

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

March 8, 2019

**PERMIT TO INSTALL
89-17B**

**ISSUED TO
W2FUEL, LLC**

**LOCATED AT
1571 West Beecher Road
Adrian, Michigan**

**IN THE COUNTY OF
Lenawee**

**STATE REGISTRATION NUMBER
N7927**

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: February 6, 2019	
DATE PERMIT TO INSTALL APPROVED: March 8, 2019	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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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	Michigan Department of Environmental Quality
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
MDEQ	Michigan Department of Environmental Quality
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of 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 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 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 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
EUOUTTANKS	Outdoor vertical fixed roof storage tanks consisting of three 20,000 gallon methanol tanks, one 20,000 gallon sodium methylate tank, one 30,000 gallon glycerin storage tank, and one 5,000 gallon wastewater storage tank.	2007	FGBIODIESEL
EUINTANKS	Twenty three 30,000 gallon indoor vertical fixed roof storage tanks for storing feedstock, intermediate materials, and finished biodiesel product.	2007/ 2018	FGBIODIESEL
EUTRANSESTER	Continuous transesterification process consisting of an absorber tower, unvented venturi mixer, and 5,000 gallons separation tank.	2007	FGBIODIESEL
EUBATCH	Batch transesterification and enzymatic process consisting of two 30,000 gallon externally vented reactor tanks (TK1300 and TK2200). There is no emission control equipment on the reactors.	2015	FGBIODIESEL
EUMODULAR	Modular transesterification process consisting of a raw oil dryer, a plug flow reactor, two stirred reactors, primary settler, a second plug flow reactor, two more stirred reactors, and a secondary settler. Only the secondary has a vent and it is vented to the absorber tower.	2018	FGBIODIESEL
EUPURIFICATION	Raw biodiesel purification process including heating the biodiesel to remove methanol, a condenser to recover the methanol (the condenser vents to the absorber tower), a two stage wash process, a dryer to remove water, and filtration.	2007	FGBIODIESEL
EULOADOUT	Biodiesel and glycerin product loadout into trucks or railcars, including a 500 gallon diesel fuel storage tank. Trucks are bottom loaded and railcars are top loaded. Diesel fuel may be splash blended with biodiesel during loading.	2007	FGBIODIESEL
EUWWTMT	Wastewater treatment system consisting of an open tank, an oil water separator, and various storage tanks that vent inside.	2007	FGBIODIESEL
EUBOILERS	Three 6.1 MM Btu/hr natural gas fired boilers.	2007/TBD	FGBIODIESEL
EUDEGUM	Raw oil degumming process consisting of citric acid addition, caustic neutralization, and centrifuge separation.	TBD	FGBIODIESEL
EUGLYCERINSKID	Glycerin purification process consisting of hydrochloric acid addition, caustic neutralization, and separation.	TBD	FGBIODIESEL

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUDISTILLATION	Methanol distillation process consisting of two distillation columns to recover methanol from the purified glycerin. Emissions from the distillation system are controlled by a chilled water condenser.	TBD	FGBIODIESEL FGNSPSNNN

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.

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
FGBIODIESEL	Biodiesel production process.	EUOUTTANKS, EUINTANKS, EUTRANSESTER, EUBATCH, EUMODULAR, EUPURIFICATION, EULOADOUT, EUWWTMT, EUBOILERS, EUDEGUM, EUGLYCERINSKID, EUDISTILLATION
FGNSPSVva	All pumps, valves, and pressure relief devices in light/heavy liquid service; all valves and pressure relief devices in gas/vapor service; each sampling connection; and each open ended valve or line and all associated closed vent systems and control devices for which construction, reconstruction, or modification commenced after November 7, 2006.	
FGNSPSNNN	Each combination of two or more distillation units and the common recovery system into which their vent streams are discharged.	

**FGBIODIESEL
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Biodiesel production process.

Emission Unit: EUOUTTANKS, EUINTANKS, EUTRANSESTER, EUBATCH, EUMODULAR, EUPURIFICATION, EULOADOUT, EUWWTMT, EUBOILERS, EUDEGUM, EUGLYCERINSKID, EUDISTILLATION

POLLUTION CONTROL EQUIPMENT

Absorber tower controls methanol containing vapor streams from the separation, drying, and washing operations. Chilled water vent condenser controls emissions from the distillation columns.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Methanol	3,800 lb/year ^a	12-month rolling time period as determined at the end of each calendar month	EUOUTTANKS	SC VI.2(a), VI.2(b), VI.5	R 336.1205(1) R 336.1225 R 336.1702(a)
2. Methanol	2,000 lb/year ^a	12-month rolling time period as determined at the end of each calendar month	EUTRANSESTER	SC VI.2(c), VI.5	R 336.1205(1) R 336.1225 R 336.1702(a)
3. Methanol	6,770 lb/year ^a	12-month rolling time period as determined at the end of each calendar month	EUBATCH	SC VI.2(d), VI.5	R 336.1205(1) R 336.1225 R 336.1702(a)
4. Methanol	4,000 lb/year ^a	12-month rolling time period as determined at the end of each calendar month	EUMODULAR	SC VI.2(e), VI.5	R 336.1205(1) R 336.1225 R 336.1702(a)
5. Methanol	600 lb/year ^b	12-month rolling time period as determined at the end of each calendar month	FGBIODIESEL equipment exhausted through the vent condenser	SC VI.2(m), VI.8	R 336.1205(1) R 336.1225 R 336.1702(a)
6. Methanol	0.06 pph	Hourly	FGBIODIESEL equipment exhausted through the vent condenser	SC V.1	R 336.1205(1) R 336.1225 R 336.1702(a)

a. Beginning on July 2, 2018, and continuing for the first 12 calendar months, this limit applies to the cumulative total methanol emissions. Thereafter, the limit shall become a 12-month rolling limit.

b. Beginning on the permit issuance date, and continuing for the first 12 calendar months, this limit applies to the cumulative total methanol emissions. Thereafter, the limit shall become a 12-month rolling limit.

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas in EUBOILERS. **(R 336.1205(1))**
2. The permittee shall limit the fresh methanol throughput through the three 20,000 gallon methanol tanks in EUOUTTANKS to a total of 6 million gallons per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

3. The permittee shall limit the sodium methyrate throughput through the 20,000 gallon sodium methyrate tank in EUOUTTANKS to a total of 600,000 gallons per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
4. The permittee shall not store methanol in any tank in EUINTANKS unless the tank contains sufficient oil to form a layer that completely covers the methanol containing layer. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The heat input capacity of each boiler in EUBOILERS shall not exceed a maximum of 6.1 MM BTU per hour. **(R 336.1205(1))**
2. The permittee shall not conduct batch or enzymatic processing in any tank in EUINTANKS. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
3. The permittee shall submit to the AQD District Supervisor, for review and approval, a protocol for demonstrating compliance with the emission limits for FGBIODIESEL within 90 days of permit issuance. The permittee shall not operate FGBIODIESEL unless the approved protocol, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any equipment in FGBIODIESEL that is vented to the absorber tower unless the absorber tower is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the pressure drop across the absorber as specified by the manufacturer or as determined based on emission testing or engineering evaluation. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
2. The permittee shall equip and maintain the absorber tower with a continuous pressure drop indicator. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
3. The permittee shall not operate any equipment in FGBIODIESEL that is vented to chilled vent condenser unless the condenser is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the condenser chilled water temperature at 47°F or less. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
4. The permittee shall equip and maintain the vent condenser with a continuous chilled water temperature monitor. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

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 EUDISTILLATION, the permittee shall verify the methanol emission rate from FGBIODIESEL equipment exhausted through the vent condenser by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A or 40 CFR Part 63, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 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 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the following:
 - a) The fresh methanol throughput through the three 20,000 gallon methanol tanks in EUOUTTANKS.
 - b) The wet methanol throughput through the three 20,000 gallon methanol tanks in EUOUTTANKS.
 - c) The sodium methylate throughput through the 20,000 gallon sodium methylate tank in EUOUTTANKS.
 - d) The methanol throughput through EUTRANSESTER.
 - e) The sodium methylate throughput through EUTRANSESTER.
 - f) The methanol throughput through EUBATCH.
 - g) The sodium methylate throughput through EUBATCH.
 - h) The methanol throughput through EUMODULAR.
 - i) The sodium methylate throughput through EUMODULAR.
 - j) The biodiesel throughput through EULOADOUT.
 - k) The glycerin throughput through EULOADOUT.
 - l) The amount of methanol sent offsite for recovery and/or disposal.
 - m) The amount of methanol recovered in EUDISTILLATION.

The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

3. The permittee shall monitor, in a satisfactory manner, the pressure drop across the absorber tower on a continuous basis when equipment vented to the absorber tower is operating. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
4. The permittee shall record, in a satisfactory manner, the pressure drop across the absorber tower on a daily basis when equipment vented to the absorber tower is operating. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
5. The permittee shall separately calculate the methanol emission rate from EUOUTTANKS, EUTRANSESTER, EUBATCH, and EUMODULAR monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. For the first month following July 2, 2018, 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. The permittee shall keep all records on file at the facility and make them available to the department upon request. **(R 336.1205(1), R 335.1225, R 336.1702(a))**
6. The permittee shall monitor, in a satisfactory manner, the vent condenser chilled water temperature on a continuous basis when equipment vented to the vent condenser is operating. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
7. The permittee shall record, in a satisfactory manner, the vent condenser chilled water temperature on a daily basis when equipment vented to the vent condenser is operating. **(R 336.1205(1), R 336.1225, R 336.1702(a))**
8. The permittee shall separately calculate the methanol emission rate from FGBIODIESEL equipment exhausted through the vent condenser monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. 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. The permittee shall keep all records on file at the facility and make them available to the department upon request. **(R 336.1205(1), R 335.1225, R 336.1702(a))**

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 EUDISTILLATION. **(R 336.1201(7)(a))**

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. SV-ABSORB	6	45	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-TK1300	6	45	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-TK2200	6	45	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-VENTCOND	6	45	R 336.1225, 40 CFR 52.21(c) & (d)

5. The exhaust gases from all equipment in EUINTANKS, EUTRANSESTER, EUBATCH, EUMODULAR, EUPURIFICATION, EUDEGUM, EUGLYCERINSKID, and EUDISTILLATION not listed in the table above (SC VIII.1, VIII.2, VIII.3, and VIII.4), except for the raw incoming oil dryers, shall not be discharged to the ambient air at any time. **(R 336.1225, 40 CFR 52.21(c) & (d))**

IX. OTHER REQUIREMENT(S)

1. Within 90 days of issuance of this permit, the permittee shall label the process equipment according to a method acceptable to the AQD District Supervisor. Within seven days of completing the labeling, the permittee shall notify the AQD District Supervisor, in writing, as to the date the labeling was completed. **(R 336.1201)**

Footnotes:

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

FGNSPSVVa FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

All pumps, valves, and pressure relief devices in light liquid and heavy liquid service; all valves and pressure relief devices in gas/vapor service; each sampling connection; and each open ended valve or line and all associated closed vent systems and control devices for which construction, reconstruction, or modification commenced after November 7, 2006.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(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 VVa, as they apply to the equipment in FGNSPSVVa. **(40 CFR Part 60 Subparts A and VVa)**
2. The permittee shall operate each pressure relief device in gas/vapor service with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485a(c), except during pressure releases and as provided in 40 CFR 60.482-4a(c) and (d). After each pressure release, the permittee shall return the pressure relief device to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than five calendar days after the pressure release, except as provided in 40 CFR 60.482-9a. No later than five calendar days after the pressure release, the permittee shall monitor the pressure relief device to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. **(40 CFR 60.482-4a(a) and (b))**
3. The permittee shall design and operate vapor recovery systems (for example, condensers and absorbers) used to comply with 40 CFR Part 60 Subpart VVa to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. **(40 CFR 60.482-10a(b))**
4. The permittee shall design and operate enclosed combustion devices used to comply with 40 CFR Part 60 Subpart VVa to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to three percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C. **(40 CFR 60.482-10a(c))**
5. The permittee shall, if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, follow either one of the following procedures: **(40 CFR 60.482-8a(a))**:
 - a. Monitor the equipment within five (5) days by the method specified in 40 CFR 60.485a(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. **(40 CFR 60.482-8a(b))**

- i. When a leak is detected, the permittee shall repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9a. The first attempt at the repair shall be made no later than five calendar days after each leak is detected. First attempts at repair include, but are not limited to, the best practices described in 40 CFR 60.482-2a(c)(2) and 40 CFR 60.482-7a(e). **(40 CFR 60.482-8(b) through (d))**
 - b. Eliminate the visual, audible, olfactory, or other indication of a potential leak. **(40 CFR 60.482-8a(a)(2))**
 6. The permittee may delay repair of equipment for which leaks have been detected if **(40 CFR 60.482-9a)**:
 - a. Repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitor to verify repair must occur within 15 days after startup of the process unit. **(40 CFR 60.482-9a(a))**
 - b. The equipment is isolated from the process and does not remain in VOC service. **(40 CFR 60.482-9a(b))**
 - c. For valve and connector repair, the permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and, when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10a. **(40 CFR 60.482-9a(c))**
 - d. For pumps, repair requires the use of a dual mechanical seal system that includes a barrier fluid system and repair is completed as soon as practicable, but not later than six months after the leak was detected. **(40 CFR 60.482-9a(d))**

Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than six months after the first process unit shutdown. **(40 CFR 60.482-9a(e))**

When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition. **(40 CFR 60.482-9a(f))**

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

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip each sampling connection system with a closed-purged, closed-loop, or closed-vent system, except as provided in 40 CFR 60.482-1a(c) and 40 CFR 60.482-5a(c). Each closed-purge, closed-loop, or closed-vent system shall comply with the requirements specified in 40 CFR 60.482-5a(b). **(40 CFR 60.482-5a)**
2. The permittee shall equip each open-ended valve or line with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1a(c), 40 CFR 60.482-6a(d), or 40 CFR 60.482-6a(e), which shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. In addition, the permittee shall ensure that: **(40 CFR 60.482-6a)**
 - a. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. **(40 CFR 60.482-6a(b))**
 - b. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 61.482-6a(a) at all other times. **(40 CFR 60.482-6a(c))**

3. The permittee shall operate closed vent systems and control devices used to comply with 40 CFR Part 60 subpart VVa at all times when emissions may be vented to them. **(40 CFR 60.482-10a(m))**
4. The permittee shall, when each leak is detected as specified in 40 CFR 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, do the following:
 - a. Attach a weatherproof and readily visible identification, marked with the equipment identification number, to the leaking equipment. The identification on a valve may be removed after it has been monitored for two successive months as specified in 40 CFR 60.482-7a(c) and no leak has been detected during those two months. The identification on equipment, except on a valve or connector, may be removed after it has been repaired. The identification on a connector may be removed after it has been monitored as specified in 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring. **(40 CFR 60.486a(b))**
 - b. Record the following information in a log that and shall be kept for two years in a readily accessible location **(40 CFR 60.486a(c))**:
 - i. The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.
 - ii. The date the leak was detected and the dates of each attempt to repair the leak.
 - iii. Repair methods applied in each attempt to repair the leak.
 - iv. Maximum instrument reading measured by Method 21 of appendix A-7 of 40 CFR 60 at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.
 - v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
 - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
 - viii. Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - ix. The date of successful repair of the leak.

V. TESTING/SAMPLING

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

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

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor each pump in light liquid service as follows:
 - a. Check, by visual inspection, each calendar week for indications of liquids dripping from the pump seal, except as provided in 40 CFR 60.482-1a(f). If there are indications of liquids dripping from the pump seal, a leak is detected. **(40 CFR 60.482-2a(a)(2) and (b)(2))**
 - b. Monitor monthly to detect leaks by the methods specified in 40 CFR 60.485a(b), except as provided in 40 CFR 60.482-1a(c), 40 CFT 60.482-1a(c), and 40 CFR 60.482-2a(d), (e), and (f). If instrument readings indicating the detection of a leak are: **(40 CFR 60.482-2a(a)(1) and (b)(1))**
 - i. 5,000 ppm or greater for pumps handling polymerizing monomers.
 - ii. 2,000 ppm or greater for all other pumps.

When a leak is detected, the permittee shall repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Sec. 60.482-9a. A first attempt at repair shall be made no later than five calendar days after each leak is detected. **(40 CFR 60.482-2a(c))**

2. The permittee shall monitor each valve in gas/vapor service and in light liquid service monthly to detect leaks by the methods specified in 40 CFR 60.485a(b) and shall comply with the following, except as provided in 40 CFR 60.482-1a(c), 40 CFR 60.482-1a(f), 40 CFR 60.483-1a(c), and 40 CFR 60.483-2a. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve or as provided in 40 CFR 60.482-7a(f), (g), (h), 60.481-1a(c), 60.483-1a, and 60.483-2a. **(40 CFR 60.482-7a):**
 - a. If an instrument reading of 500 ppm or greater is measured, a leak is detected. **(40 CFR 60.482-7a(b))**
 - b. Any valve for which a leak is not detected for two successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. Alternatively, the owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner must keep records of the valves assigned to each subgroup. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months. **(40 CFR 60.482-7(c))**
 - c. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9a. A first attempt at repair shall be made no later than five calendar days after each leak is detected. **(40 CFR 60.482-7a(d))**
 - d. First attempts at repair include, but are not limited to, the following best practices where practicable **(40 CFR 60.482-7a(e)):**
 - i. Tightening of bonnet bolts;
 - ii. Replacement of bonnet bolts;
 - iii. Tightening of packing gland nuts;
 - iv. Injection of lubricant into lubricated packing.
 - e. Any valve that is designated, as described in 40 CFR 60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the monthly monitoring if the valve has no external actuating mechanism in contact with the process fluid, is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR 60.485a(c), and is tested for compliance with the 500 ppm above background instrument reading initially upon designation, annually, and at other times requested by the ADQ District Supervisor. **(40 CFR 60.482-7(f))**
 - f. Any valve that is designated, as described in 40 CFR 60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the monthly monitoring if the permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of performing monthly monitoring and the permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. **(40 CFR 60.482-7a(g))**
 - g. Any valve that is designated, as described in 40 CFR 60.486a(f)(2), as a difficult-to-monitor valve is exempt from the monthly monitoring if it complies with all of the following **(40 CFR 60.482-7a(g)):**
 - i. The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface,
 - ii. The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 and was constructed on or before January 5, 1981, or has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator, and
 - iii. The permittee follows a written plan that requires monitoring of the valve at least once per calendar year.
3. The permittee shall monitor control devices used to comply with 40 CFR 60 Subpart VVa to ensure that they are operated and maintained in conformance with their designs. **(40 CFR 60.482-10a(e))**
4. The permittee shall inspect each closed vent system according to the procedures and schedule specified in 40 CFR 60.482-10a(f), except as follows **(40 CFR 60.482-10a(f)):**
 - a. The vapor collection system or closed vent system is operated under a vacuum. **(40 CFR 60.482-10a(i))**
 - b. Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10a(l)(1), as unsafe to inspect are exempt from the inspection requirements if they comply with the following **(40 CFR 60.482-10a(j)):**

- i. The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger; and
 - ii. The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.
 - c. Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10a(l)(2), as difficult to inspect are exempt from the inspection requirements if they comply with all of the following **(40 CFR 60.482-10a(k))**:
 - i. The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than two meters above a support surface.
 - ii. The process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 or 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect.
 - iii. The permittee has a written plan that requires inspection of the equipment at least once every five years. A closed vent system is exempt from inspection if it is operated under a vacuum.
5. The permittee shall record the following information **(40 CFR 60.482-10a(l))**:
 - a. Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.
 - b. Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.
 - c. For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486a(c).
 - d. For each inspection conducted in accordance with 40 CFR 60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
 - e. For each visual inspection conducted in accordance with paragraph 40 CFR 60.482-10a(f)(1)(ii) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
6. The permittee shall record the following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10a. This information shall be kept in a readily accessible location **(40 CFR 60.486a(d))**:
 - a. Detailed schematics, design specifications, and piping and instrumentation diagrams.
 - b. The dates and descriptions of any changes in the design specifications.
 - c. A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
 - d. Periods when the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame.
 - e. Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5.
7. The permittee shall record the following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1a to 60.482-11a. This information shall be kept in a readily accessible location **(40 CFR 40.486a(e))**:
 - a. A list of identification numbers for equipment subject to the requirements of 40 CFR Part 60 Subpart VVa.
 - b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2a(e), 60.482-3a(i) and 60.482-7a(f). The designation of this equipment shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.
 - c. A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4a.
 - d. The dates of each compliance test as required in 40 CFR 60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f), the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test.
 - e. A list of identification numbers for equipment in vacuum service.

- f. A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hours per year in accordance with 60.481-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hours per year.
 - g. The dates and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.
 - h. Records of the information specified in 40 CFR 60.486a(e)(8)(i) through 40 CFR 60.486a(e)(8)(vi) for monitor instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of Appendix A-7 of 40 CFR 60, and 60.485a(b).
 - i. The connector monitoring schedule for each process unit as specified in 40 CFR 60.482-11a(b)(3)(v).
 - j. Records of each release from a pressure relief device subject to 40 CFR 60.482-4a.
8. The permittee shall record the following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7a(g) and (h), all pumps subject to the requirements of 40 CFR 60.482-2a(g), and all connectors subject to the requirements of 40 CFR 60.482-11a(e). This information shall be kept in a readily accessible location **(40 CFR 40.486a(f))**:
- a. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.
 - b. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
9. The permittee shall record a schedule of monitoring and the percent of valves found leaking during each monitoring period for valves complying with Sec. 60.483-2a. **(40 CFR 40.486a(g))**
10. The permittee shall record the design criterion required in 40 CFR 60.482-2a(d)(5) and 60.482-3a(e)(2), an explanation of the design criterion, any changes to this criterion, and the reasons for the changes. This information shall be kept in a readily accessible location. **(40 CFR 60.486a(h))**
11. The permittee shall record the following information for use in determining exemptions as provided in 40 CFR 60.480a(d). This information shall be kept in a readily accessible location **(40 CFR 60.486a(i))**:
- a. An analysis demonstrating the design capacity of the affected facility,
 - b. A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
 - c. An analysis demonstrating that equipment is not in VOC service.
12. The permittee shall record information and data used to demonstrate that a piece of equipment is not in VOC service. This information shall be kept in a readily accessible location. **(40 CFR 60.486a(j))**

VII. REPORTING

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

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).

FGNSPSNNN FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

Each combination of two or more distillation units and the common recovery system into which their vent streams are discharged.

Emission Unit: EUDISTILLATION

POLLUTION CONTROL EQUIPMENT

Chilled water vent condenser

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(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 NNN, as they apply to the equipment in FGNSPSNNN. **(40 CFR Part 60 Subparts A and NNN)**
2. The permittee shall maintain a Total Resources Effectiveness (TRE) index value greater than 1.0 without use of VOC emission control devices. **(40 CFR 60.662(c))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications A condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 1 percent of the temperature being monitored expressed in degrees Celsius or ± 0.5 °C, whichever is greater. **(40 CFR 60.663(e)(2))**

V. TESTING/SAMPLING

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

1. The permittee shall demonstrate compliance with the requirements of 40 CFR Part 60 subparts A and NNN within 180 days of initial startup. All required testing shall be at owner's expense. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of trial operation in accordance with 40 CFR 60.7(a)(3). Performance testing procedures shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. **(40 CFR Part 60 Subparts A and NNN)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall calculate the TRE index value of the vent stream using both the incinerator equation in 40 CFR 60.664(e)(1) and the flare equation in 40 CFR 60.664(e)(2) and selecting the lower of the two values. **(40 CFR 60.664(f))**

2. The permittee shall recalculate the TRE index value for that affected facility whenever process changes are made. Examples of process changes include changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The TRE index value shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system. **(40 CFR 60.664(g))**
 - a. Where the recalculated TRE index value is less than or equal to 1.0, the permittee shall notify the Administrator within 1 week of the recalculation and shall conduct a performance test according to the methods and procedures required by 40 CFR 60.664 in order to determine compliance with 40 CFR 60.662(a). Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.
 - b. Where the initial TRE index value is greater than 8.0 and the recalculated TRE index value is less than or equal to 8.0 but greater than 1.0, the permittee shall conduct a performance test in accordance with 40 CFR 60.8 and 60.664 and shall comply with 40 CFR 60.663, 60.664 and 60.665. Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.
3. The permittee shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 CFR 60.8. The same data specified in this condition shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of Total Organic Compound, or the TRE index value of a vent stream from a recovery system is determined. **(40 CFR 60.665(b))**
 - a. Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature measured at least every 15 minutes and averaged over the same time period of the performance testing while the vent stream is routed and constituted normally.
 - b. All measurements and calculations performed to determine the TRE index value of the vent stream.
4. The permittee shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under 40 CFR 60.663(e), as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as all 3-hour periods of operation during which the average exit (product side) condenser operating temperature was more than 6 °C (11 °F) above the average exit (product side) operating temperature during the most recent performance test. **(40 CFR 60.665(g))**
5. The permittee shall keep up-to-date, readily accessible records of the following: **(40 CFR 60.665(h))**
 - a. Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of recovery equipment or a distillation unit;
 - b. Any recalculation of the TRE index value performed pursuant to 40 CFR 60.664(g); and
 - c. The results of any performance test performed pursuant to the methods and procedures required by 40 CFR 60.664(e).

VII. REPORTING

1. The permittee shall submit reports as required to comply with the federal NSPS as specified in 40 CFR Part 60 Subparts A and NNN. Information required to be submitted to the Administrator shall be submitted to the AQD District Supervisor in an acceptable format within 30 days following the end of the semiannual period in which the data were collected. Information required to be submitted includes semiannual reports, beginning six months after the initial startup date. The initial semiannual report shall include the information listed in 40 CFR 60.665(l). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.665(l))**

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).

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

Absorber tower controls methanol containing vapor streams from the separation, drying, and washing operations. Chilled water vent condenser controls emissions from the distillation columns.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Methanol	9.5 tpy*	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)
2. Aggregate HAPs	24.5 tpy**	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1205(1)

* Beginning on July 2, 2018, and continuing for the first 12 calendar months, this limit applies to the cumulative total methanol emissions. Thereafter, the limit shall become a 12-month rolling limit.

** Beginning on the July 2, 2018, and continuing for the first 12 calendar months, this limit applies to the cumulative total HAP emissions. Thereafter, the limit shall become a 12-month rolling limit.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall submit to the AQD District Supervisor, for review and approval, a protocol for demonstrating compliance with the emission limits for FGFACILITY within 90 days of permit issuance. The permittee shall not operate FGFACILITY unless the approved protocol, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. **(R 336.1205(1), R 336.1225, R 336.1702(a))**

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1))**

2. The permittee shall calculate the methanol emission rate from FGFACILITY monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. 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. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1))**
3. The permittee shall calculate the aggregate HAPs emission rate from FGFACILITY monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. 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. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1))**

VII. REPORTING

1. The permittee shall submit all methanol emission rate calculations for FGFACILITY to the AQD District Supervisor in an acceptable format for the first 12-months following permit issuance within 30 days following the end of the quarter in which the records were collected. **(R 336.1205(1))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

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

Footnotes:

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