. The permittee shall keep a record of the measures taken and the results of implementing the Preventative Maintenance Program. These records shall be maintained on-site and made available to Department personnel upon request. **(R 336.1910)**

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. SVSCB01	9.0	47.0	40 CFR 52.21(c) & (d)
2. SVSCB02	9.0	47.0	40 CFR 52.21(c) & (d)
3. SVSCB03	9.0	47.0	40 CFR 52.21(c) & (d)
4. SVSCB04	9.0	47.0	40 CFR 52.21(c) & (d)
5. SVSCB05	9.0	47.0	40 CFR 52.21(c) & (d)
6. SVSCB06	9.0	57.0	40 CFR 52.21(c) & (d)
7. SVSCB08	9.0	59.0	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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

FGFACILITY CONDITIONS

DESCRIPTION

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	Less than 90 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
2. NOx	Less than 90 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
3. SO_2	Less than 90 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
4. CO	Less than 90 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
5. CO_2e	Less than 90,000 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
6. VOCs	Less than 90 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
7. Each Individual HAP	Less than 9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
8. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)
*The enforceable restrictions that are associated with SC I.1 through SC I.6 are found in the following emission unit and flexible group conditions: EUBLR04 SC II.1, EUBLR05 SC II.1, FGBOILERS SC II.1, and FGSCB0108 SC III.4.					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 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))**

2. The permittee shall calculate and keep, in a satisfactory manner, monthly and 12-month rolling total PM, NO_x, SO_2, CO, CO_2e, and VOC mass emission records for FGFACILITY, as required by SC I.1 through SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**

3. The permittee shall calculate and keep, in a satisfactory manner, monthly and 12-month rolling individual and aggregate HAP mass emission records for FGFACILITY, as required by SC I.7 and SC I.8. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

APPENDIX 1
Procedures for Calculating Pollutant Emissions

The permittee shall demonstrate compliance with the pollutant emission limits by keeping track of all fuel usage for the applicable equipment and multiplying that fuel usage by an equipment-specific emission factor. The emission factors are typically expressed as the mass of pollutant per unit of fuel.

The permittee shall use emission factors contained in the most recent AP-42 (Compilation of Air Pollutant Emission Factors) or the most recent FIRE (Factor Information Retrieval) database if vendor or stack testing data is not available. If emission factors from other sources are used, the permittee shall obtain the approval of the AQD District Supervisor before using the emission factors to calculate emissions.

The permittee shall document the source of each emission factor used in the calculations.