

**Iowa Department of Natural Resources
Title V Operating Permit**

Name of Permitted Facility: Golden Grain Energy LLC

Facility Location: Mason City

Air Quality Operating Permit Number: 09-TV-002

Expiration Date: March 09, 2014

Permit Renewal Application Deadline: September 09, 2013

EIQ Number: 92-6927

Facility File Number: 17-01-100

Responsible Official

Name: Chad Kuhlers

Title: Plant Manager

Mailing Address: 1822 43rd Street SW, Mason City, IA 50401

Phone #: (641)423-8525

Permit Contact Person for the Facility

Name: Chad Kuhlers

Title: Plant Manager

Mailing Address: 1822 43rd Street SW, Mason City, IA 50401

Phone #: (641)423-8525

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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- F. Predictive Emission Monitoring System (PEMs)

Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
CE	control equipment
CEM.....	continuous emission monitor
°F.....	degrees Fahrenheit
EIQ.....	emissions inventory questionnaire
EP	emission point
EU	emission unit
gr./dscf	grains per dry standard cubic foot
gr./100 cf.....	grains per one hundred cubic feet
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NSPS.....	new source performance standard
ppmv	parts per million by volume
lb./hr	pounds per hour
lb./MMBtu	pounds per million British thermal units
SCC.....	Source Classification Codes
scfm.....	standard cubic feet per minute
SIC	Standard Industrial Classification
TPY.....	tons per year
USEPA.....	United States Environmental Protection Agency

Pollutants

PM.....	particulate matter
PM ₁₀	particulate matter ten microns or less in diameter
SO ₂	sulfur dioxide
NO _x	nitrogen oxides
VOC	volatile organic compound
CO.....	carbon monoxide
HAP.....	hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: Golden Grain Energy LLC

Permit Number: 09-TV-002

Facility Description: Denatured Ethanol Plant (SIC 2869)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-S10a	EU-1, 2, P50, B10	Dryers and Thermal Oxidizer	03-A-600P-S2
EP-S10b	EU-3, 4, P, B	Dryers and Thermal Oxidizer	05-A-780P
EP-S15	EU-P15	Grain Unloading and Baghouse	03-A-601P-S3
EP-S30a	EU-P30	Hammermill and Baghouse	03-A-602P-S2
EP-S30b	EU-P30b	Hammermill and Baghouse	05-A-781P
EP-S40a	EU-P40a	Fermentation and Scrubber	03-A-603P-S2
EP-S40b	EU-P40b	Fermentation and Scrubber	05-A-782P
EP-S70a	EU-P70a	DDGS Cooler Cyclone	03-A-604P-S2
EP-S70b	EU-P70b	DDGS Cooler Cyclone	05-A-783P
EP-P80a	EU-P80a	Cooling Tower	06-A-054P
EP-P80b	EU-P80b	Cooling Tower	05-A-784P
EP-S90	EU-P90	DDGS Loading and Baghouse	03-A-605P-S2
EP-11	EU-11	Biomethanator Flare	03-A-606P-S1
EP-22	EU-22	Truck Loadout and Flare	03-A-607P-S2
EP-22b	EU-22b	Rail Loadout and Flare	08-A-235P
EP-25	EU-25	Emergency Fire Pump	06-A-056P
EP-26	EU-26	Emergency Fire Pump	07-A-1291
EP-F90	EU-F90	VOC Emissions from Equipment Leaks	05-A-384P-S1
EP-F100	EU-F100	Plant Haul Road	06-A-055P
EP-T60a	EU-T60a	Denatured Ethanol Storage Tank	07-A-738P
EP-T60b	EU-T60b	Denatured Ethanol Storage Tank	07-A-739P
EP-T61	EU-T61	Denatured Ethanol Storage Tank	03-A-608P-S2
EP-T62	EU-T62	Denatured Ethanol Storage Tank	03-A-609P-S2
EP-T63	EU-T63	200-proof ethanol storage tank	03-A-610P-S2
EP-T64	EU-T64	Denaturant storage tank	03-A-611P-S2
EP-T65	EU-T65	190-proof ethanol storage tank	03-A-612P-S2

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
N/A	Tricanter Corn Oil Recovery System
N/A	Corrosion Inhibitor Tank

II. Plant-Wide Conditions

Facility Name: Golden Grain Energy LLC
Permit Number: 09-TV-002

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: Five years from permit issuance
Commencing on: March 10, 2009
Ending on: March 09, 2014

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits

Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO₂): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

- A. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
- B. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
- C. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
- D. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
- E. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

Compliance Plan

The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in Section III of this permit, Golden Grain Energy LLC is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Golden Grain Energy LLC shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

40 CFR 60 Subpart A Requirements

Except as provided in Subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility. This facility is an affected source and these General Provisions apply to the facility. The affected units are EP S10a, EP S10b, EP S40a, EP S40b, EP 22, EP 22b, EP 26, EP F90, EP T60a, EP T60b, EP T61, EP T62, EP T63, EP T64, and EP T65. See Appendix for the complete text of the Standard.

Authority for Requirements: 40 CFR 60 Subpart A
567 IAC 23.1(2)

40 CFR 60 Subpart Db Requirements

This facility is subject to Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The affected units are EP S10a and EP S10b. See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart Db
567 IAC 23.1(2) "ccc"

40 CFR 60 Subpart Kb Requirements

This facility is subject to the Standards of Performance for Volatile Organic Liquid storage vessels (including petroleum liquids). This is applicable for storage tanks constructed after July 1984. The affected units are storage tanks EP T60a, EP T60b, EP T61, EP T62, EP T63, EP T64 and EP T65. See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart Kb
567 IAC 23.1(2) "ddd"

40 CFR 60 Subpart VV Requirements

This facility is subject to the Standards of Performance for Equipment leaks of VOC in the Synthetic Organic Chemicals Manufacturing industry. The affected units are EP S10a, EP S10b, EP S40a, EP S40b, EP 22, EP 22b, EP F90, EP T60a, and EP T60b. See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart VV
567 IAC 23.1(2) "nn"

40 CFR 60 Subpart III Requirements

This facility is subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The affected unit is EP 26. See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart III
567 IAC 23.1(2) "yyy"

III. Emission Point-Specific Conditions

Facility Name: Golden Grain Energy LLC
 Permit Number: 09-TV-002

Emission Point ID Number: EP-S10a

Associated Equipment

Associated Emission Unit ID Numbers: EU-1, EU-2, EU-P50, EU-B10
 Emissions Control Equipment ID Number: CE-10a
 Emissions Control Equipment Description: Thermal Oxidizer with Low-NO_x burners, and Flue Gas Recirculation (FGR)

Emission Unit vented through this Emission Point: EU-1, EU-2, EU-P50, EU-B10
 Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMBtu/hr
EP-S10a	EU-1	DDGS Dryer	Grain and Natural Gas	42
	EU-2	DDGS Dryer		42
	EU-P50	Distillation System		125
	EU-B10	Heat Recovery Boiler		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.01 gr/dscf; 4.5 lb/hr; 19.71 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.01 gr/scf; 4.5 lb/hr; 19.71 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 11.13 lb/hr; 48.75 tons/yr; 0.10 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)
Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 8.36 lb/hr; 36.62 tons/yr; 0.04 lb/MMBtu
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 2.75 lb/hr; 12.05 tons/yr; 98% reduction or 10 ppmv
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 25.46 lb/hr; 111.51 tons/yr; 90% reduction or 100 ppmv
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Acetaldehyde (HAP)
Emission Limit(s): 0.113 lb/hr⁽³⁾; 9.4 tons/yr⁽⁴⁾
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Acrolein (HAP)
Emission Limit(s): 9.4 tons/yr⁽⁴⁾
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Formaldehyde (HAP)
Emission Limit(s): 9.4 tons/yr⁽⁴⁾
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Methanol (HAP)
Emission Limit(s): 9.4 tons/yr⁽⁴⁾
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Pollutant: Total HAP
Emission Limit(s): 0.59 lb/hr⁽⁵⁾; 24.4 tons/yr⁽⁴⁾
Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

^{(3), (5)} Limit to stay minor for 112(g).

⁽⁴⁾ Plant-wide Limit to stay minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission point is subject to NSPS subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. It is also subject to NSPS subpart A: General Provisions.

This emission point is subject to NSPS subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

This emission point is not subject to any NESHAP at this time.

Operating Limits

- A. All control equipment shall be maintained according to the manufacturer's specifications.
- B. The owner or operator shall follow the applicable standards of NSPS Subpart VV, 40 CFR 60.480 through 60.489.
- C. The owner or operator shall follow the applicable standards of NSPS Subpart Db, 40 CFR 60.40b through 60.49b.
- D. The thermal oxidizer shall maintain a temperature (3 hour average) during operation of no more than 50 °F below the average temperature of the oxidizer recorded during the most recent performance test which demonstrated compliance with the emission limits, and shall be operated at all times the dryers or distillation equipment is being used.
- E. The dryers and thermal oxidizer shall combust only natural gas and/or process off gases.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
- B. The owner or operator shall maintain hourly records of the operating temperature of the thermal oxidizer, and record all three-hour periods (during actual operation) during which the average temperature of the thermal oxidizer is more than 50 °F below the average temperature of the oxidizer recorded during the most recent performance test which demonstrated compliance with the emission limits.
- C. The owner or operator shall maintain records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- D. The owner or operator shall maintain records of the amounts of each fuel combusted during each day, and calculate the annual capacity factor on a 12-month rolling average basis a new annual capacity factor calculated at the end of each calendar month, as required in 40 CFR 60.49b(d). The annual capacity factor is defined as the ratio between the actual heat input to a steam generating unit during a calendar year, and the potential heat input had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.
- E. The owner or operator shall maintain records of the following information for each steam generating unit operating day, as required in 40 CFR 60.49b(g). This information shall also be submitted in a report, as required in 40 CFR 60.49b(i).
 - 1. Calendar date.
 - 2. Average hourly nitrogen oxides emission (as NO₂) rates measured or predicted.
 - 3. 30-day average nitrogen oxides emission rates calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
 - 4. Identification of the steam generating unit operating days when the calculated 30-day

average nitrogen oxides emission rates are in excess of the emission standard (0.10 lb/MMBTU), with the reason for such excess emissions as well as a description of corrective actions taken.

5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.
6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reason for excluding the data.
7. Identification of "F" factor used for calculations, method of determination and type of fuel combusted.
8. Identification of the times when the pollutant concentrations exceed the full span of the continuous monitoring system.
9. Description of any modifications to the continuous monitoring system that could affect the ability of the CMS to comply with Performance Specification 2 or 3.
10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.

Continuous Emission Monitoring

The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere. The CEM shall be operated and data collected as required under 40 CFR 60.48b(c), (d), (e) and (f), or use an approved monitoring plan. As an alternative to a CEM, the emissions of nitrogen oxides may be determined using a Predictive Emissions Monitoring System (PEMS). This is in accordance with 40 CFR 60.48b (g) 2 and must meet the requirements of 40 CFR 49b(c). The PEMS plan submitted April 19, 2005 by Golden Grain Energy has been approved with the additions outlined in the April 22, 2005 letter from the DNR. See Appendix F for details of PEMS.

Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 125

Stack Opening, (inches, dia.): 72

Exhaust Flow Rate (acfm): 100,000

Exhaust Temperature (°F): 261

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-600P-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-S10b

Associated Equipment

Associated Emission Unit ID Numbers: EU-3, EU-4, EU-P, EU-B

Emissions Control Equipment ID Number: CE-10b

Emissions Control Equipment Description: Thermal Oxidizer with Low-NO_x burners, and Flue Gas Recirculation (FGR)

Emission Unit vented through this Emission Point: EU-3, EU-4, EU-P, EU-B

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	Emission Unit Description	Raw Material	Rated Capacity MMBtu/hr
EP-S10b	EU-3	DDGS Dryer	Grain and Natural Gas	42
	EU-4	DDGS Dryer		42
	EU-P	Distillation (3 Tanks and Condenser)		125
	EU-B	Heat Recovery Boiler		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.01 gr/dscf; 4.5 lb/hr; 19.71 tons/yr;

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.01 gr/scf; 4.5 lb/hr; 19.71 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 11.13 lb/hr; 48.75 tons/yr; 0.10 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(3)

Iowa DNR Construction Permit 05-A-780P

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 8.36 lb/hr; 36.62 tons/yr; 0.04 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 2.75 lb/hr; 12.05 tons/yr; 98% reduction or 10 ppmv

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 25.4 lb/hr; 111.51 tons/yr; 90% reduction or 100 ppmv

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 0.113 lb/hr⁽²⁾; 9.4 tons/yr⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Acrolein (HAP)

Emission Limit(s): 9.4 tons/yr⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Formaldehyde (HAP)

Emission Limit(s): 9.4 tons/yr⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Methanol (HAP)

Emission Limit(s): 9.4 tons/yr⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Pollutant: Total HAP

Emission Limit(s): 0.59 lb/hr⁽⁴⁾; 24.4 tons/yr⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

^{(2), (4)} Limit to stay minor for 112(g).

⁽³⁾ Plant-wide Limit to stay minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission point is subject to NSPS subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. It is also subject to NSPS subpart A: General Provisions.

This emission point is subject to NSPS subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

This emission point is not subject to any NESHAP at this time.

Operating Limits

A. All control equipment shall be maintained according to the manufacturer's specifications.

B. The owner or operator shall follow the applicable standards of NSPS Subpart VV, 40 CFR 60.480 through 60.489.

- C. The owner or operator shall follow the applicable standards of NSPS Subpart Db, 40 CFR 60.40b through 60.49b.
- D. The thermal oxidizer shall maintain a temperature (3 hour average) during operation of no more than 50 °F below the average temperature of the oxidizer recorded during the most recent performance test which demonstrated compliance with the emission limits, and shall be operated at all times the dryers or distillation equipment is being used.
- E. The dryers and thermal oxidizer shall combust only natural gas and/or process off gases.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
- B. The owner or operator shall maintain hourly records of the operating temperature of the thermal oxidizer, and record all three-hour periods (during actual operation) during which the average temperature of the thermal oxidizer is more than 50 °F below the average temperature of the oxidizer recorded during the most recent performance test which demonstrated compliance with the emission limits.
- C. The owner or operator shall maintain records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- D. The owner or operator shall maintain records of the amounts of each fuel combusted during each day, and calculate the annual capacity factor on a 12-month rolling average basis a new annual capacity factor calculated at the end of each calendar month, as required in 40 CFR 60.49b (d). The annual capacity factor is defined as the ratio between the actual heat input to a steam generating unit during a calendar year, and the potential heat input had it been operated for 8760 hours during a calendar year at the maximum steady state design heat input capacity.
- E. The owner or operator shall maintain records of the following information for each steam generating unit operating day, as required in 40 CFR 60.49b(g). This information shall also be submitted in a report, as required in 40 CFR 60.49b(i).
 - 1. Calendar date.
 - 2. Average hourly nitrogen oxides emission (as NO₂) rates measured or predicted.
 - 3. 30-day average nitrogen oxides emission rates calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
 - 4. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the emission standard (0.10 lb/MMBTU), with the reason for such excess emissions as well as a description of corrective actions taken.
 - 5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of

corrective actions taken.

6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reason for excluding the data.
7. Identification of "F" factor used for calculations, method of determination and type of fuel combusted.
8. Identification of the times when the pollutant concentrations exceed the full span of the continuous monitoring system.
9. Description of any modifications to the continuous monitoring system that could affect the ability of the CMS to comply with Performance Specification 2 or 3.
10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 125

Stack Opening, (inches, dia.): 72

Exhaust Flow Rate (acfm): 100,000

Exhaust Temperature (°F): 261

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Continuous Emission Monitoring

The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere. The CEM shall be operated and data collected as required under 40 CFR 60.48b(c), (d), (e) and (f), or use an approved monitoring plan. As an alternative to a CEM, the emissions of nitrogen oxides may be determined using a Predictive Emissions Monitoring System (PEMS). This is in accordance with 40 CFR 60.48b(g)2 and must meet the requirements of 40 CFR 49b(c). The PEMS plan submitted April 19, 2005 by Golden Grain Energy has been approved with the additions outlined in the April 22, 2005 letter from the DNR. See Appendix F for details of PEMS.

Authority for Requirement: Iowa DNR Construction Permit 05-A-780P

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-S15

Associated Equipment

Associated Emission Unit ID Numbers: EU-P15
Emissions Control Equipment ID Number: CE-C15
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU-P15
Emission Unit Description: Grain Loading and Baghouse
Raw Material/Fuel: Grain
Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-601P-S3

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.0012 gr/dscf; 0.40 lb/hr; 1.75 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-601P-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.0012 gr/dscf; 0.40 lb/hr; 1.75 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-601P-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

- A. All control equipment shall be maintained according to the manufacturer's specifications.
- B. Grain unloading shall be done using a "choke flow" method to minimize fugitive dust emissions.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.

Authority for Requirement: Iowa DNR Construction Permit 03-A-601P-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40

Stack Opening, (inches, dia.): 36

Exhaust Flow Rate (scfm): 39,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-601P-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: Hammermill and Baghouse (EP-S30a and EP-S30b)

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30, EU-P30b
 Emissions Control Equipment ID Number: CE-C30, CE-C30b
 Emissions Control Equipment Description: Baghouse

Emission Unit Descriptions, Emissions Control Equipment, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	Control Equipment Description	Construction Permit
EP-S30a	EU-P30	Hammermill and Baghouse	Grain	N/A	CE-C30	Baghouse	03-A-602P-S2
EP-S30b	EU-P30b				CE-C30b		05-A-781P

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point listed in this section shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-602P-S2; 05-A-781P

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.003 gr/dscf; 0.41 lb/hr; 1.8 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-602P-S2; 05-A-781P

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.003 gr/dscf; 0.41 lb/hr; 1.8 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-602P-S2; 05-A-781P

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

A. All control equipment shall be maintained according to the manufacturer’s specifications.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.

Authority for Requirement: Iowa DNR Construction Permit 03-A-602P-S2; 05-A-781P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40

Stack Opening, (inches, dia.): 32

Exhaust Flow Rate (scfm): 16,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-602P-S2; 05-A-781P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: Fermentation and Scrubber (EP-S40a and EP-S40b)

Associated Equipment

Associated Emission Unit ID Numbers: EU-P40a, EU-P40b
 Emissions Control Equipment ID Number: CE-C40a, CE-C40b
 Emissions Control Equipment Description: Packed Bed Scrubber

Emission Unit Descriptions, Emissions Control Equipment, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	Control Equipment Description	Construction Permit
EP-S40a	EU-P40a	Fermentation and Scrubber	Corn Slurry/Yeast	N/A	CE-C40a	Baghouse	03-A-603P-S2
EP-S40b	EU-P40b				CE-C40b		05-A-782P

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point listed in this section shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2) "d"

Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

⁽¹⁾An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 6.1 lb/hr; 26.72 tons/yr; 95% reduction or 100 ppmv

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 0.822 lb/hr ⁽²⁾; 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

Pollutant: Acrolein (HAP)

Emission Limit(s): 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

Pollutant: Formaldehyde (HAP)

Emission Limit(s): 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

Pollutant: Methanol (HAP)

Emission Limit(s): 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

Pollutant: Total HAP

Emission Limit(s): 0.98 lb/hr; 24.4 tons/yr ⁽⁴⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

⁽²⁾ Limit to stay minor for 112(g).

^{(3), (4)} Plantwide limit to remain minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission point is subject to NSPS subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. It is also subject to NSPS subpart A: General Provisions.

This emission point is not subject to any NESHAP at this time.

Operating Limits

- A. All control equipment shall be maintained according to the manufacturer's specifications.
- B. The owner or operator shall follow the applicable standards of NSPS Subpart VV, 40 CFR 60.480 through 60.489.
- C. The scrubber water flowrate shall be at a rate equal to or greater than the water flowrate during the latest successful stack test for VOC.
- D. Sodium Bisulfite shall be continuously added to the scrubber water at a rate equal to or greater than the amount added during the latest successful stack test for HAP emissions.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
- B. The owner or operator shall maintain records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- C. Calculate and record the scrubber water flowrate.
- D. Calculate and record the amount of sodium bisulfite added to the scrubber water.

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 45

Stack Opening, (inches, dia.): 20

Exhaust Flow Rate (scfm): 5,100

Exhaust Temperature (°F): 75

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-603P-S2; 05-A-782P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: DDGS Cooler Cyclone (EP-S70a, EP-S70b)

Associated Equipment

Associated Emission Unit ID Numbers: EU-P70a, EU-P70b

Emissions Control Equipment ID Number: N/A

Emission Unit vented through this Emission Point: EU-P70a, EU-P70b

Emission Unit Description: DDGS Cooler Cyclone

Raw Material/Fuel: Distillers dried grain and soluble (DDGS)

Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point listed in this section shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.003 gr/dscf ; 0.54 lb/hr; 2.37 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.003 gr/dscf ; 0.54 lb/hr; 2.37 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 3.3 lb/hr; 14.45 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 0.135 lb/hr ⁽²⁾; 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Acrolein (HAP)

Emission Limit(s): 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Formaldehyde (HAP)

Emission Limit(s): 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Methanol (HAP)

Emission Limit(s): 9.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Pollutant: Total HAP

Emission Limit(s): 0.73 lb/hr ⁽⁴⁾; 24.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

^{(2), (4)} Limit to remain minor for 112(g).

⁽³⁾ Plantwide limit to remain minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

A. There are no operating limits at this time.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

A. There are no monitoring requirements at this time.

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 118

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 35,000

Exhaust Temperature (°F): 85

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-604P-S3; 05-A-783P-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: Cooling Tower (EP-P80a, EP-P80)

Associated Equipment

Associated Emission Unit ID Numbers: EU-P80a, EU-P80b
Emissions Control Equipment ID Number: CE-P80a, CE-P80b
Emissions Control Equipment Description: Drift Eliminator, 0.005%

Emission Unit vented through this Emission Point: EU-P80a, EU-P80b
Emission Unit Description: Cooling Tower
Raw Material/Fuel: Cooling Water
Rated Capacity: 1.28 MMGal/hr for each cooling tower

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point listed in this section shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM₁₀)
Emission Limit(s): 1.33 lb/hr; 5.84 tons/yr
Authority for Requirement: 567 IAC 23.3 (2)
Iowa DNR Construction Permit 06-A-054P; 05-A-784P

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 1.33 lb/hr; 5.84 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 06-A-054P; 05-A-784P

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

A. This Total Dissolved Solids (TDS) in the process water in each cooling tower shall not exceed 2500 ppm.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

A. The owner or operator shall test the Total Dissolved Solids (TDS) at least once per month.
Authority for Requirement: Iowa DNR Construction Permit 06-A-054P; 05-A-784P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 36

Stack Opening, (inches, dia.): 25 each cell

Exhaust Flow Rate (acfm): 1,500,000 each cell

Exhaust Temperature (°F): 85

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-054P; 05-A-784P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-S90

Associated Equipment

Associated Emission Unit ID Numbers: EU-P90
Emissions Control Equipment ID Number: CE-C90
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU-P90
Emission Unit Description: DDGS Loading and Baghouse
Raw Material/Fuel: Distilled Dried Grain and Solubles (DDGS)
Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-605P-S2

⁽¹⁾ An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.0023 gr/dscf; 0.1 lb/hr; 0.44 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-605P-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.0023 gr/dscf; 0.1 lb/hr; 0.44 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-605P-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

- A. All control equipment shall be maintained according to the manufacturer's specifications.
- B. A maximum of 482,143 tons of Distillers Dried Grain and Solubles (DDGS) shall be produced, plant wide, per twelve-month rolling period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
- B. The owner or operator shall maintain records of the amount of DDGS produced, plant wide, and update the twelve-month rolling total on a monthly basis.

Authority for Requirement: Iowa DNR Construction Permit 03-A-605P-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40

Stack Opening, (inches, dia.): 14

Exhaust Flow Rate (scfm): 5,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-605P-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-11

Associated Equipment

Associated Emission Unit ID Numbers: EU-11
Emissions Control Equipment ID Number: EP-11
Emissions Control Equipment Description: Flare

Emission Unit vented through this Emission Point: EU-11
Emission Unit Description: Biomethanator
Raw Material/Fuel: Biomethanator off-gases
Rated Capacity: 3.2 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

⁽¹⁾ Visible emissions are allowed for no more than 5 minutes in any 2 consecutive hours.

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.22 lb/hr; 0.96 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 grr/dscf; 0.22 lb/hr; 0.96 tons/yr

Authority for Requirement: 567 IAC 23.3(2) "a"

Iowa DNR Construction Permit 03-A-606P-S1

Pollutant: Nitrogen Dioxides (NO_x)

Emission Limit(s): 0.22 lb/hr; 0.96 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.17 lb/hr; 0.75 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 1.16 lb/hr; 5.08 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

Pollutant: Single HAP

Emission Limit(s): 9.4 tons/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

Pollutant: Total HAP

Emission Limit(s): 24.4 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

^{(2), (3)} Plant-wide limit to stay minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

- A. The flare shall be used whenever the dryers are not in operation.
- B. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- C. The flare shall be designed and operated according to the provisions of 40 CFR 60.18, including a device to determine the presence of the pilot flame.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall keep records of control equipment inspections and repairs.
- B. The owner or operator shall monitor the presence of the pilot flame and other parameters of the flare according to the provisions of 40 CFR 60.18.

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 11

Stack Opening, (inches, dia.): Flare

Exhaust Flow Rate (scfm): 3,280 Max

Exhaust Temperature (°F): 1800

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-606P-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-22

Associated Equipment

Associated Emission Unit ID Numbers: EU22

Emissions Control Equipment ID Number: CE-22

Emissions Control Equipment Description: Vapor Recovery and Truck Loadout Flare

Emission Unit vented through this Emission Point: EU-22

Emission Unit Description: Truck Product Loadout

Raw Material/Fuel: N/A

Rated Capacity: 4.5 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0%

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 1.34 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.34 tons/yr

Authority for Requirement: 567 IAC 23.3(2) "a"

Iowa DNR Construction Permit 03-A-607P-S3

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 1.34 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 7.3 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

Pollutant: Single HAP

Emission Limit(s): 9.4 tons/yr⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

Pollutant: Total HAP

Emission Limit(s): 24.4 tons/yr⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

^{(2), (3)} Plant-wide limit to stay minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission point is subject to NSPS subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. It is also subject to NSPS subpart A: General Provisions.

This emission point is not subject to any NESHAP at this time.

Operating Limits

Operating limits for this emission unit shall be:

- A. All control equipment shall be maintained according to the manufacturer's specifications.
- B. The owner or operator shall follow the applicable standards of NSPS Subpart VV, 40 CFR 60.480 through 60.489.
- C. The control equipment shall be used whenever product is loaded through the truck loadout.
- D. The flare shall be designed and operated according to the provisions of 40 CFR 60.18, including a device to determine the presence of the pilot flame.
- E. A maximum of 150 million gallons of denatured ethanol may be loaded, plant wide, per twelve-month rolling period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
- B. The owner or operator shall maintain records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- C. The owner or operator shall monitor the presence of the pilot flame and other parameters of the flare according to the provisions of 40 CFR 60.18.
- D. The owner or operator shall maintain records of the amount of ethanol loaded out plant wide, and update the twelve-month rolling total on a monthly basis.

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 20

Stack Opening, (inches, dia.): 48

Exhaust Flow Rate (scfm): 3,280

Exhaust Temperature (°F): 1800

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-607P-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-22b

Associated Equipment

Associated Emission Unit ID Numbers: EU-22b

Emissions Control Equipment ID Number: CE-22b

Emissions Control Equipment Description: Vapor Recovery and Rail Loadout Flare

Emission Unit vented through this Emission Point: EU-22b

Emission Unit Description: Rail Product Loadout

Raw Material/Fuel: N/A

Rated Capacity: 12.4 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 0%

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 3.7 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 3.7 tons/yr

Authority for Requirement: 567 IAC 23.3(2) "a"

Iowa DNR Construction Permit 08-A-235P

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 3.7 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 13.76 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

Pollutant: Single HAP

Emission Limit(s): 9.4 tons/yr ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

Pollutant: Total HAP

Emission Limit(s): 24.4 tons/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

^{(1), (2)} Plant-wide limit to stay minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission point is subject to NSPS subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. It is also subject to NSPS subpart A: General Provisions.

This emission point is not subject to any NESHAP at this time.

Operating Limits

Operating limits for this emission unit shall be:

- A. All control equipment shall be maintained according to the manufacturer's specifications.
- B. The owner or operator shall follow the applicable standards of NSPS Subpart VV, 40 CFR 60.480 through 60.489.
- C. The control equipment shall be used whenever product is loaded through the rail loadout.
- D. The rail loadout flare shall be operated no more than 6000 hours per 12 month rolling period.
- E. The flare shall be designed and operated according to the provisions of 40 CFR 60.18, including a device to determine the presence of the pilot flame.
- F. A maximum of 150 million gallons of denatured ethanol may be loaded, plant wide, per twelve-month rolling period.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
- B. The owner or operator shall maintain records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- C. The owner or operator shall monitor the presence of the pilot flame and other parameters of the flare according to the provisions of 40 CFR 60.18.
- D. Record the number of hours the rail loadout flare is operated. Calculate and record monthly and 12 month rolling totals.
- E. The owner or operator shall maintain records of the amount of ethanol loaded out plant wide, and update the twelve-month rolling total on a monthly basis.

Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 30
- Stack Opening, (inches, dia.): 60
- Exhaust Flow Rate (scfm): 3,280
- Exhaust Temperature (°F): 1800
- Discharge Style: Vertical Unobstructed
- Authority for Requirement: Iowa DNR Construction Permit 08-A-235P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-25

Associated Equipment

Associated Emission Unit ID Numbers: EU-25

Emissions Control Equipment ID Number: N/A

Emission Unit vented through this Emission Point: EU-25

Emission Unit Description: Emergency Fire Pump

Raw Material/Fuel: N/A

Rated Capacity: 130 HP/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.42 lb/hr; 0.1 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.42 lb/hr; 0.1 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 0.1 tons/yr; 0.39 tons/yr; 2.5 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(3) "b"

Iowa DNR Construction Permit 06-A-056P

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 5.9 lb/hr; 1.47 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.47 lb/hr; 0.12 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 1.27 lb/hr; 0.32 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

- A. This number of hours this unit shall operate shall not exceed 500 hours per 12 month rolling period.
- B. This unit shall be fired by fuel oil #1 or #2 only.
- C. The sulfur content of any fuel used in this unit shall not exceed 0.05% by weight.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall record the number of hours this unit is operated, in hours. Calculate and record monthly and 12 month rolling totals.
- B. The owner or operator shall record the sulfur content of any fuel used in this unit, in weight percent.

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 8

Stack Opening, (inches, dia.): 4

Exhaust Flow Rate (acfm): 514

Exhaust Temperature (°F): 1000

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-056P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-26

Associated Equipment

Associated Emission Unit ID Numbers: EU-26

Emissions Control Equipment ID Number: N/A

Emission Unit vented through this Emission Point: EU-26

Emission Unit Description: Emergency Fire Pump

Raw Material/Fuel: N/A

Rated Capacity: 130 HP/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: 567 IAC 23.3(2) "d"

Iowa DNR Construction Permit 07-A-1291

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.29 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.29 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 2.5 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(3)

Iowa DNR Construction Permit 07-A-1291

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 4.03 lb/hr ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.32 lb/hr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 0.87 lb/hr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

^{(1), (2), (3)} The limit for PM, PM₁₀, NO_x, VOC and CO emissions is established to limit potential in conjunction with the limit on the hours of operation of the emission unit.

Pollutant: Particulate Matter (PM, filterable only)
Emission Limit(s): 0.8 g/Kw-hr
Authority for Requirement: 40 CFR §60.4200 Subpart III
Iowa DNR Construction Permit 07-A-1291

Pollutant: Nitrogen Oxides (NO_x)+non-Methane Hydrocarbons (NMHC)
Emission Limit(s): 10.5 g/Kw-hr
Authority for Requirement: 40 CFR §60.4200Subpart III
Iowa DNR Construction Permit 07-A-1291

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 5.0 g/Kw-hr
Authority for Requirement: 40 CFR §60.4200 Subpart III
Iowa DNR Construction Permit 07-A-1291

Pollutant: Fuel Sulfur Requirements beginning 10/01/2007
Emission Limit(s): Max 500 ppm sulfur and
Min Cetane index=40 or
Max Aromatic content=35%_{vol}
Authority for Requirement: 40 CFR §80.510(a)
Iowa DNR Construction Permit 07-A-1291

Pollutant: Fuel Sulfur Requirements beginning 10/01/2010
Emission Limit(s): Max 15 ppm sulfur and
Min Cetane index=40 or
Max Aromatic content=35%_{vol}
Authority for Requirement: 40 CFR §80.510(b)
Iowa DNR Construction Permit 07-A-1291

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission unit is subject to NSPS subpart III: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR §60.4200 through §60.4219) and to the applicable provisions of NSPS Subpart A- General Provisions (40 CFR §60.1 through 40 CFR §60.19) and is also subject to the requirements of 567 IAC 23.1(2)"yyy".

The emission unit is of the source category regulated by National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines (40 CFR §63.6580 through §63.6675). However, since the engine is currently not located at a major source of HAP emissions, the engine is not subject to the requirements of NESHAP Subpart ZZZZ.

Operating Limits

- A. The fire pump engine shall be fired by diesel fuel only.
- B. The sulfur content of any diesel fuel used in the fire pump engine shall not exceed 0.05% by weight.
- C. The fire pump shall operate no more than 500 hours per 12-month rolling period.

- D. Per 40 CFR §60.4211, owners and operators of emergency engines meeting standards under §60.4205, but not §60.4204, any operation other than emergency operation, and maintenance and testing is prohibited.
- E. The owner or operator shall meet the fuel requirements specified in 40 CFR §60.4207.
 - 1. Beginning October 1, 2007, diesel fuel fired in the diesel fire pump shall be limited to a maximum sulfur content of 500 ppm and minimum cetane index of 40 or a maximum aromatic content of 30 percent by volume per 40 CFR §80.150(a).
 - 2. Beginning October 1, 2010, diesel fuel fired in the diesel fire pump shall be limited to a maximum sulfur content of 15 ppm and a minimum cetane index of 40 or a maximum aromatic content of 40 percent by volume per 40 CFR §80.150(b).
 - 3. Per 40 CFR §60.4207, owners and operators of pre-2011 model year diesel generators subject to NSPS Subpart III may petition the Administrator for approval to use remaining non-compliance fuel that does not meet the fuel requirements of 40 CFR §80.510(a) or §80.510(b) beyond the dates required, for the purpose of using up existing fuel inventories.
- F. Per 40 CFR §60.4209, the owner or operator shall meet the monitoring requirements specified in 40 CFR 60.4207 and install a non-resettable hour meter prior to startup of the fire pump engine.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. Record the sulfur content of any fuel used in fire pump engine in weight percent.
- B. Record the number of hours the fire pump engine is operated each month and the reason fire pump was operated. Calculate and record 12-month rolling totals.
- C. The owner or operator shall complete all recordkeeping and monitoring as required by NSPS Subpart III.
 - 1. The owner or operator of the fire pump shall follow the monitoring requirements of 40 CFR §60.4209.
 - 2. The owner or operator of the fire pump shall follow the monitoring requirements of 40 CFR §60.4211.
- 3. The owner or operator of the fire pump shall follow the notification, reporting, and recordkeeping requirements of 40 CFR §60.4214(b).

Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 8
- Stack Opening, (inches, dia.): 5
- Exhaust Flow Rate (scfm): 240
- Exhaust Temperature (°F): 1076
- Discharge Style: Vertical Unobstructed
- Authority for Requirement: Iowa DNR Construction Permit 07-A-1291

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-F90

Associated Equipment

Associated Emission Unit ID Numbers: EU-F90
Emissions Control Equipment ID Number: N/A
Emissions Control Equipment Description: N/A

Emission Unit vented through this Emission Point: EU-F90
Emission Unit Description: VOC Emissions from Equipment Leaks
Raw Material/Fuel: N/A
Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 8.75 tons/yr
Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

Pollutant: Acetaldehyde (HAP)
Emission Limit(s): 9.4 tons/yr⁽¹⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

Pollutant: Acrolein (HAP)
Emission Limit(s): 9.4 tons/yr⁽¹⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

Pollutant: Formaldehyde (HAP)
Emission Limit(s): 9.4 tons/yr⁽¹⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

Pollutant: Methanol (HAP)
Emission Limit(s): 9.4 tons/yr⁽¹⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

Pollutant: Total HAP
Emission Limit(s): 24.4 tons/yr⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

^{(1), (2)} Plant-wide limit to stay minor for 112(g).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

This emission point is subject to NSPS subpart VV: Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. It is also subject to NSPS subpart A: General Provisions.

This emission point is not subject to any NESHAP at this time.

Operating Limits

- A. The owner or operator shall document the number and type of all equipment, as defined in NSPS Subpart VV 40 CFR 60.481, at this plant.
- B. The owner or operator shall follow the applicable standards of NSPS Subpart VV, 40 CFR 60.480 through 60.489.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall maintain records of the VOC emissions from all equipment, as defined in NSPS Subpart VV 40 CFR 60.481, plant-wide and update the twelve-month rolling total on a monthly basis. Emission factors shall be based on EPA document 453-R-95-017 titled Protocol for Equipment Leak Emission Estimates. The plant shall use best LDAR methodology.
- B. The owner or operator shall maintain records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.

Authority for Requirement: Iowa DNR Construction Permit 05-A-384P-S1

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-F100

Associated Equipment

Associated Emission Unit ID Numbers: EU-F100

Emissions Control Equipment ID Number: N/A

Emissions Control Equipment Description: N/A

Emission Unit vented through this Emission Point: EU-F100

Emission Unit Description: Plant Haul Roads

Raw Material/Fuel: Fugitive Dust

Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 4.6 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-055P

Pollutant: Particulate Matter (PM)

Emission Limit(s): 23.57 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-055P

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

A. All internal paved haul roads shall be swept at least once a week, weather permitting.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

A. The owner or operator shall record the frequency of sweeping for each road section. If sweeping does not occur due to weather, the circumstances shall be recorded.

Authority for Requirement: Iowa DNR Construction Permit 06-A-055P

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: Storage Tanks (EP-T60a, EP-T60b)

Associated Equipment

Associated Emission Unit ID Numbers: EU-T60a, EU-T60b

Emissions Control Equipment ID Number: N/A

Emissions Control Equipment Description: N/A

Emission Unit Descriptions, Emissions Control Equipment, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	Construction Permit
EP-T60a	EU-T60a	1MM Gallon Denatured Ethanol Storage Tank	N/A	N/A	N/A	07-A-438P
EP-T60b	EU-T60b					07-A-439P

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

No emission limits required at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

The tanks are subject to NSPS subpart Kb for Volatile Liquid Storage Tanks.

The tanks are subject to NSPS subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry and NSPS subpart A, General Provisions.

The tanks are not subject to NESHAP requirements at this time.

Operating Limits

Operating limits for this emission unit shall be:

- A. This tank shall store denatured ethanol only.
- B. A maximum of 150 million gallons of denatured ethanol shall be produced, plant wide, per twelve-month rolling period.
- C. The owner or operator shall follow the applicable standards of NSPS Subpart Kb, 40 CFR 60.112b(a)(1), and inspect as required in 40 CFR 60.113b(a).

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the lifetime of the storage vessel.
- B. The owner or operator shall maintain records as required in 40 CFR 60.115b(a) and 40 CFR 60.116b.
- C. The owner or operator shall maintain records of the amount of denatured ethanol produced plant wide, and update the twelve-month rolling total on a monthly basis.

Authority for Requirement: Iowa DNR Construction Permit 07-A-438P, 07-A-439P

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 36
- Stack Opening, (inches, dia.): N/A
- Exhaust Flow Rate (scfm): Working losses
- Exhaust Temperature (°F): Ambient
- Discharge Style: N/A

Authority for Requirement: Iowa DNR Construction Permit 07-A-438P, 07-A-439P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required?** Yes No
- Facility Maintained Operation & Maintenance Plan Required?** Yes No
- Compliance Assurance Monitoring (CAM) Plan Required?** Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: Storage Tanks (EP-T61, EP-T62, EP-T63, EP-T64, EP-T65)

Associated Equipment

Emission Unit Descriptions, Emissions Control Equipment, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit, CE=Control Equipment

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	CE Description	Construction Permit
EP-T61	EU-T61	0.75MM Gallon Denatured Ethanol Storage Tank	N/A	N/A	CE-T61	Internal Floating Tank	03-A-608P-S2
EP-T62	EU-T62				CE-T62		03-A-609P-S2
EP-T63	EU-T63	0.1 MM Gallon 200 Proof Ethanol Storage Tank			CE-T63		03-A-610P-S2
EP-T64	EU-T64	0.1 MM Gallon Denaturant Storage Tank			CE-T64		03-A-611P-S2
EP-T65	EU-T65	0.1 MM Gallon 190 Proof Ethanol Storage Tank			CE-T65		03-A-612P-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

No emission limits are required at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP Applicability

The tanks are subject to NSPS Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984. They are also subject to NSPS subpart A: General Provisions.

The tanks are not subject to any NESHAP standards as of permit issuance date.

Operating Limits

- A. Tank T61 and T62 shall only store denatured ethanol, tank T63 shall only store 200 proof ethanol, tank T64 shall only store denaturant and tank T65 shall only store 190 proof ethanol. A maximum of 150 million gallons of denatured ethanol shall be produced, plant wide, per twelve-month rolling period*.
- B. The owner or operator shall follow the applicable standards of NSPS Subpart Kb, 40 CFR 60.112b (a)(1), and inspect as required in 40 CFR 60.113b(a).

* The maximum production requirement for EP-T63 is 150 million gallons of 200 proof ethanol, and 7.5 million gallons of denaturant for EP-T64, and there is no maximum production requirement for EP-T65 in construction permit.

Reporting and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- A. The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the lifetime of the storage vessel.
- B. The owner or operator shall maintain records as required in 40 CFR 60.115b (a) and 40 CFR 60.116b.
- C. The owner or operator shall maintain records of the amount of denatured ethanol produced plant wide, and update the twelve-month rolling total on a monthly basis.

Authority for Requirement: Iowa DNR Construction Permit 03-A-608P-S2, 03-A-609P-S2, 03-A-610P-S2, 03-A-611P-S2, 03-A-612P-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

EP	Stack Height, ft	Stack Opening, in	Exhaust Flow Rate, scfm	Exhaust Temperature, °F	Discharge Style	Authority for Requirement
EP-T61	50	4×5, 4 in total	Displacement air	Ambient	Horizontal	03-A-608P-S2
EP-T62	50	4×5, 4 in total				03-A-609P-S2
EP-T63	30	4×5, 4 in total				03-A-610P-S2
EP-T64	30	4×5, 4 in total				03-A-611P-S2
EP-T65	30	4×5, 4 in total				03-A-612P-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
 - a. Form 1.0 "Facility Identification";
 - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
 - c. Form 5.0 "Title V annual emissions summary/fee"; and
 - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
 - a. Form 1.0 "Facility Identification";
 - b. Form 5.0 "Title V annual emissions summary/fee";
 - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for reation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

- a. The date, place and time of sampling or measurements
 - b. The date the analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses; and
 - f. The operating conditions as existing at the time of sampling or measurement.
 - g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
- a. Comply with all terms and conditions of this permit specific to each alternative scenario.
 - b. Maintain a log at the permitted facility of the scenario under which it is operating.
 - c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

- a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
- b. Compliance test methods specified in 567 Chapter 25; or
- c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

- a. Any monitoring or testing methods provided in these rules; or
- b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall

be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act.
- e. The changes comply with all applicable requirements.
- f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
 - i. A brief description of the change within the permitted facility,
 - ii. The date on which the change will occur,
 - iii. Any change in emission as a result of that change,
 - iv. The pollutants emitted subject to the emissions trade
 - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
 - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
 - vii. Any permit term or condition no longer applicable as a result of the change.

567 IAC 22.110(1)

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that is required to do any of the following:

- i. Correct typographical errors;
 - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - iii. Require more frequent monitoring or reporting by the permittee; or
 - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
 - b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
 - c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.
2. Minor Permit Modification.
- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
 - i. Do not violate any applicable requirements
 - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
 - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
 - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
 - v. Are not modifications under any provision of Title I of the Act; and
 - vi. Are not required to be processed as significant modification.
 - b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
 - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
 - ii. The permittee's suggested draft permit
 - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
 - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
 - c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.
3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. 567 IAC 22.111-567 IAC 22.113 The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in

which event the operation of the changed source may not commence until the department revises the permit. 567 IAC 22.105(1)"a"(4)

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. 567 IAC 22.1(1)

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations, training fires and controlled burning of a demolished building. 567 IAC 23.1(3)"a", and 567 IAC 23.2

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. 567 IAC 23.2 *except* 23.2(3)"h"; 567 IAC 23.2(3)"h" - *State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

- a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
- b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
- c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
- d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
- d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
- e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of

the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant, 5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
 - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
 - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
 - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
 - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
 - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
 - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
 - a. Such applicable requirements are included and are specifically identified in the permit; or
 - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
 - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance. Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons. *567 IAC 26.1(1)*

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1
909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

Field Office 2
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3
1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5
401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

Field Office 6
1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Public Works Dept.
Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health Dept.
Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

Appendices:

- A. 40 CFR Part 60 Subpart A- General Provisions
<http://www.tceq.state.tx.us/permitting/air/rules/federal/60/a/ahp.html>
- B. 40 CFR Part 60 Subpart Db- Standards of Performance for Industrial-Commercial-Institutional Steam Generating Unit
<http://www.epa.gov/ttn/atw/combust/boiler/cfrdb02.pdf>
- C. 40 CFR Part 60 Subpart VV- Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry
<http://www.tceq.state.tx.us/permitting/air/rules/federal/60/vv/vvhp.html>
- D. 40 CFR Part 60 Subpart Kb- Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984
<http://www.tceq.state.tx.us/permitting/air/rules/federal/60/kb/kbhp.html>
- E. 40 CFR Part 60 Subpart IIII- Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
<http://www.epa.gov/ttn/atw/nsps/cinsps/fr11jy06.pdf>
- F. Predictive Emission Monitoring System (PEMs)

1. APPLICABILITY AND PRINCIPLE

1.1 Applicability.

1.1.1 This specification is to be used for evaluating the acceptability of predictive emission monitoring systems (PEMS's) at the time of or soon after installation and whenever specified in the regulations. The PEMS may include, for certain stationary sources, a diluent (O₂ or CO₂) PEMS.

1.1.2 This specification is not designed to evaluate the installed PEMS performance over an extended period of time nor does it identify specific validation techniques and other auxiliary procedures to assess the PEMS performance. The source owner or operator, however, is responsible to validate, maintain, and operate the PEMS properly. To evaluate the PEMS performance, the Administrator may require, under Section 114 of the Act, the operator to conduct PEMS performance evaluations at other times besides the initial test.

1.1.3 The owner or operator may conduct this performance specification test in a restricted range of operation in accordance. For example, if the permitted range of operation of the emissions unit were between 50% and 100% of the possible range, and the owner or operator wishes to restrict the emissions unit to operation between 80% and 100% of the possible range for some reason (e.g. production schedules), the initial performance specification test may be performed for that restricted range. If, at a later date, the owner or operator elects to operate outside of the restricted range, then the owner or operator must conduct a relative accuracy (RA) test within 60 days of operation in that range to demonstrate that the PEMS can provide acceptable data when operating in the new range. The RA test at the new range is to be done by performing a single 9 point RA test within the new range using the appropriate test methods.

1.2 Principle. Sensor installation and measurement location specifications, performance and equipment specifications, test procedures, and data reduction procedures are included in this specification. Reference method tests and PEMS drift tests are conducted to determine conformance of the PEMS with the specification.

2. DEFINITIONS

2.1 Centroidal Area. A concentric area that is geometrically similar to the stack or duct cross section and is no greater than 1 percent of the stack or duct cross-sectional area.

2.2 PEMS. The total equipment required for the determination of a gas concentration or emission rate. The system consists of the following major subsystems:

2.2.1 Sensors and Sensor Interface. That portion of the PEMS used for the following: Process data acquisition; process data transportation between the sensors and the emission model(s); and sensor validation.

2.2.2 Emission Model(s). That portion of the PEMS that utilizes process data or reconciled process data and generates an output proportional to the gas concentration or emission rate. The emission model may generate emissions data in terms of the applicable emission limitation without the use of a diluent emission model.

2.2.3 Diluent Emission Model (if applicable). That portion of the PEMS that utilizes process data or reconciled process data and generates an output proportional to the diluent gas concentration (e.g., CO₂ or O₂).

2.2.4 Data Recorder. That portion of the PEMS that provides a permanent record of the analyzer output. The data recorder may include automatic data reduction capabilities. The data recorder may include electronic data records, paper records, or a combination of electronic data and paper records

2.2.5 Sensor Validation System. That portion of the PEMS that analyzes the process data to ensure the accuracy of the gas concentration determined by the emission model(s) including any diluent emissions model(s), and to provide reconciled process data in the event of a failed sensor.

2.3 PEMS Drift (PD). The difference in the PEMS output readings from the reference value(s) due to the effect of sensor drift and the effect of utilizing reconciled process data for when a sensor or any combination of sensors has failed.

2.4 Reference value. Based on reference method testing, a baseline PEMS measurement during which time each sensor has been determined to be functioning properly.

2.5 Relative Accuracy (RA). The absolute mean difference between the gas concentration or emission rate determined by the PEMS and the value determined by the reference methods (RM's) plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the RM tests or the applicable emission limit.

2.6 Representative Results. As defined by the RM test procedure outlined in this specification.

2.7 Failed Sensor or Sensor Failure. A sensor which, by comparison to the other sensors, has been determined to have failed or drifted such that the difference between PEMS output readings and reference values are beyond the allowable PEMS drift criteria.

3. INSTALLATION AND MEASUREMENT LOCATION SPECIFICATIONS

3.1 Sensor Installation. All sensors shall be installed at an accessible location in order to be able to perform, as necessary, repairs and replacements. Accessible locations does not require the installation of permanently installed platforms or ladders. Sensors may be at locations which require emission unit shutdown in order to repair or replace a failed sensor. After repair or replacement of a sensor, the process data from the sensor shall be, if necessary, corrected to provide process data which is representative of the process data obtained from the previously installed sensor.

3.2 Reference Method Measurement Location and Traverse Points.

3.2.1 Select, as appropriate, an accessible Reference Method (RM) measurement point at least two equivalent diameter downstream from the nearest control device, the point of pollutant generation, or other point at which a change in the pollutant concentration or emission rate may occur, and at least a half equivalent diameter upstream from the effluent exhaust or control device. When pollutant concentration changes are due solely to diluent leakage (e.g., air heater leakages) and pollutants and diluents are simultaneously measured at the same location, a half diameter may be used in lieu of two equivalent diameters.

Then select a traverse point or points that assure acquisition of representative samples over the stack or duct cross section. The following procedure is used to establish a traverse point which yields representative results: Establish the number and location of each traverse point for the sampling location in conformance with Test Method 1; Measure emissions in accordance with the applicable RM test method(s) at each traverse point for a period of two minutes plus the twice the test method's system response time; Determine the average of the emissions; and Locate the traverse point with emissions nearest the average of the emissions as the sampling location for the RM tests. Results from previous studies may be used.

In lieu of determining a single traverse point to provide representative emissions, the following procedure may be used to locate the traverse points for conducting the RM tests: Establish a "measurement line" that passes through the centroidal area and in the direction of any expected stratification; Locate a minimum of three traverse points at 16.7, 50.0, and 83.3 percent of the measurement line or, if the measurement line is longer than 2.4 meters, the tester may choose to locate the three traverse points on the line at 0.4, 1.2, and 2.0 meters from the stack or duct.

The tester may select other traverse points, provided that they can be shown to the satisfaction of the Administrator to provide a representative sample over the stack or duct cross section. Conduct all necessary RM tests within 3 cm (but no less than 3 cm from the stack or duct wall) of the traverse point or points.

4. PERFORMANCE AND EQUIPMENT SPECIFICATIONS

4.1 Data Recorder Scale. The PEMS data recorder response range must include a low-level (zero to 20% of the applicable emission standard) and a high-level value. The high-level value is chosen by the source owner or operator and is defined as follows:

4.1.1 For a PEMS intended to measure an uncontrolled emission (e.g., NO_x measurements at the stack of a natural gas fired boiler), the high-level value must be between 1.25 and 2 times the average potential emission level, unless otherwise specified in an applicable regulations. For a PEMS installed to measure controlled emissions, the high-level value must be between 1.5 and 2.0 times the pollutant concentration corresponding to the emission standard level. For a PEMS installed to measure emissions that are in compliance with an applicable regulation, the high-level value must be between 1.1 and 1.5 times the pollutant concentration corresponding to the emission standard level. If approved by the Permitting Authority, a lower high-level value may be used.

4.1.2 The data recorder output must be established so that the high-level value is read between 90 and 100 percent of the data recorder full scale. This scale requirement is not applicable to digital data recorders.

4.1.3 The PEMS design must allow the automatic or manual determination of failed sensors. At a minimum, an hourly determination must be performed.

4.1.4 In the event of a failed sensor(s), the PEMS design may include the automatic or manual reconciliation of the process data provided that the PEMS emissions have been demonstrated to not have drifted by more than 20 percent of the applicable emission standard.

4.2 PEMS Drift. The PEMS must not drift or deviate from the reference value by more than 20 percent of the applicable emission standard based upon a perturbation analysis of the effect of sensor drift and the effect of utilizing reconciled process data for when a sensor or any combination of sensors has failed. If the PEMS includes emission and diluent models, the PEMS drift (PD) must be determined separately for each.

4.3 PEMS Relative Accuracy. The RA of the PEMS must be no greater than 20 percent of the mean value of the RM test data in terms of the units of the emission standard or 10 percent of the applicable emission standard, whichever is greater. For emissions below 1/4 of the applicable emission standard, use 20 percent of the standard.

5. PERFORMANCE SPECIFICATION TEST PROCEDURES

5.1 Pretest Preparation. Install the PEMS, prepare the RM test site according to the specifications in Section 3, and prepare the PEMS for operation according to the manufacturer's written instructions.

5.2 PEMS DRIFT TEST PROCEDURE.

5.2.1 Prior to the initial RATA, a demonstration of the ability of the PEMS to identify failed sensors and, if applicable, to reconcile failed sensors while maintaining the PEMS drift to less than 20% of the applicable standard shall be performed. This demonstration shall be conducted at a high-level reference value or a range of high-level reference values. The high-level reference value(s) must be between 75% to 100% of the pollutant concentration which corresponds to the applicable emission standard. The perturbation analysis shall be conducted as follows:

5.2.2 General Records. Record: the high-level reference value(s); the expected range of sensor values; the baseline sensor values at the reference values; the percent change in sensor value from the baseline sensor value established as the point at which the sensor is considered to have failed; and the sensor value which results in the sensor to be considered a failed sensor.

5.2.3 Analysis of Failed Sensor Values. Artificially perturb each sensor to the sensor value immediately prior to the sensor value which results in the sensor to be considered a failed sensor, and then record the sensor value and PEMS value. Calculate and record the PEMS drift for each sensor. The PEMS drift for each perturbed sensor value must be less than 20% of the applicable emission standard.

5.2.4 Analysis of Sensor Reconciliation. Artificially perturb each sensor to the sensor value which results in the sensor to be considered a failed sensor, and then record the calculated sensor value and PEMS value. Calculate and record the PEMS drift for each sensor. The PEMS drift for each reconciled sensor value must be less than 20% of the applicable emission standard. Repeat the procedure for the high-level reference value.

5.2.5 Analysis of Combinations of Failed Sensors. Artificially perturb combinations of sensors to the sensor values which result in the sensors to be considered failed sensors, and then record the reconciled sensor values and PEMS value. Calculate the PEMS drift for each combination of failed sensors analyzed. Determine each combination of failed sensors which result in a PEMS drift of less than 20% of the applicable emission standard. The PEMS drift for each combination of reconciled sensor values must be less than 20% of the applicable emission standard in order to be acceptable.

5.3 RELATIVE ACCURACY TEST PROCEDURE

5.3.1 Sampling Strategy for RM Tests. Conduct the RM tests in such a way that they will yield results representative of the emissions from the source and can be correlated to the PEMS data. In order to correlate the PEMS and RM data properly, mark the beginning and end of each RM test period of each run (including the exact time of the day) on the PEMS permanent record of output. Use the following strategies for the RM tests:

5.3.2 Instrumental Test Methods. For all types of emission units, instrumental test methods, e.g., Method 3A, Method 6C, and Method 7E, are recommended.

5.3.3 Non-instrumental Test Methods. For emission units with consistent emissions, integrated or grab non-instrumental test methods, e.g., Method 6 or Method 7, respectively, may be used. A test run for grab samples must be made up of at least three separate measurements. Note that for emission units with varying emissions, if non-instrumental test methods are to be used, then integrated non-instrumental test methods must be used since grab sampling techniques may not provide representative emissions data.

5.3.4 Note. At times, PEMS RA tests are conducted during new source performance standards performance tests. In these cases, RM results obtained during PEMS RA tests may be used to determine compliance as long as the source and test conditions are consistent with the applicable regulations.

5.3.5 Correlation of RM and PEMS Data. Correlate the PEMS and the RM test data as to the time and duration by first determining from the PEMS final output (the one used for reporting) the integrated average pollutant concentration or emission rate for each pollutant RM test period. Consider system response time, if important, and confirm that the pair of results are on a consistent moisture, temperature, and diluent concentration basis. Then, compare each integrated PEMS value against the corresponding average RM value. Use the following guidelines to make these comparisons.

5.3.6 If the RM has an instrumental or an integrated non-instrumental sampling technique, make a direct comparison of the RM results and PEMS integrated average value.

5.3.7 If the RM has a grab sampling technique, first average the results from all grab samples taken during the test run, and then compare this average value against the integrated value obtained from the PEMS during the run.

5.3.8 Number of RM Tests. Conduct a minimum of nine sets of all necessary RM tests. Three sets must be conducted at low-level gas concentrations or emission rates, three at normal-level, and three at high-level. Note: The tester may choose to perform more than nine sets of RM tests. If this option is chosen, the tester may, at his discretion, reject a maximum of three sets of the test results so long as the total number of test results used to determine the RA is greater than or equal to nine, but all data including the rejected data must be reported.

5.3.9 Reference Methods. Unless otherwise specified in an applicable regulations, the test methods contained in 40 CFR Part 60, Appendix A are required. The instrumental test methods, e.g., Methods 3A, 6C, and 7E, are recommended. The tester should ensure that the test method chosen will be able to provide accurate and precise emissions data.

5.3.10 Calculations. Summarize the results on a data sheet. Calculate the mean of the RM values. Calculate the arithmetic differences between the RM and the PEMS output sets. Then calculate the mean of the difference, standard deviation, confidence coefficient, and PEMS RA, using Equations P-1, P-2, P-3, and P-4, respectively.

6. EQUATIONS

6.1 Arithmetic Mean. Calculate the arithmetic mean of the difference, d , of a data set as follows:

$$\bar{d} = \frac{1}{n} \sum_{i=1}^n d_i$$

(Eq. P-1)

Where: n = Number of data points.

d_i = Difference between RM test result and PEMS output

When the mean of the differences of pairs of data is calculated, be sure to correct the data for moisture, if applicable.

6.2 Standard Deviation. Calculate the standard deviation, S_d , as follows:

$$S_d = \left[\frac{\sum_{i=1}^n d_i^2 - \frac{\left(\sum_{i=1}^n d_i \right)^2}{n}}{n-1} \right]^{1/2}$$

(Eq. P-2)

6.3 Confidence Coefficient. Calculate the 2.5 percent error confidence coefficient (one-tailed), CC, as follows:

$$CC = t_{0.975} \frac{S_d}{\sqrt{n}}$$

(Eq. P-3)

Where: $t_{0.975}$ = t-value (see Table P-1).

TABLE P-1. t-VALUES

n ^a	t _{0.975}	n ^a	t _{0.975}	n ^a	t _{0.975}
2	20.706	7	2.447	20	2.201
3	4.303	8	2.365	13	2.179
4	3.182	9	2.306	14	2.160
5	2.776	10	2.262	15	2.145
6	2.571	11	2.228	16	2.131

^a The values in this table are already corrected for n-1 degrees of freedom. Use n equal to the number of individual values.

6.4 Relative Accuracy. Calculate the RA of a set of data as follows:

$$RA = \frac{|A| + |CC|}{\overline{RM}} \times 100$$

(Eq. P-4)

Where: **|A|** = Absolute value of the mean differences (from Eq. P-1).

|CC| = Absolute value of the confidence coefficient (from Eq. P-3).

\overline{RM} = Average RM value or applicable standard.

7. REPORTING

At a minimum (check with the appropriate regional office, or State, or local agency for additional requirements, if any) summarize in tabular form the results of the PD tests and the RA tests or alternative RA procedure as appropriate. Include all data sheets, calculations, and charts (records of PEMS responses), necessary to substantiate that the performance of the PEMS met the performance specifications.