

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

February 22, 2007



PERMIT TO INSTALL

No. 251-06A

ISSUED TO

NextGen Energy, LLC

LOCATED AT

Red Arrow Hwy. – US-12
Watervliet Twp., Michigan

IN THE COUNTY OF

Berrien



STATE REGISTRATION NUMBER

N7665

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: 02/11/2007	
DATE PERMIT TO INSTALL APPROVED: 02/22/2007	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Section	Page
Alphabetical Listing of Common Abbreviations / Acronyms.....	2
General Conditions	3
Emission Unit Identification.....	5
Flexible Group Identification	7
Emission Unit Special Conditions	8
EU-GENSET	8
EU-WDGS	8
EU-TRKTRAFFIC.....	9
EU-COOLINGTWR	9
Flexible Group Special Conditions.....	10
FG-SOLIDSHAND.....	10
FG-FERMENTATION.....	13
FG-DRYER&TO	15
FG-ETHLOAD	20
FG-NSPSTANKS	22
FG-NSPSVV.....	25
FG-FACILITY	28
Appendices	31
Appendix A: NO _x and CO ₂ /O ₂ Monitoring	31

Common Abbreviations / Acronyms

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

* 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, 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 AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **(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 nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.
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 Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EU-CORNPIT	Corn dump pit and auger, controlled by grain handling baghouse #1 CE001	SV001
EU-CONVEYOR	Corn conveyor, controlled by grain handling baghouse #2 CE002	SV002
EU-CORNELEV	Corn elevator, controlled by grain handling baghouse CE002	
EU-CORNBIN1	Corn bin #1, controlled by grain handling baghouse CE002	
EU-CORNBIN2	Corn bin #2, controlled by grain handling baghouse CE002	
EU-SCALPER	Scalper, controlled by grain handling baghouse CE002	
EU-SURGEBIN	Surge bin, controlled by grain handling baghouse CE002	
EU-HAMMERMILL1	Hammermill #1, controlled by hamermilling baghouse #1 (CE003) and hamermilling baghouse #2 (CE004)	
EU-HAMMERMILL2	Hammermill #2, controlled by hamermilling baghouse #1 (CE003) and hamermilling baghouse #2 (CE004)	
EU-FLOURELEV	Flour elevator, controlled by hamermilling baghouse #1 (CE003) and hamermilling baghouse #2 (CE004)	SV005
EU-FLOURCONV	Flour conveyor, controlled by hamermilling baghouse #1 (CE003) and hamermilling baghouse #2 (CE004)	
EU-LIQTANK	Liquefaction tank, controlled by vent gas scrubber CE005	
EU-YEASTTANK	Yeast tank, controlled by vent gas scrubber CE005	SV006
EU-FERM1	Fermenter #1, controlled by vent gas scrubber CE005	
EU-FERM2	Fermenter #2, controlled by vent gas scrubber CE005	
EU-FERM3	Fermenter #3, controlled by vent gas scrubber CE005	
EU-FERM4	Fermenter #4, controlled by vent gas scrubber CE005	
EU-BEERWELL	Beer well, controlled by vent gas scrubber CE005	
EU-BEERSTRIP	Beer stripper, controlled by vent gas scrubber CE005	
EU-SIDESTRIP	Side Stripper, controlled by vent gas scrubber CE005	
EU-RECTIFIER	Rectifier, controlled by vent gas scrubber CE005	
EU-MOLSIEVE	Molecular Sieve, controlled by vent gas scrubber CE005	
EU-EVAPORATOR	Evaporator, controlled by vent gas scrubber CE005	
EU-CENTRIFUGE1	Centrifuge #1, controlled by vent gas scrubber CE005	
EU-CENTRIFUGE2	Centrifuge #2, controlled by vent gas scrubber CE005	
EU-CENTRIFUGE3	Centrifuge #3, controlled by vent gas scrubber CE005	
EU-CENTRIFUGE4	Centrifuge #4, controlled by vent gas scrubber CE005	
EU-GENSET	1250 horsepower emergency generator	SV006
EU-DDGSDRYER	87,308,000 Btu/hr natural gas-fired DDGS dryer, controlled by multiclone CE006 and thermal oxidizer CE007	SV007
EU-COOLER	Dried distiller's grains and solubles (DDGS) cooler, controlled by thermal oxidizer CE007	
EU-TO&HRB	184 MMBtu/hr natural gas fired thermal oxidizer CE007 with a heat recovery boiler. The thermal oxidizer controls emissions from several emission units.	
EU-DDGSDMPIT	DDGS dump pit/auger, controlled by DDGS handling baghouse CE008	SV008
EU-DDGSELEV	DDGS elevator, controlled by DDGS handling baghouse CE008	

Emission Unit ID	Emission Unit Description	Stack Identification
EU-DDGSCONV1	DDGS conveyor #1, controlled by DDGS handling baghouse CE008	SV008
EU-DDGSLOADSP	DDGS load spout, controlled by DDGS handling baghouse CE008	
EU-WDGS	Wet distiller's grains and solubles (WDGS) storage and handling operations	N/A
EU-TRUCKLOAD	Denatured ethanol truck load-out, controlled by loadout flare CE009	SV009
EU-RAILLOAD	Denatured ethanol rail load-out, controlled by loadout flare CE009	
EU-190TANK	160,000 gallon 190 proof ethanol storage tank with an internal floating roof	N/A
EU-NATGASTANK	55,500 gallon denaturant storage tank with an internal floating roof	N/A
EU-DENATTANK1	792,000 gallon denatured alcohol storage tank #1 with an internal floating roof	N/A
EU-DENATTANK2	792,000 gallon denatured alcohol storage tank #2 with an internal floating roof	N/A
EU-200TANK1	160,000 gallon 200 proof ethanol storage tank #1 with an internal floating roof	N/A
EU-200TANK2	160,000 gallon 200 proof ethanol storage tank #1 with an internal floating roof	N/A
EU-TRKTRAFFIC	Truck traffic for delivery of grain and denaturant to the facility and transport of DDGS, WDGS, and denatured ethanol from the facility	N/A
EU-COOLINGTWR	1,830,000 gallon per hour four cell cooling tower equipped with drift eliminators	FS006
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FG-CORN	EU-CONVEYOR, EU-CORNELEV, EU-CORNBIN1, EU-CORNBIN2, EU-SCALPER, EU-SURGEBIN	SV002
FG-MILL	EU-HAMMERMILL1, EU-HAMMERMILL2, EU-FLOURELEV, EU-FLOURCONV	SV003 SV004
FG-DDGS	EU-DDGSDMPIT, EU-DDGSELEV, EU-DDGSCONV1, EU-DDGSLOADSP	SV008
FG-SOLIDSHAND	EU-CORNPIT, FG-CORN, FG-MILL, FG-DDGS	SV001, SV002 SV003, SV004 SV008
FG-FERMENTATION	EU-LIQTANK, EU-YEASTTANK, EU-FERM1, EU-FERM2, EU-FERM3, EU-FERM4, EU-BEERWELL, EU-BEERSTRIP, EU-SIDESTRIP, EU-RECTIFIER, EU-MOLSIEVE, EU-EVAPORATOR, EU-CENTRIFUGE1, EU-CENTRIFUGE2, EU-CENTRIFUGE3, EU-CENTRIFUGE4	SV005
FG-DRYER&TO	EU-DDGSDRYER, EU-COOLER, EU-TO&HRB	SV007
FG-ETHLOAD	EU-TRUCKLOAD, EU-RAILLOAD	SV009
FG-NSPSTANKS	EU-190TANK, EU-NATGASTANK, EU-DENATTANK1, EU-DENATTANK2, EU-200TANK1, EU-200TANK2	N/A
FG-NSPSVV	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.	N/A
FG-FACILITY	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	N/A

The following conditions apply to: EU-GENSET

Description: 1250 horsepower emergency generator

Process/Operational Limits

- 1.1 The permittee shall not operate EU-GENSET for more than 500 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Recordkeeping/Reporting/Notification

- 1.2 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the hours of operation for EU-GENSET, as required by SC 1.1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.3	SV006	14	35	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-WDGS

Description: Wet distiller's grains and solubles (WDGS) storage and handling operations

Pollution Control Equipment: Emissions will be controlled through compliance with the facility odor management plan (OMP)

Process/Operational Limits

- 2.1 The permittee shall manage EU-WDGS in manner that minimizes the release of odors to the outside air, in accordance with the facility odor management plan (OMP). **(R 336.1901)**

Recordkeeping/Reporting/Notification

- 2.2 The permittee shall keep, in a satisfactory manner, records necessary to show that EU-WDGS is being managed in accordance with the OMP. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1901)**

The following conditions apply to: EU-TRKTRAFFIC

Description: Truck traffic for delivery of grain and denaturant to the facility and transport of DDGS, WDGS, and denatured ethanol from the facility

Pollution Control Equipment: Emissions will be controlled through compliance with the facility program for continuous fugitive emissions control

Process/Operational Limits

- 3.1 The permittee shall not operate EU-TRKTRAFFIC unless the program for continuous fugitive emissions control for all plant roadways has been implemented and is maintained. **(R 336.1205(3), R 336.1371, R 336.1372, Act 451 324.5524)**
- 3.2 The permittee shall limit the total vehicle miles traveled on plant roads, for all trucks delivering material to the facility and transporting material away from the facility, to 25,052 miles per 12-month rolling time period, as determined at the end of each calendar month. **(R 336.1205(3))**

Recordkeeping/Reporting/Notification

- 3.3 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the total vehicle miles traveled on plant roads, for all trucks delivering material to the facility and transporting material away from the facility, to demonstrate compliance with the limit in SC 3.2. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**

The following conditions apply to: EU-COOLINGTWR

Description: 1,830,000 gallon per hour four cell cooling tower

Pollution Control Equipment: Drift eliminators

Equipment

- 4.1 The permittee shall not operate EU-COOLINGTWR unless it is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of EU-COOLINGTWR includes maintaining it, including the drift eliminators, according to the facility Malfunction Abatement Plan (MAP). **(R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

The following conditions apply to: FG-SOLDISHAND

Description: Solids handling operations – grain handling, milling, and DDGS handling

Emission Unit and Flexible Group IDs: EU-CORNPIT
 FG-CORN includes EU-CONVEYOR, EU-CORNELEV, EU-CORNBIN1, EU-CORNBIN2, EU-SCALPER, EU-SURGEBIN
 FG-MILL includes EU-HAMMERMILL1, EU-HAMMERMILL2, EU-FLOURELEV, EU-FLOURCONV
 FG-DDGS includes EU-DDGSDMPIT, EU-DDGSELEV, EU-DDGSCONV1, EU-DDGSLOADSP

Pollution Control Equipment: Grain handling baghouse #1 CE001, Grain handling baghouse #2 CE002, Hammermilling baghouse #1 CE003, Hammermilling baghouse #2, CE004 DDGS handling baghouse CE008

Emission Limits

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirement
5.1a	PM10	0.65 pph	Test Protocol	EU-CORNPIT equipment vented through baghouse CE001	SC 5.6, 5.7, 5.10, 5.11, 5.12	R 336.1205(3) R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
5.1b	PM10	0.31 pph	Test Protocol	FG-CORN equipment vented through baghouse CE002	SC 5.6, 5.7, 5.10, 5.11, 5.12	R 336.1205(3) R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
5.1c	PM10	0.26 pph	Test Protocol	FG-MILL equipment vented through baghouse CE003	SC 5.6, 5.7, 5.10, 5.11, 5.12	R 336.1205(3) R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
5.1d	PM10	0.26 pph	Test Protocol	FG-MILL equipment vented through baghouse CE004	SC 5.6, 5.7, 5.10, 5.11, 5.12	R 336.1205(3) R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
5.1e	PM10	0.15 pph	Test Protocol	FG-DDGS equipment vented through baghouse CE008	SC 5.6, 5.7, 5.10, 5.11, 5.12	R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)

Material Usage Limits

- 5.2 The grain receiving rate for EU-CORNPIT shall not exceed 21,300,000 bushels per 12-month rolling time period, as determined at the end of each calendar month. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**
- 5.3 The FG-DDGS throughput shall not exceed 193,771 tons per year of DDGS, based on a rolling 12-month time period as determined at the end of each calendar month. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Equipment

- 5.4 The permittee shall not operate the equipment listed below unless the associated baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each baghouse includes maintaining it according to the MAP. **(R 336.1205(3), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Process Equipment	Associated Baghouse
EU-CORNPIT	Grain handling baghouse #1 (CE001)
FG-CORN	Grain handling baghouse #2 (CE002)
FG-MILL	Hammermilling baghouse #1 CE003 and Hammermilling baghouse #2 CE004
FG-DDGS	DDGS handling baghouse (CE008)

- 5.5 The permittee shall equip and maintain baghouses CE001, CE002, CE003, CE004, and CE008 with pressure drop gauges. **(R 336.1205(3), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Testing

- 5.6 Within 180 days after commencement of trial operation, verification of the PM10 emission rates from EU-CORNPIT, FG-CORN, FG-MILL, and FGDDGS by testing at owner's expense, in accordance with Department requirements, will be required. 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. 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(3), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Monitoring

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

Recordkeeping/Reporting/Notification

- 5.8 The permittee shall keep, in a satisfactory manner, records of the total bushels of grain received in EU-CORNPIT and the bushels of grain received by straight truck in EU-CORNPIT for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**
- 5.9 The permittee shall keep, in a satisfactory manner, records of the tons of DDGS throughput for FG-DDGS for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**

- 5.10 The permittee shall keep, in a satisfactory manner, records of the differential pressure drop across baghouses CE001, CE002, CE003, CE004, and CE008 on a daily basis and records of whether or not the pressure drop of each baghouse was within the range specified in the MAP. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**
- 5.11 The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EU-CORNPIT, FG-CORN, FG-MILL, and FGDDGS. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**
- 5.12 The permittee shall keep production records and other records necessary to demonstrate compliance with the PM10 emission rate limits listed in SC 5.1. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
5.13a	SV001	32	70	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
5.13b	SV002	22	60	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
5.13c	SV003	20	76	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
5.13d	SV004	20	76	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
5.13e	SV008	16	47	R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG-FERMENTATION

Description: Equipment associated with fermentation of grain starch to ethanol

Emission Unit IDs: EU-LIQTANK, EU-YEASTTANK, EU-FERM1, EU-FERM2, EU-FERM3, EU-FERM4, EU-BEERWELL, EU-BEERSTRIP, EU-SIDESTRIP, EU-RECTIFIER, EU-MOLSIEVE, EU-EVAPORATOR, EU-CENTRIFUGE1, EU-CENTRIFUGE2, EU-CENTRIFUGE3, EU-CENTRIFUGE4

Pollution Control Equipment: Vent gas scrubber CE005

Emission Limits

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirement
6.1a	VOC	5.5 pph	Test Protocol	FG-FERMENTATION	SC 6.4, 6.6	R 336.1205(3) R 336.1702(a)
6.1b	Acetaldehyde	1.43 pph	Test Protocol	FG-FERMENTATION	SC 6.4, 6.7	R 336.1225

Equipment

6.2 The permittee shall not operate any equipment in FG-FERMENTATION unless the fermentation vent gas scrubber CE005 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the scrubber according to the MAP and maintaining the liquid flow rate in the range at which the emission limits were met during the most recent compliance test. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

6.3 The permittee shall equip and maintain the fermentation vent gas scrubber CE005 with a liquid flow rate indicator capable of accurately indicating the scrubber liquid flow rate over the entire range of expected flow rates. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910))**

Testing

6.4 Within 180 days after commencement of trial operation, verification of the VOC and acetaldehyde emission rates from FG-FERMENTATION, by testing at owner's expense, in accordance with Department requirements, will be required. 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. 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(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.2001, R 336.2003, R 336.2004)**

Recordkeeping/Reporting/Notification

6.5 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

6.6 The permittee shall keep production records on a monthly basis and other records, including the scrubber liquid flow rate, necessary to demonstrate compliance with the emission limits listed in SC 6.1. The emission rate may be calculated based upon monthly records, prorated to an hourly rate. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1702(a))**

6.7 The permittee shall keep production records and other records, including the scrubber liquid flow rate, necessary to demonstrate compliance with the acetaldehyde emission limit listed in SC 6.1. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(2), R 336.1225)**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
6.8a	SV005	24	105	R 336.1225
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG-DRYER&TO

Description: Distillers grains drying and facility steam production

Emission Unit IDs: EU-DDGS DRYER, EU-COOLER, EU-TO&HRB

Pollution Control Equipment: Multiclone CE006 and Thermal Oxidizer CE007

Emission Limits

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirement
7.1a	PM10	5.0 pph	Test Protocol	FG-DRYER&TO	SC 7.7, 7.9, 7.10, 7.13, 7.16, 7.19, 7.23, 7.24	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
7.1b	NOx	0.05 lb/MMBTU	30-day rolling average	EU-TO&HRB	40 CFR 60.46b(c), 60.48b(b)	R 336.1205(3) 40 CFR 60.44b(a)
7.1c	NOx	13.7 pph	Test Protocol	FG-DRYER&TO while combusting natural gas	SC 7.8, 7.10, 7.18, 7.23	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
7.1d	NOx	56.3 pph	Test Protocol	FG-DRYER&TO while combusting propane	SC 7.8, 7.10, 7.18, 7.23	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
7.1e	VOC	5 pph	Test Protocol	FG-DRYER&TO	SC 7.7, 7.9, 7.10, 7.16, 7.18, 7.23	R 336.1205(3), R 336.1702(a), R 336.1901
7.1f	CO	16.8 pph	Test Protocol	FG-DRYER&TO	SC 7.7, 7.9, 7.10, 7.12, 7.16, 7.18, 7.23	R 336.1205(3), R 336.2804, 40 CFR 52.21 (d)
7.1g	SO ₂	9 pph	Test Protocol	FG-DRYER&TO	SC 7.10, 7.18, 7.23	R 336.1205(3) 40 CFR 60.44b(a)
7.1h	Acetaldehyde	0.12 pph	Test Protocol	FG-DRYER&TO	SC 7.7, 7.9, 7.10, 7.16, 7.19, 7.23	R336.1205(3) R 336.1225

Visible Emission Limits

7.2 Visible emissions from FG-DRYER&TO shall not exceed a six-minute average of five percent opacity. **(R 336.1301, 40 CFR 60.43b(f))**

Material Usage Limits

7.3 The permittee shall use only sweet natural gas as fuel in EU-DDGS DRYER and EU-TO&HRB, except for a maximum of 500 hours of operation per 12-month rolling time period using propane as a back-up fuel. **(R 336.1205(3), R 336.1205(2), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

Process/Operational Limits

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

Equipment

7.5 The permittee shall not operate FG-DRYER&TO unless multiclone CE006 and thermal oxidizer CE007 are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the multiclone and thermal oxidizer according to the MAP and maintaining the thermal oxidizer combustion chamber temperature at not less than 50°F below the average combustion chamber temperature at which the VOC emission limit was met during the most recent compliance test. **(R 336.1205(3), R 336.1225, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

7.6 The permittee shall equip and maintain EU-TO&HRB with a low-NOx burner. **(R 336.1205(3), R 336.1910)**

Testing

7.7 Within 180 days after commencement of trial operation, verification of PM10, VOC, CO, and acetaldehyde emission rates from FG-DRYER&TO, by testing at owner's expense, in accordance with Department requirements, will be required. 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. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following completion of testing. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

7.8 Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of trial operation, federal Standards of Performance for New Stationary Sources require verification of NOx emission rates from EU-TO&HRB, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and Db, 60.46b. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of trial operation in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 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. 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. **(40 CFR 60.46b)**

Monitoring

7.9 The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record on a continuous basis the combustion chamber temperature of EU-TO&HRB. The temperature monitoring device shall be calibrated once per calendar year. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

7.10 The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to separately monitor the propane and natural gas usage for EU-DDGSDRYER and EU-TO&HRB on a continuous basis. **(R 336.1205(3))**

- 7.11 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_x emissions for EU-TO&HRB on a continuous basis and according to the procedures outlined in Appendix A attached and 40 CFR Part 60.48b(b)(1), (c), (d), (e), (f). **(R 336.1205(3), 40 CFR 60.48b)**
- 7.12 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the flue gas oxygen concentration for EU-TO&HRB on a continuous basis and according to the procedures outlined in Appendix A attached and 40 CFR Part 60.48. **(R 336.1205(3), 40 CFR 60.48b)**
- 7.13 The permittee shall conduct a monthly visible emissions check of the thermal oxidizer vent during routine operating conditions. For the purpose of this condition, such checks do not have to be in accordance with Method 9. If a check reveals any visible emissions from the vent (other than uncombined water vapor), the permittee shall inspect the particulate control system and perform any maintenance required to eliminate visible emissions. **(R 336.1205(3), R 336.1301)**

Recordkeeping/Reporting/Notification

- 7.14 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**
- 7.15 The permittee shall keep, in a satisfactory manner, daily, monthly and 12-month rolling time period average fuel use records and the annual capacity factor for EU-TO&HRB. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each month. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), 40 CFR 60.49b(d))**
- 7.16 The permittee shall keep, in a satisfactory manner, continuous records of the EU-TO&HRB combustion chamber temperature. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1205(2), R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**
- 7.17 The permittee shall keep, in a satisfactory manner the following records for EU-TO&HRB for each calendar day pursuant to the requirements of 40 CFR 60.49b:
- a) Calendar date that EU-TO&HRB was in operation.
 - b) Average hourly NO_x emission rate in lb/MMBTU heat input.
 - c) 30-day average NO_x emission rate in lb/MMBTU heat input, calculated at the end of each operating day from the hourly NO_x emission rates for the preceding 30-days.
 - d) Excess emissions, reasons for excess emissions, and description for corrective actions taken.
 - e) Identification of the operating days for which NO_x data has not been obtained, reasons for not obtaining the data and description of corrective actions taken.
 - f) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data.
 - g) Identification of the "F" factor used for calculations, method of determining the "F" factor and type of fuel combusted.
 - h) Identification of the times when the NO_x concentration exceeds full span of the continuous emission monitoring system.

- i) Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. Reports of the above information shall be submitted every six months in accordance with 40 CFR 60.49b(w). **(R 336.1205(3), 40 CFR 60.49b(g), (h), (i), (o), (w))**

7.18 The permittee shall keep, in a satisfactory manner, production records on a monthly basis and other records necessary to demonstrate that the following pollutants are in compliance with the emission rate limits listed in the corresponding special conditions. The emission rates may be calculated based upon monthly records, prorated to an hourly rate. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

	Pollutant	Emission Limit Special Condition	Applicable Requirement
7.18a	NOx	7.1c and 7.1d	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
7.18b	VOC	7.1e	R 336.1205(3), R 336.1702(a), R 336.1901
7.18c	CO	7.1f	R 336.1205(3), R 336.2804, 40 CFR 52.21 (d)
7.18d	SO ₂	7.1g	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

7.19 The permittee shall keep, in a satisfactory manner, production records and other records necessary to demonstrate that the following pollutants are in compliance with the emission rate limits listed in the corresponding special conditions. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

	Pollutant	Emission Limit Special Condition	Applicable Requirement
7.19a	PM10	12.1a	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
7.19b	Acetaldehyde	12.1h	R 336.1205(3), R 336.1225

7.20 The permittee shall keep, in a satisfactory manner, records of the occurrence and duration of any startup, shutdown, or malfunction in the operation; or any periods during which a continuous monitoring system or monitoring device is inoperative. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.7)**

7.21 The permittee shall submit notification to the AQD District Supervisor of the design heat input capacity, the identification of fuels to be combusted and the annual capacity factor for EU-TO&HRB as required by 40 CFR 60.7 and 40 CFR 60.49b(a). **(40 CFR 60.49b(a))**

7.22 The permittee shall keep records of fuel supplier certifications of the sulfur content of the fuels burned in FG-DRYER&TO. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.45b(k), 40 CFR 60.46b(i), 40 CFR 60.47b(g), 40 CFR 60.48b(j))**

7.23 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the hours propane is used as a back-up fuel for EU-DDGSDRYER and EU-TO&HRB.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

7.24 The permittee shall keep, in a satisfactory manner, records of visible emission readings for FG-DRYER&TO. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1301)**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
7.25a	SV007	80	90	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG-ETHLOAD

Description: Loadout of ethanol into tank trucks and rail cars

Emission Unit IDs: EU-TRUCKLOAD, EU-RAILLOAD

Pollution Control Equipment: Loadout flare CE009

Material Usage Limits

8.1 The FG-ETHLOAD throughput shall not exceed 58,000,000 gallons per year of denatured ethanol, based on a rolling 12-month time period as determined at the end of each calendar month. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

Process/Operational Limits

8.2 The permittee shall only load rail cars in EU-RAILLOAD that are dedicated to carrying ethanol. **(R 336.1205(3), R 336.1225)**

8.3 The permittee shall design and operate flare CE009 to comply with applicable requirements of 40 CFR 60.18, including: **(R 336.1205(3), 40 CFR 60.18(b))**

- a) The permittee shall operate flare CE009 with no visible emissions as determined by the methods specified in 40 CFR 60.18(f)(1), except for periods not to exceed a total of five minutes during any two consecutive hours. **(40 CFR 60.18(c)(1))**
- b) The permittee shall design and operate flare CE009 with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f)(2). **(40 CFR 60.18(c)(2))**
- c) The permittee shall operate flare CE009 with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified 40 CFR 60.18(f)(3). **(40 CFR 60.18(c)(3))**
- d) If steam assisted or nonassisted, the permittee shall design and operate flare CE009 with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), as follows: **(40 CFR 60.18(c)(4))**
 - i) Less than 60 ft/sec, except if the net heating value of the gas being combusted is greater than 1,000 Btu/scf, the exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), shall be less than 400 ft/sec, and
 - ii) Less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(5) and less than 400 ft/sec.
- e) If air-assisted, the permittee shall design and operate flare C50 with an exit velocity less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(6): **(40 CFR 60.18(c)(5))**

Equipment

8.4 The permittee shall not operate EU-TRUCKLOAD or EU-RAILLOAD unless ethanol loadout flare CE009 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the flare includes maintaining it according to the MAP. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

8.5 The permittee shall equip all loading and vapor return lines with fittings that are designed to be vapor tight. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

Monitoring

8.6 The permittee shall monitor flare CE009 to ensure that it is operated and maintained in conformance with the manufacturer's design, as required by 40 CFR 60.18(d). **(R 336.1205(3), 40 CFR 60.18(d))**

Recordkeeping/Reporting/Notification

8.7 The permittee shall keep, in a satisfactory manner, records of the monthly and 12-month rolling time period, as determined at the end of each calendar month, denatured ethanol throughput for FG-ETHLOAD. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

8.8 The permittee shall keep, in a satisfactory manner, records for each rail car loaded in EU-ETHLOAD_RL that it is dedicated to carrying ethanol. **(R 336.1205(3), R336.1225)**

8.9 The permittee shall keep records necessary to demonstrate that flare CE009 is designed and operated in accordance with CFR 60.18. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR Part 60.18)**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
8.10a	SV009	N/A	35	R 336.1225
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG-NSPSTANKS

Description: Volatile organic liquid storage tanks subject to NSPS Kb

Emission Unit IDs: EU-190TANK, EU-NATGASTANK, EU-DENATTANK1, EU-DENATTANK2,
EU-200TANK1, EU-200TANK2

Pollution Control Equipment: Internal floating roofs on the storage tanks

Process/Operational Limits

- 9.1 The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb, as they apply to the equipment in FG-NSPSTANKS. **(40 CFR Part 60 Subparts A and Kb)**
- 9.2 The permittee shall not load EU-NATGASTANK with gasoline from a delivery vessel unless EU-NATGASTANK is equipped with a permanent submerged fill pipe. **(R 336.1205(3), R 336.1225, R 336.1704, R 336.1910)**

Equipment

- 9.3 The permittee shall equip each tank in FG-NSPSTANKS according to the requirements of 40 CFR 60.112b(a)(1) through (4). These requirements include, but are not limited to, the following: **(R 336.1205(3), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**
- a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. **(40 CFR 60.112b(a)(1)(i))**
 - b) Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the edge of the internal floating roof that meets the requirements of 40 CFR 60.112b(a)(1)(ii). **(40 CFR 60.112b(a)(1)(ii))**
 - c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. **(40 CFR 60.112b(a)(1)(iii))**
 - d) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. **(40 CFR 60.112b(a)(1)(iv))**
 - e) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. **(40 CFR 60.112b(a)(1)(v))**
 - f) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. **(40 CFR 60.112b(a)(1)(vi))**
 - g) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening. **(40 CFR 60.112b(a)(1)(vii))**

- h) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. **(40 CFR 60.112b(a)(1)(viii))**
- i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. **(40 CFR 60.112b(a)(1)(ix))**

9.4 The permittee shall equip and maintain each FG-NSPSTANKS storage tank with the deck and seal configuration listed in the following table, or a deck and seal configuration that results in the same or lower VOC emissions from the tank.

	Equipment	Deck Type	Primary Seal	Applicable Requirement
9.4	Each tank	Bolted	Liquid-mounted	R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910

Monitoring

9.5 The permittee shall perform inspections and monitor operating information for FG-NSPSTANKS as required by 40 CFR 60.113b. These requirements include, but are not limited to, the following: **(R 336.1205(3), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**

- a) Visually inspect the internal floating roof, the primary seal, and the secondary seal prior to filling the storage vessel with volatile organic liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel. **(40 CFR 60.113b(a)(1))**
- b) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in 40 CFR 60.113b(a)(2) and 40 CFR 60.113b(a)(3)(ii) and at intervals no greater than five years in the case of vessels specified in 40 CFR 60.113b(a)(3)(i). **(40 CFR 60.113b(a)(4))**

Recordkeeping/Reporting/Notification

9.6 The permittee shall keep records of inspections and operating information for FG-NSPSTANKS as required by 40 CFR Part 60 Subparts A and Kb. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. These requirements include, but are not limited to, the following: **(R 336.1205(3), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**

- a) Keep a record of each inspection performed as required by 40 CFR 60.113b(a). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). **(40 CFR 60.115b(a)(2))**

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

9.7 The permittee shall submit reports for FG-NSPSTANKS as required by 40 CFR 60.115b. These requirements include, but are not limited to, the following: **(R 336.1205(3), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**

- a) A report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3). **(40 CFR 60.115b(a)(1))**
- b) If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report, furnished to the USEPA within 30 days of the inspection, identifying the tank, the nature of the defects, and the date the tank was emptied or the nature of and date the repair was made. **(40 CFR 60.115b(a)(3))**
- c) After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report, furnished to the USEPA within 30 days of the inspection, identifying the tank and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 40 CFR 60.113b(a)(3), and list each repair made. **(40 CFR 60.115b(a)(4))**

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

The following conditions apply to: FG-NSPSVV

Description: Fugitive VOC leaks from components of piping systems

Emission Unit IDs: 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.

Process/Operational Limits

- 10.1 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 VV, as they apply to the equipment in FG-NSPSVV. **(40 CFR Part 60 Subparts A and VV)**
- 10.2 The permittee shall operate each pressure relief device in gas/vapor service with no detectable emissions, as specified in 40 CFR 60.482-4(a) and (b). **(40 CFR 60.482-4(a) and (b))**
- 10.3 The permittee shall design and operate vapor recovery systems (for example, condensers and absorbers) used to comply with 40 CFR 60 subpart VV 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 60.482-10(b))**
- 10.4 The permittee shall design and operate enclosed combustion devices used to comply with 40 CFR 60 subpart VV 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 (1,500 °F). **(40 CFR 60.482-10(c))**
- 10.5 The permittee shall, if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, follow either one of the procedures specified in 40 CFR 60.482-8(a). **(40 CFR 60.482-8(a))**
- 10.6 The permittee may delay repair of equipment for which leaks have been detected as specified in 40 CFR 60.482-9. **(40 CFR 60.482-9)**
- 10.7 The permittee shall repair leaks of a closed vent system as specified in 40 CFR 60.482-10(g). **(40 CFR 60.482-10(g))**

Equipment

- 10.8. The permittee shall equip each sampling connection system with a closed-purged, closed-loop, or closed-vent system, as specified in 40 CFR 60.482-5. **(40 CFR 60.482-5)**
- 10.9 The permittee shall equip each open-ended valve or line with a cap, blind flange, plug, or a second valve, as specified in 40 CFR 60.482-6. **(40 CFR 60.482-6)**
- 10.10 The permittee shall operate closed vent systems and control devices used to comply with 40 CFR 60 subpart VV at all times when emissions may be vented to them. **(40 CFR 60.482-10(m))**
- 10.11 The permittee shall, when each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, take the actions specified in 40 CFR 60.286(b) and (c). **(40 CFR 60.486(b) and (c))**

Testing

- 10.12 The permittee shall demonstrate compliance with the requirements of 40 CFR Part 60 subparts A and VV 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 60.482-1 through 40 CFR 60.482-10 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 60.485. Equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482-2 to 40 CFR 60.482-10 if it is identified as required in 40 CFR 60.486(e)(5). **(R 336.1225, R 336.1702(b), 40 CFR Part 60 Subparts A and VV, 40 CFR 60.482-1, 40 CFR 60.485)**

Monitoring

- 10.13 The permittee shall monitor each pump in light liquid service as specified in 40 CFR 60.482-2. **(40 CFR 60.482-2)**
- 10.14 The permittee shall monitor each valve in gas/vapor service and in light liquid service as specified in 40 CFR 60.482-7. **(40 CFR 60.482-7)**
- 10.15 The permittee shall monitor control devices used to comply with 40 CFR 60 subpart VV to ensure that they are operated and maintained in conformance with their designs. **(40 CFR 60.482-10(e))**
- 10.16 The permittee shall inspect each closed vent system according to the procedures and schedule specified in 40 CFR 60.482-10(f). **(40 CFR 60.482-10(f))**

Recordkeeping / Reporting / Notification

- 10.17 The permittee shall record the information specified in 40 CFR 60.282-10(l). **(40 CFR 60.482-10(l))**
- 10.18 The permittee shall record the information specified in 40 CFR 60.486(d) pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10. This information shall be kept in a readily accessible location. **(40 CFR 60.486(d))**
- 10.19 The permittee shall record the information specified in 40 CFR 60.486(e) pertaining to all equipment subject to the requirements in 40 CFR 60.482-1 to 60.482-10. This information shall be kept in a readily accessible location. **(40 CFR 60.486(e))**
- 10.20 The permittee shall record the information specified in 40 CFR 60.486(f) pertaining to all valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all pumps subject to the requirements of 40 CFR 60.482-2(g). This information shall be kept in a readily accessible location. **(40 CFR 60.486(f))**
- 10.21 The permittee shall record a schedule of monitoring and the percent of valves found leaking during each monitoring period valves complying with Sec. 60.483-2. **(40 CFR 60.486(g))**
- 10.22 The permittee shall record the design criterion required in 40 CFR 60.482-2(d)(5) and 60.482-3(e)(2) and an explanation of the design criterion and any changes to this criterion and the

reasons for the changes. This information shall be kept in a readily accessible location.
(40 CFR 60.486(h))

- 10.23 The permittee shall record the information specified in 40 CFR 486(i) for use in determining exemptions as provided in 40 CFR 60.480(d). This information shall be kept in a readily accessible location. **(40 CFR 60.486(i))**
- 10.24 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 60.486(j))**
- 10.25 The permittee shall submit reports as required to comply with the federal NSPS as specified in 40 CFR Part 60 Subparts A and VV. The permittee shall keep all required records on file for a period of at least five years and make them available to the Department upon request.
(40 CFR 60.487)

The following conditions apply to: FG-FACILITY

Description: 58 million gallon per year dry mill fuel grade ethanol plant

Emission Unit IDs: All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.

Emission Limits

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirement
11.1a	NOx	84 tpy	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
11.1b	VOC	64 tpy	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3)
11.1c	CO	82 tpy	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3), R 336.2804, 40 CFR 52.21(d)
11.1d	PM	45 tpy	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3)
11.1e	PM10	36 tpy	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
11.1f	SO ₂	39 tpy	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)
11.1g	HAPs	6.8 tpy of any individual HAP	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3)
11.1h	HAPs	13 tpy of aggregate of HAPs	12-month rolling time period*	FG-FACILITY	SC 11.10	R 336.1205(3)
* 12-month rolling time period as determined at the end of each calendar month.						

Process/Operational Limits

11.2 The permittee shall submit a malfunction abatement plan (MAP) for FG-FACILITY to the AQD District Supervisor. The interim MAP and any future revised MAP shall be subject to review and approval, as provided in Rule 911. The permittee shall not operate any equipment in FG-FACILITY unless the MAP, revised as necessary according to the procedures of Rule 911, is implemented and maintained. The MAP shall include procedures for maintaining and operating equipment in a satisfactory manner, including procedures for minimizing emissions during malfunction events, and a program for corrective action for such events. If the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the MAP within 45 days after such an event occurs. **(R 336.1205(3), 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) and (d))**

- a) The permittee shall submit an interim MAP to the AQD District Supervisor before beginning operation of any equipment in FG-FACILITY.

- b) No later than 270 days after commencing operation of any equipment in FG-FACILITY, the permittee shall revise the MAP, based on equipment operating history and the results of the emission testing, and submit the revised MAP to the AQD District Supervisor.

11.3 The permittee shall submit an odor management plan (OMP) for FG-FACILITY to the AQD District Supervisor. The OMP shall include procedures for maintaining and operating equipment in a manner that minimizes the release of odors to the outside air, and a program for corrective action for such events. If the OMP fails to address or inadequately addresses an event that results in an odor release to the outside air at the time the plan is initially developed, the owner or operator shall revise the OMP within 45 days after such an event occurs. **(R 336.1901)**

- a) The permittee shall submit an interim OMP to the AQD District Supervisor before beginning operation of any equipment in FG-FACILITY.
- b) No later than 270 days after commencing operation of any equipment in FG-FACILITY, the permittee shall revise the OMP based on equipment operating history and submit the revised OMP to the AQD District Supervisor.

11.4 The permittee shall submit a program for continuous fugitive emissions control for all plant roadways and all material handling operations for FG-FACILITY to the AQD District Supervisor for review and approval. The program shall be considered approved if it is not acted on by the department within 90 days of submittal. The permittee shall not operate any equipment in FG-FACILITY unless the program, revised as necessary, is implemented and maintained. The program shall include the following: **(R 336.1205(3), R 336.1371, R 336.1372, Act 451 324.5524)**

- a) The name and address of the facility and the owner or operator responsible for implementation of the program.
- b) A map or diagram of the facility showing the approximate locations of storage piles, conveyor loading operations, and all traffic patterns within the facility.
- c) The location of unloading and transporting operations with pollution control equipment.
- d) A detailed description of the best management practices utilized to achieve compliance with this section, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals, and dust suppressants utilized, and equivalent methods utilized.
- e) A test procedure, including record keeping, for testing all waste or recycled oils used for fugitive dust control for toxic contaminants.
- f) The frequency of application, application rates, and dilution rates if applicable, of dust suppressants by location of materials.
- g) The frequency of cleaning paved traffic pattern roads and parking facilities.

11.5 The permittee shall not operate FG-FACILITY unless an emergency response plan, to be followed in the event of an emergency, has been submitted to the local fire department or county emergency response agency and is implemented and maintained. By October 1 each year, the permittee shall review this plan with the local fire department or emergency response agency and make any necessary updates. **(R 336.1901)**

11.6 The permittee shall not operate FG-FACILITY unless all plant roadways are paved. **(R 336.1205(3), R 336.1301)**

Equipment

11.7 A sign shall be present and conspicuously placed at the facility entrance stating the emergency phone numbers for the owner, primary operator, local and state police, local fire department, and ambulance service. **(R 336.1901)**

11.8 The permittee shall install and maintain fencing, warning signs, or other measures as necessary to attempt to prevent unauthorized individuals from entering the plant property and buildings. **(R 336.1225, R 336.1901)**

Recordkeeping/Reporting/Notification

11.9 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

11.10 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period emission calculations for the following pollutants to demonstrate compliance with the emission rate limits specified in the corresponding special conditions. The permittee shall keep all required records on file for a period of at least five years and make them available to the Department upon request.

	Pollutant	Emission Limit Special Condition	Applicable Requirement
11.10a	NOx	11.1a	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
11.10b	VOC	11.1b	R 336.1205(3)
11.10c	CO	11.1c	R 336.1205(3), R 336.2804, 40 CFR 52.21 (d)
11.10d	PM	11.1d	R 336.1205(3)
11.10e	PM10	11.1e	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
11.10f	SO ₂	11.1f	R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)
11.10g	Individual HAP, including fugitives	11.1g	R 336.1205(3)
11.10h	Total HAPs, including fugitives	11.1h	R 336.1205(3)

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

11.12 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 FG-FACILITY. **(R 336.1216(1), R 336.1201(7)(a))**

Appendix A
NO_x and CO₂/O₂ Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NO _x	2
CO ₂ /O ₂	3

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b) A report of all periods of CEMS downtime and corrective action.
 - c) A report of the total operating time of the each boiler during the reporting period.
 - d) A report of any periods that the CEMS exceeds the instrument range.
 - e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.