

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

October 29, 2013

**PERMIT TO INSTALL
24-12A**

**ISSUED TO
RNFL Acquisition, LLC**

**LOCATED AT
Sawyer International Airport Industrial Park
125 G Avenue, Gwinn, Michigan**

**IN THE COUNTY OF
Marquette**

**STATE REGISTRATION NUMBER
N8149**

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: September 16, 2013	
DATE PERMIT TO INSTALL APPROVED: October 29, 2013	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfuction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM less than 10 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM less than 2.5 microns diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

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

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

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

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-RAW MATERIAL	<p>The raw materials are stockpiled in containment bunkers located in Buildings 666 and/or 667.</p> <p>The stockpiled material will be transported to the raw material pretreatment screens for sizing. The screen emissions will be controlled by a baghouse.</p> <p>Raw material pretreatment hammermill is used for grinding the larger sized materials.</p> <p>Ash generated from the burner will be stored near Building 666 in an ash bin.</p> <p>The emissions generated from the process equipment in Building 666, the general in plant air and the ash bin will be controlled by Building 666 baghouse (CE-BH 666) and exhaust through stack (SV-BH 666).</p>	FG-FACILITY
EU-DRYER	<p>The drum dryer used during normal drying operations burns softwood or hardwood chips (including tops, limbs, bark, and other forest residue), corn stover, switch grass, and/or sawdust (raw material) in the multi-stage combustion wood-fired burner. The burner is fired with natural gas during start-up, and can also continue with natural gas and/or biogas during normal operation. The emissions from the burner and dryer exhaust through stack SV-EXHAUST. During normal production, the emissions from the dryer are controlled by a multiclone and thermal oxidation system (a primary burner followed in series by a secondary chamber).</p> <p>The burner fuel stream is fed into the fuel storage bin. The fuel storage bin exhaust is vented to the burner under-grate air system.</p>	FG-MATERIAL DRYING FG-FACILITY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-DRIED MATERIAL	<p>The dried material from the dryer is conveyed thru the cooling drum. The conveyor emissions are controlled by a baghouse (CE-BH 667).</p> <p>A portion of the dried material from the dryer is extracted through a variable-speed metering conveyor as fuel for the burner. The screening process is used as a backup during periods of maintenance for the burner fuel feed system. The indoor emissions will be controlled by a baghouse (CE-BH 667).</p> <p>The cooled and dried material travels in enclosed conveyors.</p> <p>The exhaust from the baghouse (CE-BH Dry) is vented through stack (SV-BH 667).</p> <p>The finished product is stored indoors and the emissions are controlled by baghouse (CE-BH 667).</p> <p>The collected emissions from EU-DRIED MATERIAL process equipment are controlled by a baghouse (CE-BH 667) and exhausts through Stack (SV-BH 667).</p>	FG-FACILITY
EU-ROADWAY	Fugitive emissions from paved and unpaved roads.	FG-FACILITY
EU-GENERATOR	A 275 kW natural-gas fired emergency generator. The emissions are emitted from stack (SV-GENERATOR).	FG-FACILITY
EU-PROCESS HEATERS	<p>Process heaters that operate in series or parallel that further process the dried biomass from EU-DRYER or other dried biomass sources into a carbonized, sized, and packaged biomass product. It includes a natural gas fired process heater with a maximum heat input capacity of 20.5 MMBtu/hr to further process dried biomass and pre-heat nitrogen, and to recover energy from VOCs and CO in the heater off-gas stream. The emissions from the drying of material in EU-PROCESS HEATERS are utilized in the process heaters before exiting the shared stack. Process Heater 1 vents through SV-BH 667 after the CE-BH667 baghouse. Process Heaters 2 and 3 vents through SV-Exhaust after EU-DRYER.</p> <p>EU-PROCESS HEATERS has a product recovery baghouse used when sizing material. The sizing and packaging equipment will be located in existing Building 667 and exhausted through existing stack CE BH 667.</p>	FG-MATERIAL DRYING FG-FACILITY

The following conditions apply to: EU- RAW MATERIAL

DESCRIPTION: The process equipment to handle and convey the raw materials.

Flexible Group ID: FG-FACILITY

POLLUTION CONTROL EQUIPMENT: The emission unit is controlled by baghouse (CE-BH 666).

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.017 lb/1000 lb exhaust gases	Test Protocol*	EU-RAW MATERIAL	SC V.1 SC VI.1	R 336.1331
2. PM	4.22 pph	Test Protocol*	EU-RAW MATERIAL	SC V.1	R 336.1331(1)(c) R 336.1205(3)
3. PM ₁₀	4.22 pph	Test Protocol*	EU-RAW MATERIAL	SC V.1	R 336.1205(3) R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
4. Visible Emissions (VE)	10% opacity	6-minute average	EU-RAW MATERIAL	SC V.1 SC VI.3	R 336.1301(c)

*Test protocol will specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-RAW MATERIAL hammermill operations in Building 666 unless the baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate EU-RAW MATERIAL hammermill operations in Building 666 unless a gauge is installed, maintained, calibrated and operated in a satisfactory manner capable of measuring the pressure drop across each baghouse. The gauge shall be equipped with an audible alarm that will sound when the pressure drop is outside the manufacturer's recommended operating range. **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of trial operation, the permittee shall verify visible, PM, and PM₁₀ emissions from EU-RAW MATERIAL, by testing at owner's expense, in accordance with Department requirements in order to continue operation. Trial operation shall be deemed to occur upon 5 days of continuous operation of the facility at any point after the issuance of this permit. The testing must be completed within 365 days of issuance of this permit. Thereafter, the permittee shall conduct this test every five years. No less than 60 days prior to testing, the permittee shall submit to the AQD, the permittee shall submit to the AQD, a complete stack sampling plan. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 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 pressure drop across each baghouse for EU-RAW MATERIAL at least once per day during normal operation in a manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, monthly records of raw material feed for EU-RAW MATERIAL. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
3. Whenever the EU-RAW MATERIAL is in operation, daily visible emissions observations shall be conducted, either by a certified reader or a non-certified reader. If visible emissions are observed, a full 6-minute average reading shall be conducted by a certified reader. Records of the visible emissions observations (date, time, name of reader, whether the reader is certified or not), causes of abnormal opacity, corrective actions, and the results of such actions shall be maintained. After compliance is demonstrated for one month, the visible emission observations can be reduced to a weekly basis, if approved by the District Supervisor. **(R 336.1301, R 336.1331, R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BH 666	56	105	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: EU-DRYER

DESCRIPTION: The drum dryer used during normal drying operations is heated by a burner that is fired with softwood or hardwood chips (including tops, limbs, bark, and other forest residue), corn stover, switch grass, and/or sawdust (raw material) in the multi-stage combustion wood-fired burner. The burner is fired with natural gas during start-up, and can also continue with natural gas and/or biogas during normal operation. The emissions from the burner and dryer exhaust through stack SV-EXHAUST. During normal production, the emissions from the dryer are controlled by a multiclone and thermal oxidation system.

The solid burner fuel stream is fed into the fuel storage bin. The fuel storage bin exhaust is vented to the burner under-grate air system.

Flexible Group ID: FG-MATERIAL DRYING, FG-FACILITY

POLLUTION CONTROL EQUIPMENT: The exhaust gases from the dryer are controlled by a multiclone and a thermal oxidation system (a primary burner followed in series by a secondary chamber) followed by a stack (SV-EXHAUST).

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall only burn natural gas in EU-DRYER during startup. **(R 336.1205(3), R 336.1225, R 336.1301, R 336.1331)**
2. The permittee may burn natural gas, biogas, or burner fuel in EU-DRYER during normal operation. **(R 336.1205, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
3. The permittee shall not feed greater than 4.04 tons of burner fuel per hour to the burner. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not process through the EU-DRYER more than 25.0 oven-dried tons (ODT) of product per hour as determined at the end of each calendar month. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. The temperature at the inlet of the EU-DRYER shall not exceed 800 degrees Fahrenheit. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-DRYER unless the thermal oxidation system (a primary burner followed in series by a secondary chamber) is installed, maintained and operated in a satisfactory manner. Prior to AQD acceptance of the testing mentioned in SC V.2, satisfactory operation of the thermal oxidation system (a primary burner followed in series by a secondary chamber) includes maintaining a minimum combustion primary burner temperature of 1450 °F and a minimum combustion secondary chamber temperature of 1000 °F, and a minimum total retention time of 0.5 seconds. After completion, the average temperature shall not go below the satisfactory temperatures determined from the testing mentioned in SC V.2. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, temperature monitoring devices in both the primary combustion burner and the secondary combustion chamber of the thermal oxidization system (a primary burner followed in series by a secondary chamber) to monitor and record the temperature, on a continuous basis, during operation of EU-DRYER. The devices shall sound alarms if the temperatures fall below 1450 °F in the primary burner or 1000 °F in the secondary chamber prior to testing, and below the temperatures determined from testing mentioned in SC V.2 upon its completion. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
3. The permittee shall not operate EU-DRYER unless a multiclone and a thermal oxidation system (a primary burner followed in series by a secondary chamber) are installed, maintained and operated in a satisfactory manner. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
4. The permittee shall not operate EU-DRYER unless a gauge is installed, maintained, calibrated and operated in a satisfactory manner capable of measuring the pressure drop across the multiclone. The gauge shall be equipped with an audible alarm that will sound when the pressure drop is below the minimum level as established during the performance stack test. **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. The permittee shall use the performance test results to develop revised emission factors to demonstrate compliance with the emission limits for the applicable pollutants from the time that the performance test results are approved by the AQD. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. During the performance test required in FG-MATERIAL DRYING SC V.1 and SC V.2, the permittee shall record the following parameters to demonstrate operation at or near process capacity. The results recorded during the test may be used to adjust the following site-specific operating limits: **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
 - a. The maximum fuel per hour and fuel type into the burner during the non-startup operation of the EU-DRYER.
 - b. The maximum EU-DRYER temperature at the inlet.
 - c. The maximum dried material throughput (ODT) from EU-DRYER.
 - d. The maximum inlet raw material feed rate to EU-DRYER.
 - e. A minimum thermal oxidation system (a primary burner followed in series by a secondary chamber) temperature for the primary burner and secondary chamber.
 - f. The moisture content of the raw material to the EU-DRYER.

The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 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 keep a monthly record of the amount of raw material used to manufacture the finished product. By the fifteenth day of each calendar month, the permittee shall calculate the percentage by weight of raw material used to manufacture the finished product for the previous 12-calendar month period. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. The permittee shall monitor and record a daily 24-hour average for raw material feed rate to the inlet of the EU-DRYER by a method approved by the AQD District Supervisor. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
3. The permittee shall monitor and record, in a satisfactory manner, the total amount of burner fuel, by weight, fed to the burner of EU-DRYER during normal operation, on a weekly and monthly basis. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
4. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a temperature device to continuously monitor and record the EU-DRYER temperature when raw material is fed to the dryer. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
5. The permittee shall monitor and record, in a satisfactory manner, the daily and monthly oven-dried tons (ODT) of dried material from EU-DRYER, and the yearly ODT as determined on a 12-month rolling time period as approved by the AQD District Supervisor. **((R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
6. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across the multiclone during normal operation as approved by the AQD District Supervisor. **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
7. The permittee shall monitor and record, in a satisfactory manner, the temperatures in the primary combustion burner and the secondary combustion chamber of the thermal oxidation system (a primary burner followed in series by a secondary chamber), on a continuous basis, during operation of EU-DRYER. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. The permittee shall keep summary records of temperature monitoring system downtime and all temperatures less than 1450 °F in the primary burner and all temperatures less than 1000 °F in the secondary chamber prior to testing, and less than the minimum operating temperatures determined from testing mentioned in SC V.2 upon its completion, including the cause if known and details of corrective action or action taken to discontinue operation of the EU-DRYER. The permittee shall keep all records and calculations on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
8. The permittee shall monitor and record, in a satisfactory manner, the number of hours of startup operation of the EU-DRYER each calendar month. **(R 336.1205(3))**
9. The permittee shall record the amount of natural gas burned each calendar month, both during start-up and also when in use for regular operation. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-EXHAUST	60	145	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: EU-DRIED MATERIAL

DESCRIPTION: The process equipment to handle and convey the dried and finish product materials.

Flexible Group ID: FG-Facility

POLLUTION CONTROL EQUIPMENT: This emission unit is controlled by baghouses (CE-BH 667 and CE-BH DRY).

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.016 lb/1000 lb exhaust gases	Test Protocol*	EU-DRIED MATERIAL	SC V.1 SC VI.1	R 336.1331
2. PM	4.52 pph	Test Protocol*	EU-DRIED MATERIAL	SC V.1	R 336.1331(1)(c) R 336.1205(3)
3. PM ₁₀	4.52 pph	Test Protocol*	EU-DRIED MATERIAL	SC V.1	R 336.1205(3), R 336.2803, R 336.2804 40 CFR 52.21(c) & (d)
4. VE	10% opacity	6-minute average	EU-DRIED MATERIAL	SC V.1 SC VI.3	R 336.1301(c)

*Test protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-DRIED MATERIAL unless the baghouse is installed, maintained and operated in a satisfactory manner. **(R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate EU-DRIED MATERIAL, unless a separate gauge is installed, maintained, calibrated and operated in a satisfactory manner capable of measuring the pressure drop across baghouses CE-BH 667 and CE-BH DRY. The gauges shall be equipped with an audible alarm that will sound when the pressure drop is outside the manufacturer's recommended operating range. **(R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. The permittee shall conduct this test every five years. No less than 60 days prior to testing, the permittee shall submit to the AQD, the permittee shall submit to the AQD, a complete stack sampling plan. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, 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 pressure drop across baghouses CE-BH 667 and CE-BH DRY for EU-DRIED MATERIAL at least once per day during normal operation in a manner acceptable to the AQD District Supervisor. **(R 336.1331, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, monthly records of dried material feed for EU- DRIED MATERIAL. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21(c) & (d))**
3. Whenever the EU-DRIED MATERIAL is in operation, daily visible emissions observations shall be conducted, either by a certified reader or a non-certified reader. If visible emissions are observed, a full 6-minute average reading shall be conducted by a certified reader. Records of the visible emissions observations (date, time, name of reader, whether the reader is certified or not), causes of abnormal opacity, corrective actions, and the results of such actions shall be maintained. After compliance is demonstrated for one month, the visible emission observations can be reduced to a weekly basis, if approved by the District Supervisor. **(R 336.1301, R 336.1331, R336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BH 667	66	105	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: EU-GENERATOR

DESCRIPTION: A 275 kW natural gas emergency generator.

Flexible Group ID: FG-FACILITY

POLLUTION CONTROL EQUIPMENT: The exhaust gases from the emergency generator are discharged from a stack (SV-Generator).

I. EMISSION LIMITS

1. The permittee shall meet the specifications and requirements of 40 CFR 60 Subpart JJJJ for emergency generators operating on natural gas with a maximum engine power greater than 19 kW. **(40 CFR Part 60, Subpart JJJJ)**

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in EU-GENERATOR. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall operate EU-GENERATOR in accordance with its manufacturer's written instructions or by operating procedures developed by the permittee that are approved by the manufacturer. **(40 CFR Part 60, Subpart JJJJ)**
2. The permittee shall not change or revise the operating instructions, procedures or settings for EU-GENERATOR unless permitted by the manufacturer in writing. **(40 CFR Part 60, Subpart JJJJ)**
3. The permittee shall not operate EU-GENERATOR for more than 100 hours per engine per 12-month rolling time period as determined at the end of each calendar month during maintenance checks and readiness testing and not more than a total of 500 hours of operation per engine per rolling 12-month rolling time period as determined at the end of each calendar month, total. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d), 40 CFR 60.4243)**

IV. DESIGN/EQUIPMENT PARAMETERS

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 the hours of operation of EU-GENERATOR on a monthly and 12-month rolling time period basis in a manner that is acceptable to the District Supervisor, Air Quality Division. **(R 336.1205(1)(a) & (3))**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period hours of operation records for EU-GENERATOR. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
3. The permittee shall keep, in a satisfactory manner, the following records on file and made available to the Department upon request:
 - a. Engine certification according to 40 CFR Part 90 or Part 1054, as applicable, for the same engine model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
 - b. Records of engine manufacturer data indicating compliance with these standards.
(40 CFR Part 60, Subpart JJJJ)

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal National Emission Standards for Hazardous Air Pollutants, 40 CFR 63.9(b). This notification shall be submitted to the AQD District Supervisor within the time frames specified in 40 CFR 63.9(b).
(40 CFR 63.9(b), 40 CFR Part 63, Subpart ZZZZ, Section 63.6645(d))

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-GENERATOR	8.0	15	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: EU-PROCESS HEATERS

DESCRIPTION: Process heaters that operate in series or parallel that further process the dried biomass from EU-DRYER or other dried biomass sources into a carbonized, sized, and packaged biomass product. It includes a natural gas fired process heater with a maximum heat input capacity of 20.5 MMBtu/hr to further process dried biomass and pre-heat nitrogen, and to recover energy from VOCs and CO in the heater off-gas stream. The emissions from the drying of material in EU-PROCESS HEATERS are utilized in the process heaters before exiting the shared stack. Process Heater 1 vents through SV-BH 667 after the CE-BH667 baghouse. Process Heaters 2 and 3 vents through SV-Exhaust after EU-DRYER.

EU-PROCESS HEATERS has a product recovery baghouse used when sizing material. The sizing and packaging equipment will be located in existing Building 667 and exhausted through existing stack CE BH 667.

Flexible Group ID: FG-MATERIAL DRYING, FG-FACILITY

POLLUTION CONTROL EQUIPMENT: EU-PROCESS HEATERS has a baghouse for processed material involved in the bagging process, and then enters another baghouse that exhausts out stack SV-BH 667 from EU-DRIED MATERIAL.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in EU-PROCESS HEATERS as a supplemental fuel source. (R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-PROCESS HEATERS sizing and packaging equipment unless the baghouse is installed, maintained, and operated in a satisfactory manner. (R 336.1205, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
2. The permittee shall not operate EU-PROCESS HEATERS sizing and packaging equipment unless a gauge, which measures the pressure drop across the baghouse CE-BH 667 and sounds an alarm when the pressure drop exceeds the manufacturer's recommended operating range, is installed, maintained and operated in a satisfactory manner. (R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 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 natural gas usage rate, on a daily basis, in cubic feet per day. (R 336.1205, R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of trial operation of EU-PROCESS HEATERS, the permittee shall verify visible, PM, and PM-10 emissions from SV-BH 667, as limited by EU-DRIED MATERIAL SC I.1, SC I.2, SC I.3, and SC I.4, by testing at owner's expense, in accordance with Department requirements in order to continue operation. Trial operation shall be deemed to occur upon 5 days of continuous operation of the facility at any point after the issuance of this permit. The testing must be completed within 365 days of issuance of this permit. Thereafter, the permittee shall conduct this test every five years. No less than 60 days prior to testing, the permittee shall submit to the AQD, the permittee shall submit to the AQD, a complete stack sampling plan. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, 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, in a satisfactory manner, the pressure drop across the baghouse CE-BH 667 for EU-PROCESS HEATERS at least once per day during normal operation in a manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep records of monthly natural gas consumption rates to EU-PROCESS HEATERS. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

VII. REPORTING

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

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BH 667	66	105	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21 (c) & (d)
2. SV-EXHAUST	60	145	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

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
FG-MATERIAL DRYING	EU-DRYER produces dried material which can then either be fed into EU-PROCESS HEATERS or can continue on to be processed into biofuel. EU-PROCESS HEATERS is a pyrolysis process that receives dried material from EU-DRYER or other sources. Both share SV-EXHAUST.	EU-DRYER EU-PROCESS HEATERS
FG-FACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	EU-ROADWAY EU-RAW MATERIAL EU-DRYER EU-DRIED MATERIAL EU-GENERATOR EU-PROCESS HEATERS

The following conditions apply to: FG-MATERIAL DRYING

DESCRIPTION: EU-DRYER produces dried material which can then either be fed into EU-PROCESS HEATERS or can continue on to be processed into biomass. EU-PROCESS HEATERS is a pyrolysis process that receives dried material from EU-DRYER. Both share SV-EXHAUST. EU-PROCESS HEATERS has a product recovery baghouse for the processed material involved in the bagging process. This baghouse may be bypassed based on product demand, but emissions from the baghouse or bypass stream both enter the baghouse associated with EU-DRIED MATERIAL, CE-BH 667. Emissions from the drying of material in EU-PROCESS HEATERS are utilized in the process heater before exiting the shared stacks.

Emission Units: EU-DRYER and EU-PROCESS HEATERS

POLLUTION CONTROL EQUIPMENT: The exhaust gases from EU-DRYER are controlled by a multiclone and a thermal oxidation system (a primary burner followed in series by a secondary chamber) exhausted out stack SV-EXHAUST. EU-PROCESS HEATERS material handling is controlled by baghouse CE-BH 667 that exhausts out stack SV-BH 667 from EU-DRIED MATERIAL.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1.PM	0.09 lb/1000 lb exhaust gases	Test Protocol*	FG-MATERIAL DRYING	SC V.1 SC VI.6 SC VI.7	R 336.1331
2.PM	11.45 pph	Test Protocol*	FG-MATERIAL DRYING	SC V.1 SC VI.5 SC VI.6 SC VI.7	R 336.1205(3) R 336.1331(1)(c)
3.PM ₁₀	20.5 pph	Test Protocol*	FG-MATERIAL DRYING	SC V.1 SC VI.5 SC VI.6 SC VI.7	R 336.2803, R 336.2804 40 CFR 52.21(c) & (d)
4.NO _x	46.2 pph	Test Protocol*	FG-MATERIAL DRYING	SC V.1 SC VI.4 SC VI.5	R 336.2803, R 336.2804 40 CFR 52.21(c) & (d)
5.CO	23.1 pph	Test Protocol*	FG-MATERIAL DRYING	SC V.1 SC VI.4 SC VI.5 SC VI.7	R 336.2804 40 CFR 52.21(d)
6.VOC	23.1 pph	Test Protocol*	FG-MATERIAL DRYING	SC V.1 SC VI.4 SC VI.5 SC VI.7	R 336.1702
7.Hydrogen Chloride	2.1 pph	Test Protocol*	FG-MATERIAL DRYING	SC V.1	R 336.1205 R 336.1225
8.Visible Emissions	20% opacity	6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity	FG-MATERIAL DRYING	SC VI.8	R 336.1301

*Test protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of trial operation drying wood at up to 7 ODT of EU-DRYER product, the permittee shall verify visible, PM, PM₁₀, NO_x, CO, VOC, HCl, and methanol emission rates from FG-MATERIAL DRYING's stack, SV-EXHAUST, by testing at owner's expense, in accordance with Department requirements. Trial operation shall be deemed to occur upon 5 days of continuous operation of the facility at any point after the issuance of this permit. The testing must be completed within 365 days of issuance of this permit. Thereafter, the permittee shall conduct this test every five years. No less than 60 days prior to testing, the permittee shall submit to the AQD, a complete test plan. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
2. Within 180 days after commencement of trial operation drying corn stover and/or switch grass at up to 7 ODT of EU-DRYER product, the permittee shall verify visible, PM, PM₁₀, NO_x, CO, VOC, HCl, and methanol emission rates from FG-MATERIAL DRYING by testing at owner's expense, in accordance with Department requirements. Trial operation shall be deemed to occur upon 5 days of continuous operation of the facility at any point after the issuance of this permit. The testing must be completed within 365 days of issuance of this permit. During the performance test, the permittee shall include the requirements of EU-DRYER SC VI.3 and SC VI.4. Thereafter, the permittee shall conduct this test every five years. No less than 60 days prior to testing, the permittee shall submit to the AQD, a complete test plan. **(R 336.1205, R 336.1225, R 336.1331, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 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. Whenever either component of FG-MATERIAL DRYING is in operation, daily visible emissions observations shall be conducted, either by a certified reader or a non-certified reader, during the beginning of normal operation for each piece of equipment in FG-MATERIAL DRYING. If visible emissions are observed, a full 6-minute average reading shall be conducted by a certified reader. Records of the visible emissions observations (date, time, name of reader, whether the reader is certified or not), causes of abnormal opacity, corrective actions, and the results of such actions shall be maintained. After compliance is demonstrated for one month, the visible emission observations can be reduced to a weekly basis, if approved by the District Supervisor. **(R 336.1301, R 336.1331, R336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-EXHAUST	60	145	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)
2. SV-BH667	66	105	R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply Source-Wide to: FG-FACILITY

DESCRIPTION: EU-ROADWAY, EU-RAW MATERIAL, EU-DRYER, EU-DRIED MATERIAL, EU-GENERATOR, and EU-PROCESS HEATERS.

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1205(3)
2. PM ₁₀	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1205(3)
3. NOx	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)
4. CO	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)
5. VOC	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3), R 336.1702(a)
6. Aggregate HAPs	Less than 22.4 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.3	R 336.1205(3)
7. Individual HAPs	Not greater than 8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.3	R 336.1205(3)

* Beginning on startup, and continuing for the first 12 calendar months, this limit applies to the cumulative total of PM, PM₁₀, NOx, CO, VOC, and HAPs emissions. Thereafter, the limit shall become a 12-month rolling limit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL

1. The permittee shall not operate FG-FACILITY unless a malfunction abatement plan (MAP) as described in Rule 911(2), for EU-RAW MATERIAL, EU-DRYER, EU-DRIED MATERIAL, and EU-PROCESS HEATERS has been submitted within 60 days of startup, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - 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. The permittee shall retain a copy of the plan at the facility at all times. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The permittee shall not operate FG-FACILITY unless an acceptable Compliance Sampling and Monitoring Plan for the FG-FACILITY has been submitted to the AQD District Supervisor within 60 days after startup, and is implemented and maintained. The plan shall include all sampling and monitoring requirements as indicated in this permit. **(R 336.1301, R 336.1331, R 336.1205(3), R 336.1702, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
3. The permittee shall not operate FG-FACILITY unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations has been submitted to the AQD District Supervisor within 60 days after startup, and is implemented and maintained. The plan shall identify the specific measures to be taken to prevent fugitive dust and the frequency of these measures. In addition, the permittee shall record the number of raw material and product trucks which are at the facility on a daily basis. **(R 336.1372, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETERS

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 keep, in a satisfactory manner, monthly and 12-month rolling time period records of PM and PM₁₀ emissions from FG-FACILITY (See Appendix A). The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of NO_x, CO, and VOC emissions from FG-FACILITY (See Appendix A). The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of individual and aggregate HAPs emissions, from FG-FACILITY (See Appendix A). The permittee shall add up the quantities for all HAPs tested and untested and then compare with the EPA emission factor data and develop an acceptable emission factor for individual and aggregate HAPs as approved by the AQD. The permittee shall keep all records on file at the FG-FACILITY for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

APPENDIX A

FG-FACILITY emission factors are determined by site specific emission factors as established during the performance stack test for EU-RAW MATERIAL, EU-DRIED MATERIAL, and FG-MATERIAL DRYING, as acceptable to the AQD. All others are determined by using AP-42 emission factors for EU-DRYER during startup, and other natural gas fired heating units for the building as acceptable to the AQD. The permittee shall sum the quantities for all HAPs tested (comparing with the EPA emission factor data) and all other HAPs (comparing with the EPA emission factor data) and develop an acceptable emission factor for individual and aggregate HAPs as approved by the AQD. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months.