

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

Name of Permitted Facility: Green Plains LLC – Shenandoah
Facility Location: 4124 Airport Road, Shenandoah, Iowa 51601
Air Quality Operating Permit Number: 13-TV-004-M002
Expiration Date: August 4, 2018
Permit Renewal Application Deadline: February 4, 2018

EIQ Number: 92-6961
Facility File Number: 36-10-001

Responsible Official

Name: Cory Scamman

Title: General Manager
Mailing Address: 4124 Airport Road
Phone #: (712) 246-2932

Permit Contact Person for the Facility

Name: Eric Nelson
Title: EHS&S Manager
Mailing Address: 4124 Airport Rd., Shenandoah, IA 51601
Phone #: (712) 246-2932

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

Lori Hanson, Supervisor of Air Operating Permits Section

Date

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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 |
| DNR..... | Iowa Department of Natural Resources |
| MVAC..... | motor vehicle air conditioner |
| NAICS..... | North American Industry Classification System |
| NSPS..... | new source performance standard |
| NESHAP..... | National Emission Standards for Hazardous Air Pollutants |
| 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: Green Plains LLC – Shenandoah

Permit Number: 13-TV-004-M002

Facility Description: Industrial Organic Chemicals/Ethanol Production (SIC 2869)

Equipment List

| Emission Point Number | Emission Unit Number | Emission Unit Description | DNR Construction Permit Number |
|------------------------------|-----------------------------|----------------------------------|---------------------------------------|
| EP-SV01 | EU-01 | Truck Receiving #1 | 06-A-340-S3 |
| | EU-02 | Truck Receiving #2 | |
| | EU-04 | Rail Receiving | |
| | EU-05 | Grain Elevator #1 | |
| | EU-06 | Grain Elevator #2 | |
| | EU-08 | Grain Bin #1 | |
| | EU-09 | Grain Bin #2 | |
| | EU-47 | Fill Conveyor #2 | |
| | EU-49 | Reclaim Conveyor #2 | |
| | EU-50 | Reclaim Conveyor #3 | |
| EP-SV02 | EU-51 | Transfer Conveyor #1 | 06-A-341-S2 |
| | EU-11 | Hammermill #1 | |
| | EU-12 | Hammermill #2 | |
| EP-SV03 | EU-14 | Grinder Bucket Elevator | 06-A-342-S4 |
| | EU-15 | Fermenter #1 | |
| | EU-16 | Fermenter #2 | |
| | EU-17 | Fermenter #3 | |
| | EU-18 | Fermenter #4 | |
| | EU-53 | Fermenter #5 | |
| EP-SV04 | EU-19 | Beer Well | 06-A-343-S3 |
| | EU-20 | Slurry Mixer | |
| | EU-21 | Slurry Tank | |
| | EU-22 | Cook Tube | |
| | EU-23 | Flash Vessel | |
| | EU-26 | Yeast Tank | |
| | EU-27 | Beer Column | |
| | EU-28 | Side Stripper | |
| | EU-29 | Rectifier Column | |
| | EU-30 | 190 Proof Condenser | |
| | EU-31 | Molecular Sieve | |
| | EU-32 | 200 Proof Condenser | |
| EU-33 | Centrifuges | | |
| EU-34 | Evaporators | | |

| Emission Point Number | Emission Unit Number | Emission Unit Description | DNR Construction Permit Number |
|------------------------------|-----------------------------|------------------------------------|---------------------------------------|
| | EU-35 | DDGS Dryer A | |
| | EU-36 | DDGS Dryer B | |
| | EU-37 | Heat Recovery Steam Generator | |
| EP-SV05 | EU-38 | DDGS Cooling | 06-A-344-S3 |
| EP-SV06 | EU-39 | DDGS Storage | 06-A-345-S1 |
| | EU-40 | DDGS Conveyor | |
| | EU-41 | DDGS Truck Loadout | |
| EP-SV07 | EU-42 | Ethanol Truck Loadout | 06-A-346-S2 |
| | EU-43 | Ethanol Rail Loadout | |
| EP-SV08 | EU-44 | Methanator | 06-A-347-S1 |
| EP-SV09 | EU-45 | Diesel Fire Pump | 06-A-348-S1 |
| EP-SV10 | EU-24 | Liquefaction Tank #1 | 12-A-035-S1 |
| | EU-25 | Liquefaction Tank #2 | |
| EP-SV11 | EU-46 | Grain Bin #3 | 16-A-170 |
| | EU-48 | Fill Conveyor #3 | |
| EP-FS001 | EU-FS001 | Paved Road | 06-A-351-S2 |
| EP-FS005 | EU-FS005 | Cooling Tower | 06-A-349 |
| FS006 | EU-FS006 | VOC Emissions from Equipment Leaks | 06-A-350-S2 |
| EP-TK001 | EU-TK001 | 190 Proof Ethanol Storage Tank | 06-A-352-S1 |
| EP-TK002 | EU-TK002 | 200 Proof Ethanol Storage Tank | 06-A-353-S1 |
| EP-TK003 | EU-TK003 | Denaturant Storage Tank | 06-A-354-S1 |
| EP-TK004 | EU-TK004 | Denatured Ethanol Storage Tank | 06-A-355-S1 |
| EP-TK005 | EU-TK005 | Denatured Ethanol Storage Tank | 06-A-356-S1 |
| T-EIA04 | T-EIA01 | Gasoline Tank (150 gallon) | None |

Insignificant Activities Equipment List

| Insignificant Emission Unit Number | Insignificant Emission Unit Description |
|---|---|
| LI-8411 | Corrosion Inhibitor Storage Tank (2,300 gallon) |
| LI-6801 | Thin Stillage Tank (146,000 gallon) |
| LI-6810 | Syrup Tank (50,000 gallon) |
| LI-6101 | Whole Stillage Tank (50,000 gallon) |
| LI-2101 | Cook Water Tank (50,000 gallon) |
| TS-6851 | Corn Oil Syrup Feed Tank (1,690 gallon) |
| TS-8901 | Corn Oil Storage Tank (6,200 gallon) |
| TS-8902 | Corn Oil Storage Tank (6,200 gallon) |
| TS-6852 | Corn Oil Syrup Receiver Tank (336 gallon) |
| TS-6853 | Corn Oil Receiver Tank (200 gallon) |
| TS-6854 | Corn Oil Receiver Tank (300 gallon) |
| TP-12401 | Ammonia Tank (18,000 gallon) |
| LI-12501 | Sulfuric Acid Tank (7,100 gallon) |
| T-EIA02 | Diesel Tank (300 gallon) |
| T-EIA03 | Diesel Tank (500 gallon) |
| T-EIA04 | Parts Washer (500 gal/yr) |

II. Plant-Wide Conditions

Facility Name: Green Plains LLC – Shenandoah

Permit Number: 13-TV-004-M002

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: August 5, 2013

Ending on: August 4, 2018

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 - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits 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 roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is State Only) 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 public 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 be limited to, the following procedures.

1. 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.
2. 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.
3. 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, fertilizer or limestone.
4. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. 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.
6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

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

40 CFR 60 Subpart A Requirements

This facility is an affected source and these General Provisions apply to the facility. The affected units are EP-SV03, EP-SV04, EP-SV07, EP-SV09, EP-SV10, FS006, EP-TK001, EP-TK002, EP-TK003, EP-TK004 and EP-TK005.

See Appendix for the link of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for 40 CFR 60 Subpart A

Requirements:

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 unit is EP-SV04.

See Appendix for the link of the Standard.

Authority for 40 CFR 60 Subpart Db

Requirements:

567 IAC 23.1(2) "ccc"

40 CFR 60 Subpart Kb Requirements

This facility is subject to 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. The affected units are EP-TK003, EP-TK004 and EP-TK005.

See Appendix for the link of the Standard.

Authority for 40 CFR 60 Subpart Kb

Requirements:

567 IAC 23.1(2) "ddd"

40 CFR 60 Subpart VV Requirements

This facility is subject to Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006. The affected units are EP-SV03, EP-SV04, EP-SV07, EP-SV10, EP-FS06, EP-TK001, EP-TK002, EP-TK003, EP-TK004 and EP-TK005.

See Appendix for the link of the Standard.

Authority for 40 CFR 60 Subpart VV

Requirements:

567 IAC 23.1(2) "nn"

40 CFR 60 Subpart IIII Requirements

This facility is subject to Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60 Subpart IIII]. The affected unit is EP-SV09.

See Appendix for the link of the Standard.

Authority for 40 CFR 60 Subpart IIII

Requirements:

III. Emission Point-Specific Conditions

Facility Name: Green Plains LLC – Shenandoah

Permit Number: 13-TV-004-M002

Emission Point ID Number: EP-SV01

Associated Equipment

Associated Emission Unit ID Numbers: See the table below

Emissions Control Equipment ID Number: CE01

Emissions Control Equipment Description: Baghouse

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------|---------------------------|--------------|-------------------|
| EP-SV01 | EU-01 | Truck Receiving #1 | Corn | 15,000 bushel/hr |
| | EU-02 | Truck Receiving #2 | Corn | 15,000 bushel/hr |
| | EU-04 | Rail Receiving | Corn | 15,000 bushel/hr |
| | EU-05 | Grain Elevator #1 | Corn | 15,000 bushel/hr |
| | EU-06 | Grain Elevator #2 | Corn | 15,000 bushel/hr |
| | EU-08 | Grain Bin #1 | Corn | 300,000 bushels |
| | EU-09 | Grain Bin #2 | Corn | 300,000 bushels |
| | EU-47 | Fill Conveyor #2 | Corn | 30,000 Bushels/hr |
| | EU-49 | Reclaim Conveyor #1 | Corn | 10,000 Bushels/hr |
| | EU-50 | Reclaim Conveyor #2 | Corn | 10,000 Bushels/hr |
| | EU-51 | Transfer Conveyor #1 | Corn | 10,000 Bushels/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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-340-S3
567 IAC 23.3(2) "d"

⁽¹⁾An exceedance of the indicator opacity of "No Visible Emission" 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): 1.67 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-340-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 1.67 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 06-A-340-S3
567 IAC 23.4(7)

Operational Requirements with Associated Monitoring and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. 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 grain bins shall be filled only while under negative pressure and vented to the control equipment.
- B. The owner or operator shall operate, inspect, and maintain all the equipment associated with the process and the Baghouse (CE01) according with good air pollution control practices and manufacturer's specifications.
 - i. The owner or operator shall maintain a record of all inspections, maintenance activities, and any actions resulting from the inspection or maintenance of the Baghouse (CE01).
- C. A maximum of 28.3 million bushels of corn per twelve month rolling period may be received plantwide.
 - i. The owner or operator shall keep records of the amount of corn received, and update the twelve month rolling total on a monthly basis.

Authority for Requirement: DNR Construction Permit 06-A-340-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 132

Stack Opening, (inches, dia.): 44

Exhaust Flow Rate (scfm): 35,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-340-S3

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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.

The data pertaining to the plan shall be 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-SV02

Associated Equipment

Associated Emission Unit ID Numbers: EU-11, EU-12 and EU-14
Emissions Control Equipment ID Number: CE-02
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: None

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------|---------------------------|--------------|-----------------|
| EP-SV02 | EU-11 | Hammermill #1 | Corn | 1,250 bushel/hr |
| | EU-12 | Hammermill #2 | Corn | 1,250 bushel/hr |
| | EU-14 | Grinder Bucket Elevator | Corn | 30,000 bushel |

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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-341-S2
567 IAC 23.3(2) "d"

⁽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): 0.75 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-341-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.75 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 06-A-341-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The facility shall inspect and maintain the control equipment according to 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 keep records of control equipment inspection and maintenance.

Authority for Requirement: DNR Construction Permit 06-A-341-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 132

Stack Opening, (inches, dia.): 38

Exhaust Flow Rate (scfm): 21,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-341-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-SV03

Associated Equipment

Associated Emission Unit ID Numbers: see the table below

Emissions Control Equipment ID Number: CE-03

Emissions Control Equipment Description: Scrubber

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------|---------------------------|--------------|----------------|
| EP-SV03 | EU-15 | Fermenter #1 | Process Gas | 730,000 gallon |
| | EU-16 | Fermenter #2 | Process Gas | 730,000 gallon |
| | EU-17 | Fermenter #3 | Process Gas | 730,000 gallon |
| | EU-18 | Fermenter #4 | Process Gas | 730,000 gallon |
| | EU-53 | Fermenter #5 | Process Gas | 730,000 gallon |
| | EU-19 | Beer Well | Process Gas | 985,000 gallon |

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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-342-S4
567 IAC 23.3(2) "d"

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner or 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 Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 1.20 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 06-A-342-S4
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 15.7 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-342-S4

Pollutant: Single HAP

Emission Limit(s): 1.44 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-342-S4

Pollutant: Total HAP

Emission Limit(s): 2.0 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-342-S4

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification commenced after January 5, 1981, and on or before November 7, 2006

Authority for Requirement: DNR Construction Permit 06-A-342-S4
567 IAC 23.1(2)“nn”

Operating Requirements with Associated Monitoring and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. 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 an average pressure drop across the Packed Bed Scrubber (CE-03) that is greater than 4.5 inches water column based on a 24-hour rolling average period.
 - i. The owner or operator shall record the scrubber pressure drop on a daily basis.
 - ii. The owner or operator shall establish an alarm setting for the purpose of initiating corrective action based on a pressure drop across the scrubber of 4.0 inches water column or less. After the collection of 12 months of pressure drop data, the owner or operator shall re-evaluate the minimum pressure drop requirements to determine if the pressure drop monitoring needs to be adjusted. If so, the owner or operator shall submit a permit modification request to the Department.
 1. On those days when there is an alarm for the pressure drop reaching 4 inches water column or less, calculate and record the average pressure drop across the scrubber based on a 24-hour rolling average. This requirement shall not apply on the days that the scrubber is not in operator or during facility start-up, shutdown or during operation at less than 50% of capacity. If the pressure drop deviates below the minimum required, then record the time, date, and actions taken to correct the situation and record when the pressure drop is back above the minimum average pressure drop required.
- B. The Packed Bed Scrubber (CE-03) shall have a minimum scrubber liquid flow rate that is calculated as 90 percent of the total liquid flow rate at the inlet to the scrubber measured during a previous performance test that demonstrated compliance with VOC and HAP emission limitations in Emission Limits section above.
 - i. The owner or operator shall record the scrubber liquid flow rate on a daily basis.
 1. If the flow rate deviates below the minimum required, then the owner or operator shall record the time, date, and actions taken to correct the situation.

2.The owner or operator shall also record when the flow rate is back above the minimum required.

C. Any additive added to the scrubber liquid during a compliance test to enhance the efficiency of the scrubber shall be added at a rate greater than or equal to the rate recorded during a previous performance test that demonstrated compliance with the VOC and HAP emission limitations in Emission Limits section above.

i. The owner or operator shall record the rate of additive to the scrubber liquid on a daily basis. If the additive feed rate deviates below the required rate, then the owner or operator shall record the time, date, and actions taken to correct the situation.

D. The owner or operator shall maintain onsite a copy of the previous performance test for each scrubber operating scenario detailing pressure drop, scrubber liquid flow rate, and additive feed rate measured during each performance test that demonstrated compliance with emission limits in Emission Limits section above.

E. The owner or operator shall inspect and maintain the Packed Bed Scrubber (CE-03) according to the facility's (Plant No. 36-10-001) operation and maintenance plan.

i. The owner or operator shall keep a log of all maintenance and inspection activities performed on the scrubber. This log shall include, but shall not be limited to:

1.The date that any inspection and/or maintenance was performed on the control equipment;

2.Any issues identified during the inspection;

3.Any issues addressed during the maintenance activities; and

4.Identification of the staff member performing the maintenance or inspection.

Authority for Requirement: DNR Construction Permit 06-A-342-S4

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 79

Stack Opening, (inches): 23.5

Exhaust Flow Rate (scfm): 6,500

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-342-S4

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Stack Testing Requirements:

Pollutant – VOC⁽¹⁾

Initial Stack Test to be completed in June, July, or August 2017.

Test Method - 40 CFR 63, Appendix A, Method 320 or 40 CFR 60, Appendix A, Method 18

Authority for Requirement - DNR Construction Permit 06-A-342-S4

Pollutant – VOC⁽¹⁾

Annual Stack Test to be completed in June, July, or August.

Test Method - 40 CFR 63, Appendix A, Method 320 or 40 CFR 60, Appendix A, Method 18

Authority for Requirement - DNR Construction Permit 06-A-342-S4

Pollutant – Single HAP⁽²⁾

Initial Stack Test to be completed in June, July, or August 2017.

Test Method – 40 CFR 63, Appendix A, Method 320 or 40 CFR 60, Appendix A, Method 18

Authority for Requirement – DNR Construction Permit 06-A-342-S4

Pollutant – Single HAP⁽²⁾

Annual Stack Test to be completed in June, July, or August.

Test Method – 40 CFR 63, Appendix A, Method 18 or 40 CFR 60, Appendix A, Method 320

Authority for Requirement – DNR Construction Permit 06-A-342-S4

Pollutant – Total HAP⁽²⁾

Initial Stack Test to be completed in June, July, or August 2017.

Test Method - 40 CFR 63, Appendix A, Method 320 or 40 CFR 60, Appendix A, Method 18

Authority for Requirement - DNR Construction Permit 06-A-342-S4

Pollutant – Total HAP⁽²⁾

Annual Stack Test to be completed in June, July, or August.

Test Method - 40 CFR 63, Appendix A, Method 18 or 40 CFR 60, Appendix A, Method 320

Authority for Requirement - DNR Construction Permit 06-A-342-S4

⁽¹⁾Initial and annual stack testing shall be conducted for VOC. The required initial and annual stack testing shall be conducted in June, July, or August. Should three (3) consecutive stack tests demonstrate emission rates that are less than 90% of the VOC emission limit in Emission Limits section above, the facility (Plant No. 36-10-001) may request a reduction in test frequency.

⁽²⁾ Acrolein, acetaldehyde, formaldehyde, and methanol shall be tested for specifically. The specified HAP compounds that test below detection limits shall be assumed to be emitting at a rate equal to the detection limit. The required initial and annual stack testing shall be conducted in June, July, or August. Should three (3) consecutive stack tests demonstrate emission rates that are less than 90% of the HAP emission limits in Emission Limits section above, the facility (Plant No. 36-10-001) may request a reduction in test frequency.

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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)

Compliance Assurance Monitoring (CAM) Plan for Packed Bed Wet Scrubber (CE-03)

I. Background

A. Emissions Unit

Facility: Green Plains LLC- Shenandoah
Source ID #: Fermentation Process (EU-15, EU-16, EU-17, EU-18, EU-53, EU-19)
EU Description: Beer Well (EU-19) and 5 Fermenters (EU-15, EU-16, EU-17, EU-18, EU-53, EU-19)

B. Control Technology

Control Equipment ID: CE-03
CE Description: Packed Bed Wet Scrubber

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation #: DNR Construction Permit 06-A-342-S4
VOC Emission Limit: 15.7 lb/hr of VOC
HAPs Emission Limits: 1.44 lb/hr for single HAP; 2.0 lb/hr for total HAPs
Current Monitoring Requirements: Record the amount of sodium bisulfite, ammonium bisulfite or other additive(s) used daily.

II. Monitoring Approach

A. Indicator:

Water flow rate will be used as an indicator.

B. Monitoring Approach:

The water flow rate is monitored with a flow meter.

C. Indicator Range:

An excursion is defined as a daily scrubber water flow rate recording of less than the amount recorded during the most recent stack test. Excursions trigger an investigation of the occurrence, corrective action and reporting requirements.

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is triggered when there are excursions more than 5% of the operating time in a semi-annual reporting period (January 1 to June 30, or July 1 to December 31), excluding periods of startup, shutdown and malfunction. A deviation shall be reported in the semi-annual report when the QIP threshold is triggered.

E. Performance Criteria:

Data Representativeness: The water flow rate meter measures the inlet water flow rate to the scrubber. Water flow rates less than that recorded during the most recent stack test indicate a

| | |
|--|--|
| | potential decrease in VOC removal efficiency of the scrubber. |
| Verification of operational status: | The water flow rate meter was installed, calibrated, and is operated in accordance with manufacturer's recommendations. |
| QA/QC practices and criteria: | <ol style="list-style-type: none"> 1. The water flow rate meter will be calibrated per manufacturer's recommendations. 2. The scrubber will be cleaned and inspected per manufacturer's recommendations. |
| Monitoring frequency and data collection procedure | The scrubber water flow rate will be measured continuously using a data acquisition system and recorded on a daily basis. |
| Averaging period: | A 24-hour average will be calculated and recorded during process of operation. |

III. Justification

A. Background:

VOC emissions from the Fermenters (EU-15, EU-16, EU-17, EU-18, EU-53, EU-19) and Beerwell (EU-19) are controlled using a packed bed wet scrubber with single pass water flow. The exhaust from the scrubber is routed to atmosphere.

B. Rationale for Selection of Performance Indicator:

To comply with the applicable emission limit, a minimum water flow rate must be supplied to the scrubber to absorb a given amount of VOC in the gas stream, given the size of the tower and height of the packed bed. The liquid to gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, sufficient mass transfer of the pollutant from the gas phase to the liquid phase may not occur. Results from stack testing are used as a minimum liquid flow required to maintain the proper L/G ratio at the maximum gas flow and vapor loading through the scrubber. Maintaining this minimum liquid flow, even during periods of reduced air flow, will help ensure that ideal L/G ratio is achieved at all times.

C. Rationale for Selection of Indicator Level:

The minimum water flow rate indicator level was chosen based on the most recent approved stack testing results that showed compliance with the current emission limits. The water flow rate to the scrubber must be maintained at this level or higher to meet permitted emission limits.

Emission Point ID Number: EP-SV04

Associated Equipment

Associated Emission Unit ID Numbers: see the table below

Emissions Control Equipment ID Number: CE-04; CE-09; CE-10

Emissions Control Equipment Description: Thermal Oxidizer (CE-04); Centrifugal Collectors for Dryers (CE-09 and CE-10)

Continuous Emissions Monitors ID Numbers: ME-01

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------------------------------|---------------------------|-------------------------|-------------------|
| EP-SV04 | EU-20 | Slurry Mixer | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-21 | Slurry Tank | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-22 | Cook Tube | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-23 | Flash Vessel | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-26 | Yeast Tank | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-27 | Beer Column | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-28 | Side Stripper | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-29 | Rectifier Column | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-30 | 190 Proof Condenser | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-31 | Molecular Sieve | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-32 | 200 Proof Condenser | 200 Proof Ethanol | 33,076,729 gal/yr |
| | EU-33 | Centrifuges | DDGS Produced | 76,695 ton/yr |
| | EU-34 | Evaporators | DDGS Produced | 76,695 ton/yr |
| | EU-35 | DDGS Dryer A | Natural Gas/Process Gas | 40 MMBtu/hr |
| | EU-36 | DDGS Dryer B | Natural Gas/Process Gas | 40 MMBtu/hr |
| EU-37 | Heat Recovery Steam Generator | Natural Gas | 125 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): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-343-S3
567 IAC 23.3(2) "d"

⁽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): 8.0 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 8.0 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 16.0 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 20.78 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 5.0 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 20.55 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Single HAP

Emission Limit(s): 0.10 lb/hr; 9.4 ton/yr ⁽⁵⁾

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Pollutant: Total HAPs

Emission Limit(s): 0.90 lb/hr; 24.4 ton/yr ⁽⁶⁾

Authority for Requirement: DNR Construction Permit 06-A-343-S3

^{(5), (6)}Plant-wide limits to remain synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The facility shall inspect and maintain the control equipment according to manufacturer's recommendations.
- B. The facility shall follow the applicable standards of Subpart VV, 40 CFR §60.480 through §60.489.
- C. The thermal oxidizer shall maintain a temperature (3-hour average) during operation which is no more than 50 degrees Fahrenheit 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 and/or distillation equipment are being used.
- D. The dryers/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 keep records of control equipment inspections and maintenance.
- B. The owner or operator shall keep records as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.
- C. The owner or operator shall keep 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 degrees Fahrenheit below the average temperature of the oxidizer during its most recent performance test which demonstrated compliance with the emission limits.
- D. The owner or operator shall keep records of the frequency and amount of time the thermal oxidizer malfunctions, and estimate the emissions emitted during said malfunctions.
- E. The owner or operator shall maintain fuel supplier certifications of the sulfur content of the fuels burned which demonstrate that it has a potential sulfur dioxide emission rate of 0.32 lb/MMBtu heat input or less (40 CFR §60.47b(g) and §60.48b(j)).
- F. The owner or operator shall record and maintain records of the amounts of each fuel combusted during each day, and calculate the annual capacity factor individually for natural gas for the reporting period. The annual capacity factor is determined on a 12 month rolling average basis with a new annual capacity factor calculated at the end of each calendar month, as required in 40 CFR §60.49b(d) for the thermal oxidizer/waste heat boiler. 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.
- G. 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).

- G1. Calendar date.
- G2. Average hourly nitrogen oxides emission (as NO₂) (lb/MMBtu heat input) rates measured or predicted.
- G3. 30-day average nitrogen oxides emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
- G4. 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 under §60.44b, with the reason for such excess emissions as well as a description of corrective actions taken.
- G5. 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.
- G6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.
- G7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
- G8. Identification of the times when the pollutant concentrations exceeded the full span of the continuous monitoring system.
- G9. 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.
- G10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.

Authority for Requirement: DNR Construction Permit 06-A-343-S3

NSPS and NESHAP Applicability

This emission point is subject to the following NSPS subparts:

NSPS Subpart A – General Provisions

NSPS Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

NSPS Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

Authority for Requirement: DNR Construction Permit 06-A-343-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches, dia.): 84

Exhaust Flow Rate (scfm): 59,613

Exhaust Temperature (°F): 272

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-343-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.

Continuous Emissions 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 alternative monitoring plan.

Pollutant – NO_x

- Operational Specifications – 40 CFR Part 60
- Date of Initial System Calibration and Quality Assurance – 01/08/2008
- Ongoing System Calibration/Quality Assurance – 40 CFR Part 60
- Reporting & Record keeping – 40 CFR Part 60
- Authority for Requirement– 567 IAC 25.3

Other Parameters

- Pollutant – Oxygen (O₂)
- Operational Specifications – 40 CFR Part 60
- Date of System Calibration and Quality Assurance – 01/08/2008
- Ongoing System Calibration/Quality Assurance – 40 CFR Part 60
- Reporting & Record keeping – 40 CFR Part 60
- Authority for Requirement – 567 IAC 25.1 (9)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

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)

Compliance Assurance Monitoring (CAM) Plan for Thermal Oxidizer (CE-04)

I. Background

A. Emissions Unit

Facility: Green Plains LLC- Shenandoah
 Source ID #: Distillation Process Units (EU-20~EU-37)
 EU Description: Distillation Equipment (EU-20~EU-34)
 DDGS Dryers (EU-35 and EU-36)
 Heat Recovery Steam Generator (EU-37)

B. Control Technology

Control Equipment ID: CE-04
 CE Description: Thermal Oxidizer/Heat Recovery Steam Generator

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation #: DNR Construction Permit 06-A-343-S3
 VOC Emission Limit: 5.0 lb/hr of VOC
 HAPs Emission Limits: 0.10 lb/hr for single HAP; 0.90 lb/hr for total HAPs
 PM₁₀/PM_{2.5} Limits: 8.0 lb/hr
 Current Monitoring Requirements: Maintain hourly records of combustion chamber temperature

II. Monitoring Approach

A. Indicator:

Combustions chamber temperature and annual internal inspection will be used as indicators.

B. Monitoring Approach:

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1.

Table 1. Monitoring Approach

| | Indicator No. 1 | Indicator No. 2 |
|----------------------|--|--|
| I. Indicator | Combustion Chamber Temperature. | Work Practice/Inspection. |
| Measurement Approach | The temperature measured in the combustion chamber by the continuous temperature monitor (thermocouple) | Inspection and maintenance of the burner to ensure structural integrity and ensure proper operation. |
| II. Indicator Range | An excursion is defined as 3-hour rolling average temperature reading 50°F less than the average temperature in the most | An excursion is defined as failure to perform annual inspection or any finding that the structural integrity of the incinerator has been |

| | | |
|-------------------|--|---|
| | recent compliance performance test. | jeopardized and it no longer operates as designed. |
| Correction Action | Each excursion triggers an inspection, corrective action, and a reporting requirement. | Each excursion triggers an assessment of the problem, corrective action, and a reporting requirement. |
| QIP Threshold | An accumulation of excursions below the indicator range exceeding 5 percent of operating time for a reporting period excluding periods of startup, shutdown and malfunction. | Not applicable. |

III. Performance Criteria

| | | |
|---------------------------------------|---|---|
| A. Data Representativeness | The sensor is located in the incinerator combustion chamber as an integral part of the incinerator design. The minimum tolerance of the thermocouple is $\pm 4^{\circ}\text{F}$. | Not applicable. |
| B. Verification of Operational Status | Temperatures recorded electronically. | Inspection records. |
| C. QA/QC Practices and Criteria | Calibrate, maintain, and operate instrumentation in accordance with manufacturer's recommendation. | Not applicable. |
| D. Monitoring Frequency | The combustion temperature is measured continuously. | Annual internal inspection of the burner. |
| Data Collection Procedures | Record chamber temperature continuously on electronic media. | Record results of inspections. |
| Averaging Period | Three (3) hours rolling average. | Not applicable. |
| E. Record Keeping | Maintain for a period of 2 years records of electronic media and corrective actions taken in response to excursions. | Maintain for a period of 2 years records of inspections and corrective actions taken in response to excursions. |
| F. Reporting | Number, duration, and cause of any excursion and the corrective action taken. | Number, duration, and cause of any excursion |

| | | |
|-----------|---------------|---------------------------------|
| | | and the corrective action take. |
| Frequency | Semiannually. | Semiannually. |

III. Justification

A. Background:

VOC emissions from the Distillation Equipment (EU-20~EU-34), DDGS Dryers A and B (EU-35 and EU-36) and PM10/PM2.5 from DDGS Dryers A and B (EU-35 and EU-36) are controlled by the Thermal Oxidizer (CE-04).

B. Rationale for Selection of Performance Indicator:

The control efficiency achieved by a thermal oxidizer is a function of the combustion chamber temperature. It is expected that by maintaining the operating temperature at or above the minimum chamber temperature, the required level of VOC control efficiency can be expected to be achieved.

The work practice of an annual inspection and tuning of the incinerator burner was selected because an inspection verifies equipment integrity and periodic tuning will maintain proper burner operation and efficiency.

C. Rationale for Selection of Indicator Level:

The minimum operating temperature of the thermal oxidizer is based on the average temperature recorded during the most recent VOC performance testing that demonstrated compliance with permit limits.

Emission Point ID Number: EP-SV05

Associated Equipment

Associated Emission Unit ID Numbers: EU-38
Emissions Control Equipment ID Number: CE-05
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-38
Emission Unit Description: DDGS Cooling Cyclone
Raw Material/Fuel: DDGS
Rated Capacity: 23 ton/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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-344-S3
567 IAC 23.3(2) "d"

⁽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): 1.2 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-344-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 1.2 lb/hr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 06-A-344-S3
567 IAC 23.3(2) "a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 1.43 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-344-S3

Pollutant: Single HAP

Emission Limit(s): 0.25 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: DNR Construction Permit 06-A-344-S3

Pollutant: Total HAP

Emission Limit(s): 0.82 lb/hr; 24.4 ton/yr ⁽³⁾

Authority for Requirement: DNR Construction Permit 06-A-344-S3

^{(2), (3)} Plant-wide limits to remain synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The facility shall inspect and maintain the control equipment according to manufacturer's recommendations.
- B. The facility shall follow the applicable standards of 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 keep records of control equipment inspections and maintenance.
- B. The owner or operator shall keep records as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.

Authority for Requirement: DNR Construction Permit 06-A-344-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 132

Stack Opening, (inches, dia.): 36

Exhaust Flow Rate (scfm): 28,000

Exhaust Temperature (°F): 90

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-344-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

Authority for Requirement: 567 IAC 22.108(3)

Compliance Assurance Monitoring (CAM) Plan for Baghouse (CE-05)

I. Background

A. Emissions Unit

Facility: Green Plains LLC- Shenandoah
 Source ID #: EU-38
 EU Description: DDGS Cooling Cyclone

B. Control Technology

Control Equipment ID: CE-05
 CE Description: Fabric Filter Baghouse

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation #: DNR Construction Permit 06-A-344-S3
 Emission Limit: 1.2 lb/hr for PM10
 Current Monitoring Requirements: None

II. Monitoring Approach

A. Indicator:

Pressure drop will be used as indicators.

B. Monitoring Approach:

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1.

Table1. Monitoring Approach

| | |
|---------------------------------------|---|
| I. Indicator | Combustion Chamber Temperature |
| Measurement Approach | The pressure drop will be monitored and recorded at least once each day of operation. |
| II. Indicator Range | A minimum pressure drop of 1.0 inches of water shall be maintained during operation. |
| Correction Action | Each excursion triggers an inspection, corrective action, and a reporting requirement. |
| QIP Threshold | An accumulation of excursions below the indicator range of six or more for a reporting period excluding periods of startup, shutdown and malfunction. |
| III. Performance Criteria | |
| A. Data Representativeness | Pressure drop is measured across the system. |
| B. Verification of Operational Status | Record of pressure drop readings will be maintained for five years. |
| C. QA/QC Practices and Criteria | Calibrated, maintain, and operate instrumentation in accordance with manufacturer's recommendations. |
| D. Monitoring Frequency | The pressure drop will be recorded a minimum of once per day during operation. |

| | |
|----------------------------|--|
| Data Collection Procedures | The pressure drop will be recorded electronically or manually. |
| Averaging Period | NA. |
| E. Record Keeping | Maintain for a period of five years records of electronic media and corrective actions taken in response to excursion. |
| F. Reporting | Number, duration, and cause of any excursion and the corrective action taken. |
| Frequency | Semiannually. |

III. Justification

A. Background:

PM10 emissions from the DDGS Cooling Cyclone (EU-38) are controlled by the DDGS Cooling Cyclone Baghouse (CE-05).

B. Rationale for Selection of Performance Indicator:

Baghouses are standard PM10 emission controls from grain processing operation creating particulate emissions and are typically cited as best available control technology (BACT) for such applications. Baghouses operate by collecting particulate on porous fabric bags, thus resulting in a pressure differential across the system. The gas stream is passed through the fabric which results in pressure; too much pressure indicates a possible plugging of the system and too little indicates possible bag breakage. Therefore, pressure drop is the best indicator of baghouse performance.

C. Rationale for Selection of Indicator Level:

Baghouses remove dust from a gas stream by passing the stream through a porous fabric. Particles from a porous cake on the fabric that acts as the filtration device. This porous cake is routinely removed and collected and returned to the process. Baghouses are highly efficient for controlling filterable PM10 and are considered BACT for such applications. Baghouses are subject to failure if they are not properly operated and maintained. An indicator minimum pressure drop of 1.0 inch of water is recommended to achieve the required control efficiency.

The selected QIP threshold for the daily pressure drop is six excursions during a semi-annual reporting period. If the QIP threshold is exceeded during a semi-annual reporting period, a QIP will be developed and implemented.

Emission Point ID Number: EP-SV06

Associated Equipment

Associated Emission Unit ID Numbers: EU-39; EU-40; EU-41
Emissions Control Equipment ID Number: CE-06
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitors ID Numbers: None

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------|---------------------------|--------------|-----------------|
| EP-SV06 | EU-39 | DDGS Storage | DDGS | 1,500 Bushel/hr |
| | EU-40 | DDGS Conveyor | DDGS | 1,500 Bushel/hr |
| | EU-41 | Truck Loadout Spout | DDGS | 1,500 Bushel/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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-345-S1
567 IAC 23.3(2) "d"

⁽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): 0.16 lb/hr; 1.06 ton/yr

Authority for Requirement: DNR Construction Permit 06-A-345-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.16 lb/hr; 1.06 ton/yr; 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 06-A-345-S1
567 IAC 23.3 (2) "a"

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall inspect and maintain the control equipment according to manufacturer's recommendations.

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 maintenance.

Authority for Requirement: DNR Construction Permit 06-A-345-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches, dia.): 13.25

Exhaust Flow Rate (scfm): 2,976

Exhaust Temperature (°F): Ambient

Discharge Style: Unobstructed Vertical

Authority for Requirement: DNR Construction Permit 06-A-345-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

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-SV07

Associated Equipment

Associated Emission Unit ID Numbers: EU-42; EU-43
Emissions Control Equipment ID Number: CE-07 (for truck only)
Emissions Control Equipment Description: Flare
Continuous Emissions Monitors ID Numbers: None

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------|---------------------------|--------------|----------------|
| EP-SV07 | EU-42 | Ethanol Truck Loadout | Ethanol | 36,000 gal/hr |
| | EU-43 | Ethanol Rail Loadout | Ethanol | 78,000 gal/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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-346-S2
567 IAC 23.3(2) "d"

⁽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): 0.25 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-346-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.25 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-346-S2

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: DNR Construction Permit 06-A-346-S2
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.44 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-346-S2

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.34 lb/hr; 20.0 ton/yr ⁽²⁾

Authority for Requirement: DNR Construction Permit 06-A-346-S2

⁽²⁾Total VOC emissions from truck loadout, rail loadout and combustion emissions is 20.0 tons/yr.

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 2.36 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-346-S2

Operational Limits & Requirements

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

Operating Limits

- A. The facility shall loadout a maximum of 80.0 million gallons of denatured ethanol per twelve month rolling period on a plantwide basis.
- B. All rail loadouts shall be to dedicated tank cars (i.e., no switch loading).
- C. All truck loadouts shall have the emissions controlled by the flare.
- D. The facility shall inspect and maintain the control equipment according to manufacturer's recommendations.
- E. The facility shall follow the applicable standards of 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 keep records of the amount of denatured ethanol loaded out on a plantwide basis, and update the twelve month rolling total monthly.
- B. The owner or operator shall keep records of control equipment inspections and maintenance.
- C. The owner or operator shall keep records as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.

Authority for Requirement: DNR Construction Permit 06-A-346-S2

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provision and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

Authority for Requirement: DNR Construction Permit 06-A-346-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 25
- Stack Opening, (inches, dia.): 42
- Exhaust Flow Rate (scfm): 2,691
- Exhaust Temperature (°F): 800
- Discharge Style: Vertical Unobstructed
- Authority for Requirement: DNR Construction Permit 06-A-346-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)

Compliance Assurance Monitoring (CAM) Plan for Ethanol Loadout Flare (CE-07)

I. Background

A. Emissions Unit

Facility: Green Plains LLC- Shenandoah
 Source ID #: EU-42
 EU Description: Ethanol Truck Loadout

B. Control Technology

Control Equipment ID: CE-07
 CE Description: Thermal Oxidization by Flaring

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation #: DNR Construction Permit 06-A-346-S2
 Emission Limit: 0.34 lb/hr and 20.0 ton/yr for VOC
 Current Monitoring Requirements: None

II. Monitoring Approach

A. Indicator:

Visual confirmation that a flame is present during ethanol loadout operations will be used as the performance indicator.

B. Monitoring Approach:

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1.

Table1. Monitoring Approach

| | |
|---------------------------------------|--|
| I. Indicator | Visual confirmation of the presence of a flame. |
| Measurement Approach | The presence of a flame will be monitored and recorded once per day that ethanol is loaded out to trucks. |
| II. Indicator Range | The facility utilizes automatic systems and safety devices to verify that a flame is present to ensure the control of emissions. The visual confirmation of flame presence will be the indicator and no range is required. |
| Correction Action | Each excursion triggers an inspection, corrective action, and a reporting requirement. |
| QIP Threshold | Six or more excursions (visual confirmation of no flame present) in a reporting period. |
| III. Performance Criteria | |
| A. Data Representativeness | Visual confirmation of flame presence will be monitored and performed by a qualified operator. |
| B. Verification of Operational Status | NA. |

| | |
|--|---|
| C. QA/QC Practices and Criteria | Calibrate, maintain, and operate any required instrumentation in accordance with manufacturer's recommendation. |
| D. Monitoring Frequency and Data Collection Procedures | Visual confirmation of flame presence will be conducted and the results will be recorded once per day during ethanol loadout to trucks. |
| Averaging Period | NA. |
| E. Record Keeping | Maintain for a period of 5 years records of electronic media and corrective actions taken in response to excursions. |
| F. Reporting | Number, duration and cause of any excursion and the corrective action taken. |
| Frequency | Semiannually. |

III. Justification

A. Background:

VOC emissions from Ethanol Loadout to Trucks (EU-42) are controlled by the Ethanol Loadout Flare (CE-07).

B. Rationale for Selection of Performance Indicator:

The use of a flare at ethanol facilities is typically considered best available control technology (BACT) for ethanol loading operations. Since the vapors from the transport vessel are flammable, the presence of a flame in the flare results in combustion of the vapors and the destruction of VOC. Therefore, confirmation that a flame is present during loading operations is recommended to achieve the desired VOC control.

C. Rationale for Selection of Indicator Level:

The indicator was selected to allow a simple and effective procedure for compliance tracking purpose. When an excursion occurs corrective action will be initiated based upon the observed operating parameters. All excursions will be documented and reported.

The selected QIP threshold for flare operations is 6 excursions during the semiannual reporting period. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

Emission Point ID Number: EP-SV08

Associated Equipment

Associated Emission Unit ID Numbers: EU-44
Emissions Control Equipment ID Number: CE-08
Emissions Control Equipment Description: Flare
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-44
Emission Unit Description: Methanator
Raw Material/Fuel: Natural Gas
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): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-347-S1
567 IAC 23.3(2) "d"

⁽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): 0.25 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-347-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.25 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-347-S1

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: DNR Construction Permit 06-A-347-S1
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.22 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-347-S1

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.17 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-347-S1

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 1.18 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-347-S1

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall inspect and maintain the control equipment according to 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 keep records of control equipment inspections and maintenance.

Authority for Requirement: DNR Construction Permit 06-A-347-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 34

Stack Opening, (inches, dia.): 17

Exhaust Flow Rate (scfm): 3,200

Exhaust Temperature (°F): 800

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-347-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-SV09

Associated Equipment

Associated Emission Unit ID Numbers: EU-45
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: NA
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-45
Emission Unit Description: Emergency Diesel Fire Pump
Raw Material/Fuel: Diesel
Rated Capacity: 110 bhp

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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 06-A-348-S1
567 IAC 23.3(2) "d"

⁽¹⁾An exceedance of the indicator opacity of "20%" 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): 0.15 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-348-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.15 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-348-S1

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 0.23 lb/hr; 2.5 lb/MMBtu

Authority for Requirement: DNR Construction Permit 06-A-348-S1
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 1.89 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-348-S1

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 0.27 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-348-S1

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 0.90 lb/hr

Authority for Requirement: DNR Construction Permit 06-A-348-S1

Operational Limits & Requirements

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

Operating Limits

- A. This unit shall operate a maximum of 500 hours per twelve month rolling period.
- B. This unit shall combust diesel with a maximum sulfur content of 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 keep records of the amount of time the unit is operated, and update the twelve month rolling total on a monthly basis.
- B. The owner or operator shall keep records from the fuel supplier documenting the sulfur content of the diesel.

Authority for Requirement: DNR Construction Permit 06-A-348-S1

NSPS and NESHAP Applicability

This emission unit is subject to Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60 Subpart III].

Authority for Requirement: 40 CFR Part 60 Subpart III

This emission unit is subject to National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) [40 CFR Part 63 Subpart ZZZZ].

Authority for Requirement: 40 CFR Part 63 Subpart ZZZZ

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 13

Stack Opening, (inches, dia.): 4

Exhaust Flow Rate (scfm): 187

Exhaust Temperature (°F): 1108

Discharge Style: Vertical Unobstructed

Authority for Requirement: DNR Construction Permit 06-A-348-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-SV11

Associated Equipment

Associated Emission Unit ID Numbers: EU-46, EU-48
Emissions Control Equipment ID Number: CE11
Emissions Control Equipment Description: Cartridge Filters
Continuous Emissions Monitors ID Numbers: None

| Emission Point Number | Emission Unit Number | Emission Unit Description | Raw Material | Rated Capacity |
|-----------------------|----------------------|---------------------------|--------------|-------------------|
| EP-SV11 | EU-46 | Grain Bin #3 | Corn | 250,000 Bushels |
| | EU-48 | Fill Conveyor #3 | Corn | 30,000 Bushels/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%⁽¹⁾

Authority for Requirement: DNR Construction Permit 16-A-170
567 IAC 23.3(2)"d"

Pollutant: PM

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: DNR Construction Permit 16-A-170
567 IAC 23.4(7)

⁽¹⁾An exceedance of the indicator opacity of 25% will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Operating Requirements with Associated Monitoring and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. 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 grain bin shall be filled only while under negative pressure and vented to the control equipment.
- B. The owner or operator shall operate, inspect, and maintain all the equipment associated with the process and the Cartridge Filters (CE11) according with good air pollution control practices and manufacture's specifications.

- i. The owner or operator shall maintain a record of all inspections, maintenance activities, and any actions resulting from the inspection or maintenance of the Cartridge Filters (CE11).
- C. A maximum of 28.3 million bushels of corn per twelve month rolling period may be received plantwide.
 - i. The owner or operator shall keep records of the amount of corn received, and update the twelve month rolling total on a monthly basis.

Authority for Requirement: DNR Construction Permit 16-A-170

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 107

Stack Opening, (inches): 15.6 X 16.94

Exhaust Flow Rate (scfm): 1,500

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: DNR Construction Permit 16-A-170

The temperature and flowrate 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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

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-SV10

Associated Equipment

Associated Emission Unit ID Numbers: EU-24; EU-25
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: NA
Continuous Emissions Monitors ID Numbers: None

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---------|-------|---------------------------|--------------|----------------|
| EP-SV10 | EU-24 | Liquefaction Tank #1 | Mash | 64,700 gallons |
| | EU-25 | Liquefaction Tank #2 | Mash | 64,700 gallons |

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% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 12-A-035-S1
567 IAC 23.3(2) "d"

⁽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): 5.28 lb/hr

Authority for Requirement: DNR Construction Permit 12-A-035-S1

Pollutant: Single HAP

Emission Limit(s): 0.10 lb/hr; 9.4 ton/yr ⁽¹⁾

Authority for Requirement: DNR Construction Permit 12-A-035-S1

Pollutant: Total HAPs

Emission Limit(s): 0.15 lb/hr; 24.4 ton/yr ⁽²⁾

Authority for Requirement: DNR Construction Permit 12-A-035-S1

^{(1), (2)}Plant-wide limits to remain synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operational limits are not required at this time.

NSPS and NESHAP Applicability

This emission unit is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

Authority for Requirement: DNR Construction Permit 12-A-035-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 39

Stack Opening, (inches, dia.): 8

Exhaust Flow Rate (scfm): 17

Exhaust Temperature (°F): 180

Discharge Style: Downward

Authority for Requirement: DNR Construction Permit 12-A-035-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-FS001

Associated Equipment

Associated Emission Unit ID Numbers: EU-FS001
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: NA
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-FS001
Emission Unit Description: Paved Roads
Raw Material/Fuel: Traffic Emissions
Rated Capacity: 63,679 VMT

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: Fugitive Dust

Emission Limit: 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, without taking reasonable precautions to prevent a nuisance. All persons 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.

Authority for Requirement: 567 IAC 23.3(2)"c" (1)

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 6.81 ton/yr

Authority for Requirement: DNR Construction Permit 06-A-351-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 34.95 ton/yr; 0.1 gr/dscf*

Authority for Requirement: DNR Construction Permit 06-A-351-S2

*: see review notes.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall keep records of the number of trucks that arrive on a monthly basis.
- B. All plant roads shall be paved.
- C. Sweeping is required to be completed at least once per calendar month.
- D. The owner or operator shall test a representative road for silt content at least once every calendar quarter (four tests per calendar year). Silt load testing shall not be completed within at least one week of sweeping.

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 calculate and record the monthly fugitive dust emissions according to the following formula, which uses the equations from AP-42 Section 13.2.2, the PM₁₀ empirical constants, and assumes a mean vehicle weight of 29 tons and an average of 1.2 miles per truck delivery or loadout.

$$E = 0.0006 \times V \times (0.4809 \times \frac{sL^{0.65}}{2} - 0.00047)$$

Where E = tons PM₁₀/month

V = number of trucks that month, and

sL = surface silt loading in g/m² from that month's test results

- B. The owner or operator shall update monthly the twelve month rolling total PM₁₀ emissions by adding up the calculated monthly emissions for the previous twelve months. The owner or operator shall immediately notify the DNR if the twelve month rolling PM₁₀ total exceeds 6.81 tons.
- C. The owner or operator shall record the date sweeping occurs.
- D. The owner or operator shall record the date silt load testing is performed.

Authority for Requirement: DNR Construction Permit 06-A-351-S2

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-FS005

Associated Equipment

Associated Emission Unit ID Numbers: EU-FS005
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: NA
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-FS005
Emission Unit Description: Cooling Tower
Raw Material/Fuel: Cooling Water
Rated Capacity: 1.62 MMgal/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"

Pollutant: Particulate Matter (PM)
Emission Limit(s): 7.40 ton/yr
Authority for Requirement: DNR Construction Permit 06-A-349

Operational Limits & Requirements

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

Operating Limits

- A. The Total Dissolved Solids (TDS) level shall not exceed 2,500 mg/l for any single sampling event.
- B. The owner or operator shall test TDS on a monthly basis.

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 the results of the monthly TDS testing available.

Authority for Requirement: DNR Construction Permit 06-A-349

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: FS006

Associated Equipment

Associated Emission Unit ID Numbers: EU-FS006
Emissions Control Equipment ID Number: CE-FS006
Emissions Control Equipment Description: Leak Detection and Repair

Emission Unit vented through this Emission Point: EU-FS006
Emission Unit Description: VOC Emissions from Equipment Leaks
Raw Material/Fuel: VOC Leaks
Rated Capacity: NA

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: Volatile Organic Compounds (VOC)
Emission Limit(s): 8.43 ton/yr
Authority for Requirement: DNR Construction Permit 06-A-350-S2

Pollutant: Single HAP
Emission Limit(s): 1.20
Authority for Requirement: DNR Construction Permit 06-A-350-S2

Pollutant: Total HAP
Emission Limit(s): 3.61
Authority for Requirement: DNR Construction Permit 06-A-350-S2

NSPS and NESHAP Applicability

This emission unit is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification commenced after January 5, 1981, and on or before November 7, 2006.

Authority for Requirement: DNR Construction Permit 06-A-350-S2

Operating Requirements with Associated Monitoring and Recordkeeping

The owner/operator of this equipment shall comply with the operational limits and requirements listed below. 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 comply with the applicable standards in 40 CFR Part 60, Subpart VV [§60.480 – 60.489], including those not specifically mentioned in this permit.

- i. The owner or operator shall comply with the applicable recordkeeping and reporting requirements in §60.486 and §60.487, respectively.
- B. The owner or operator shall document on an annual basis the number and types of components used. Components include, but are not limited to, valves, pumps, compressor seals, flanges, etc.
- C. The owner or operator shall calculate and record on an annual basis the facility's VOC emissions, in tons, using the documented component count and the calculation methods outlined in EPA's document 453/R-95-017 titled: *Protocol for Equipment Leak Emission Estimates* (Pages 2-10 through 2-38).
- D. The owner or operator shall calculate and record on an annual basis the facility's HAP emissions, in tons, using the HAP or VOC ratio determined using the potential-to-emit from the regulated process streams multiplied by the VOC emissions calculated in Permit Condition C.

Authority for Requirement: DNR Construction Permit 06-A-350-S2

Emission Point Characteristics

This emission point shall conform to the specifications listed below:

There is no emission point associated with VOC Emissions from Equipment Leaks (EU-FS006).

Authority for Requirement: DNR Construction permit 06-A-350-S2

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-TK001

Associated Equipment

Associated Emission Unit ID Numbers: EU-TK001
Emissions Control Equipment ID Number: CE-TK001
Emissions Control Equipment Description: Internal Floating Roof
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-TK001
Emission Unit Description: 190 Proof Ethanol Storage Tank
Raw Material/Fuel: 190 Proof Ethanol
Rated Capacity: 165,000 gallons

Applicable Requirements

Emission limits and operational limits are not required at this time.

NSPS and NESHAP Applicability

This emission unit is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

Authority for Requirement: DNR Construction Permit 06-A-352-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 10
Exhaust Flow Rate (scfm): Working and breathing loss
Exhaust Temperature (°F): Ambient
Discharge Style: Downward
Authority for Requirement: DNR Construction Permit 06-A-352-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-TK002

Associated Equipment

Associated Emission Unit ID Numbers: EU-TK002
Emissions Control Equipment ID Number: CE-TK002
Emissions Control Equipment Description: Internal Floating Roof
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-TK002
Emission Unit Description: 200 Proof Ethanol Storage Tank
Raw Material/Fuel: 200 Proof Ethanol
Rated Capacity: 165,000 gallons

Applicable Requirements

Emission limits and operational limits are not required at this time.

NSPS and NESHAP Applicability

This emission unit is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

Authority for Requirement: DNR Construction Permit 06-A-353-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 10
Exhaust Flow Rate (scfm): Working and breathing loss
Exhaust Temperature (°F): Ambient
Discharge Style: Downward
Authority for Requirement: DNR Construction Permit 06-A-353-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-TK003

Associated Equipment

Associated Emission Unit ID Numbers: EU-TK003
Emissions Control Equipment ID Number: CE-TK003
Emissions Control Equipment Description: Internal Floating Roof
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-TK003
Emission Unit Description: Denaturant Storage Tank
Raw Material/Fuel: Denaturant
Rated Capacity: 165,000 gallons

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

Operating Limits

- A. The storage tank shall be limited to storing denaturant only.

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 source.
- B. The owner or operator shall follow the applicable recordkeeping and reporting standards of Subpart Kb, 40 CFR §60.115b through §60.116b.
- C. The owner or operator shall keep records as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.

Authority for Requirement: DNR Construction Permit 06-A-354-S1

NSPS and NESHAP Applicability

This emission unit is subject to the following NSPS subparts:

NSPS Subpart A – General Provisions

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

NSPS Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

Authority for Requirement: DNR Construction Permit 06-A-354-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches, dia.): 10

Exhaust Flow Rate (scfm): Working and breathing loss

Exhaust Temperature (°F): Ambient

Discharge Style: Downward

Authority for Requirement: DNR Construction Permit 06-A-354-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-TK004 and EP-TK005

Associated Equipment

Associated Emission Unit ID Numbers: EU0TK004; EU-TK005
Emissions Control Equipment ID Number: CE-TK004; CE-TK005
Emissions Control Equipment Description: Internal Floating Roof
Continuous Emissions Monitors ID Numbers: None

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|----------|----------|--------------------------------|-------------------|-----------------|
| EP-TK004 | EU-TK004 | Denatured Ethanol Storage Tank | Denatured Ethanol | 750,000 gallons |
| EP-TK005 | EU-TK005 | Denatured Ethanol Storage Tank | Denatured Ethanol | 750,000 gallons |

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

Operating Limits

- A. The storage tank shall be limited to storing denatured ethanol only.

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 source.
- B. The owner or operator shall follow the applicable recordkeeping and reporting standards of Subpart Kb, 40 CFR 60.115b through 60.116b.
- C. The owner or operator shall keep records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.

Authority for Requirement: DNR Construction Permit 06-A-355-S1; 06-A-356-S1

NSPS and NESHAP Applicability

These storage tanks are subject to the following NSPS subparts:

NSPS Subpart A – General Provisions

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

NSPS Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

Authority for Requirement: DNR Construction Permit 06-A-355-S1; 06-A-356-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 54

Stack Opening, (inches, dia.): 10

Exhaust Flow Rate (scfm): Working and breathing loss

Exhaust Temperature (°F): Ambient

Discharge Style: Downward

Authority for Requirement: DNR Construction Permit 06-A-355-S1; 06-A-356-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: T-EIA01

Associated Equipment

Associated Emission Unit ID Numbers: T-EIA01
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: NA
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: T-EIA01
Emission Unit Description: Gasoline Storage Tank
Raw Material/Fuel: Gasoline
Rated Capacity: 150 gallons

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

Operational limits are not required at this time.

NSPS and NESHAP Applicability

This emission unit is subject to National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities [40 CFR Part 63 Subpart CCCCCC].

Authority for Requirement: 40 CFR Part 63 Subpart CCCCCC

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)

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.

The data pertaining to the plan shall be 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)

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"*
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. *567 IAC 22.108(15)"c"*

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source's right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *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 submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, 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 U.S. EPA Region VII, Attention: Chief of Air Permits, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. 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 revocation 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. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. 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. Initial 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 initial 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 initial report may be made by electronic mail (E-mail), 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 initial 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 situation 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 fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. *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 (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));
 - e. The changes comply with all applicable requirements.
 - f. For each such 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 does 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 Title V Permit Modification.

a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:

i. Do not violate any applicable requirement;

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 an 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 under rule 567 - 22.113(455B).

- 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 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, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V 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, as those requirements that apply to Title V issuance and renewal.

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 22.111-567 IAC 22.113*

G19. Duty to Obtain Construction Permits

Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. *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 (*567 IAC 23.1(3)"a"*); training fires and controlled burning of a demolished building (*567 IAC 23.2*).

G21. Open Burning

The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"j"; 567 IAC 23.2(3)"j" - 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. Exceedances 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)*

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

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 consistent with the requirements of *567 IAC 22.111(1)*. *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. 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. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department's request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. 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
Windsor Heights, IA 50324
(515) 725-9545

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
U.S. EPA Region 7
Air Permits and Compliance Branch
11201 Renner Blvd.
Lenexa, KS 66219
(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
Windsor Heights, IA 50324
(515) 725-9500

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
7900 Hickman Road, Suite #200
Windsor Heights, IA 50324
(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
Air Quality Branch
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

V. 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 Units
<http://www.epa.gov/ttn/atw/combust/boiler/cfrdb02.pdf>
- C. 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>
- D. 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>
- E. 40 CFR Part 60 Subpart IIII –Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
<http://www.epa.gov/ttn/atw/nsps/sinsps/fr28jn11.pdf>
- F. 40 CFR Part 63 Subpart A – General Provisions
<http://www.tceq.texas.gov/permitting/air/rules/federal/63/a/ahp.html>
- G. 40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE NESHAP)
<http://www.epa.gov/ttn/atw/rice/fr09mr11.pdf>
- H. 40 CFR Part 63 Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities
<http://www.tceq.texas.gov/permitting/air/rules/federal/63/cccccchp.html>