

# Iowa Department of Natural Resources Draft Title V Operating Permit

**Name of Permitted Facility: Big River Resources West Burlington LLC**

**Facility Location: 15210 103<sup>rd</sup> St., West Burlington, IA 52655**

**Air Quality Operating Permit Number: to be determined**

**Expiration Date: to be determined (5 years from issuance)**

**Permit Renewal Application Deadline: to be determined**

**EIQ Number: 92-7013**

**Facility File Number: 29-02-012**

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## **Responsible Official**

**Name: Jim Leiting**

**Title: General Manager**

**Mailing Address: 15210 103<sup>rd</sup> St., West Burlington, IA 52655**

**Phone #: (319) 768-5869**

## **Permit Contact Person for the Facility**

**Name: Brian Schasel**

**Title: Technical Manager**

**Mailing Address: 15210 103<sup>rd</sup> St., West Burlington, IA 52655**

**Phone #: (319) 768-5873**

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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**

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Douglas A. Campbell, 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
IDNR.....	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 <sub>10</sub> .....	particulate matter ten microns or less in diameter
SO <sub>2</sub> .....	sulfur dioxide
NO <sub>x</sub> .....	nitrogen oxides
VOC .....	volatile organic compound
CO.....	carbon monoxide
HAP.....	hazardous air pollutant

# I. Facility Description and Equipment List

Facility Name: Big River Resources West Burlington LLC

Permit Number: **To be determined**

Facility Description: Denatured Ethanol Plant (SIC 2869)

## Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-S10	EU-DR7103	DDGS Dryer A	03-A-048-S6
	EU-DR7203	DDGS Dryer B	
	EU-B10	Heat Recovery Boiler	
	EU-FH9201	Thermal Oxidizer	
EP-S10B	EU-DR7103B	DDGS Dryer C	06-A-623-S2
	EU-DR7203B	DDGS Dryer D	
	EU-B10B	Heat Recovery Boiler	
	EU-FH9201B	Thermal Oxidizer	
EP-S11	EU-P11	Biomathanator Flare	03-A-054-S2
EP-S20	EU-BF176	Grain Unloading	03-A-049-S2
	EU-BF103A	Grain Bin (250,000 Bushels)	
	EU-BF103B	Grain Bin (250,000 Bushels)	
EP-S30	EU-P30	Milling/Hammermill	03-A-050-S2
EP-S30B	EU-P30B	Milling/Hammermill	05-A-816-S2
EP-S40	EU-P40	Fermentation/Distillation Process	05-A-817-S3
EP-S40B	EU-P40B	Fermentation/Distillation Process	06-A-624-S2
EP-S50	EU-P50	Truck Product Loadout	03-A-055-S3
EP-S50B	EU-P50B	Rail and Truck Product Loadout	06-A-631
EP-F50	EU-F50	Emission from truck and rail product loading	N/A
EP-T61	EU-T61	Denatured Ethanol Storage Tank 750,000 gallons	03-A-056-S1
EP-T62	EU-T62	Denatured Ethanol Storage Tank 750,000 gallons	03-A-057-S1
EP-T63	EU-T63	Storage Tank 100,000 gallons	03-A-058-S1
EP-T64	EU-T64	Denaturant Storage Tank 100,000 gallons	03-A-059-S1
EP-T65	EU-T65	190 Proof Ethanol Storage Tank 100,000 gallons	03-A-060-S1
EP-T66	EU-T66	Denatured Ethanol Storage Tank 750,000 gallons	06-A-628
EP-T67	EU-T67	Denatured Ethanol Storage Tank 750,000 gallons	06-A-629
EP-T68	EU-T68	200 Proof Ethanol Storage Tank 200,000 gallons	06-A-630
EP-S70	EU-P70	DDGS Cooler	03-A-052-S3
EP-S70B	EU-P70B	DDGS Cooler	06-A-625-S1
EP-S80	EU-P80	Cooling Tower 1	05-A-368-S2
EP-S80B	EU-P80B	Cooling Tower 2	06-A-626
EP-S90	EU-P90	DDGS Loading	03-A-053-S1
EP-S90B	EU-P90B	DDGS Loading	06-A-627
EP-S101	EU-P101	Storage Bin 1	06-A-111-S1
EP-S105	EU-P105	Storage Bin 2	06-A-112-S1
EP-F110	EU-F110	VOC Emissions from Equipment Leaks	05-A-370-S4
EP-F120	EU-F120	Truck Traffic on Paved Road	05-A-369-S2

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## Insignificant Activities Equipment List

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<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
FWP	Emergency Fire Water Pump (300hp)
S51	Truck Loadout Rack - Corn Oil
T67B	Corn Oil #1 Tank (23,000 gal)
T68B	Corn Oil #2 Tank (23,000 gal)
TS-6854	Corn Oil Tank (320 gal)
TS-6853	Corn Oil Tank (328 gal)
T70	Corn Oil Tank (1,000 gal)
T71	Syrup Storage Tank (200 gal)
IPV	Insignificant Process Vent
CIT	Corrosion Inhibitor Tank
F100	Grain/DDG Fugitives

## II. Plant-Wide Conditions

Facility Name: Big River Resources West Burlington LLC

Permit Number: to be determined

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

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### Permit Duration

The term of this permit is: Five years from permit issuance

Commencing on: To be determined

Ending on: To be determined

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.

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### 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 (SO<sub>2</sub>): 500 parts per million by volume

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

Particulate Matter:

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

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

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

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of

fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

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, fertilizers 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.

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

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### ***Compliance Plan***

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

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

Authority for Requirement: 567 IAC 22.108(15)

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### **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-S10, EP-S10B, EP-S40, EP-S40B, EP-S50, EP-S50B, EP-T61, EP-T62, EP-T63, EP-T64, EP-T65, EP-T66, EP-T67, EP-T68, and EP-F110.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

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

### **40 CFR 60 Subpart Db Requirements**

This facility is subject to Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The affected units are EP-S10 and EP-S10B.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

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

#### **40 CFR 60 Subpart Kb Requirements**

This facility is subject to the Standards of Performance for Volatile Organic Liquid storage vessels (including petroleum liquids). This is applicable for storage tanks constructed after July 1984. The affected units are EP-T61, EP-T62, EP-T63, EP-T64, EP-T65, EP-T66, EP-T67, and EP-T68.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

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

#### **40 CFR 60 Subpart VV Requirements**

This facility is subject to the Standards of Performance for Equipment leaks of VOC in the Synthetic Organic Chemicals Manufacturing industry. The affected units are EP-S10, EP-S10B, EP-S40, EP-S40B, EP-S50, EP-S50B, and EP-F110.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

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

### III. Emission Point-Specific Conditions

Facility Name: Big River Resources West Burlington

Permit Number: **to be determined**

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#### Emission Point ID Number: EP-S10

##### Associated Equipment

Associated Emission Unit ID Numbers: EU-DR7103, EU-DR7203, EU-B10, EU-FH9201

Emissions Control Equipment ID Number: CE-C10

Emissions Control Equipment Description: Thermal Oxidizer

Continuous Emissions Monitors ID Numbers: CEMS1

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

*EP=Emission Point, EU=Emission Unit*

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-S10	EU-DR7103	DDGS Dryer A	Natural Gas	45 MMBtu/hr
	EU-DR7203	DDGS Dryer B	Natural Gas	45 MMBtu/hr
	EU-B10	Heat Recovery Boiler	Waste Heat	Not Applicable
	EU-FH9201	Thermal Oxidizer	Natural Gas	135 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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6  
567 IAC 23.3(2) "d"

<sup>(1)</sup> An exceedance of the indicator opacity of 10% 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 (PM<sub>10</sub>)

Emission Limit(s): 4.33 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 4.33 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6  
567 IAC 23.4(7)

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)  
Emission Limit(s): 9.89 lb/hr<sup>(2)</sup>; 500 ppmv  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6  
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)  
Emission Limit(s): 15.75 lb/hr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Volatile Organic Compounds (VOC)  
Emission Limit(s): 4.33 lb/hr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Carbon Monoxide (CO)  
Emission Limit(s): 20.22 lb/hr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6  
<sup>(2)</sup> To remain synthetic minor for PSD.

Pollutant: Acetaldehyde  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Acrolein  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Formaldehyde  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Methanol  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

Pollutant: Total HAP  
Emission Limit(s): 4.17 lb/hr; 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

### **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 follow the applicable standards of Subpart VV, 40 CFR 60.480 through 60.489.
- B. The owner or operator shall follow the applicable standards of Subpart Db, 40 CFR 60.40b through 60.49b.
- C. The dryers/thermal oxidizer shall combust only natural gas and/or process off-gases.
- D. The thermal oxidizer shall be maintained at a minimum operating temperature of 1450 degrees F (measured as a three-hour average). The thermal oxidizer shall be operated at all times the dryers or distillation equipment is being used.

- E. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- F. Plant-wide, grain usage shall not exceed 46,428,573 bushels per twelve-month rolling period.
- G. Plant-wide HAP emissions shall not exceed 9.4 tons for any single HAP or 24.4 tons for all HAPs per twelve-month rolling period.

### **Reporting and Recordkeeping**

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

- A. The owner or operator shall keep hourly records of the operating temperature of the thermal oxidizer. The owner or operator shall record all three-hour periods (during actual operations) during which the average temperature of the thermal oxidizer is not within the range of 1450 degrees F to 1625 degrees F.
- 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 records of control equipment inspections and repairs.
- D. 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 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). The annual capacity factor is defined as the ratio between the actual heat input to a steam generating unit during a calendar year, and the potential heat input had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.
- E. The owner or operator shall maintain records of the following information for each steam generating unit operating day, as required in 40 CFR 60.49b (g). This information shall also be submitted in a report, as required in 40 CFR 60.49b (i).
  - E1. Calendar date.
  - E2. Average hourly nitrogen oxides emission (as NO<sub>2</sub>) rates measured or predicted.
  - E3. 30-day average nitrogen oxides emission rates calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
  - E4. 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, with the reason for such excess emissions as well as a description of corrective actions taken.
  - E5. 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.
  - E6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data. (NOTE: when the NO<sub>x</sub> CEM is experiencing downtime, the facility is required to estimate emissions based on the 3 hour average emission rate prior to the downtime.)

- E7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
- E8. Identification of the times when the pollutant concentrations exceeded the full span of the continuous monitoring system.
- E9. Description of any modifications to the continuous monitoring system that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.
- E10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.
- F. Plant-wide record the HAP emissions for each HAP and all HAPs per twelve-month rolling period.
- G. Plant-wide record the amount of grain received per twelve-month rolling period.

### **Continuous Emission Monitoring**

The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides (NO<sub>x</sub>) 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).

Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

### **NSPS and NESHAP Applicability**

This emission point is subject to NSPS Subpart A – General Provisions, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

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

Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 66

Exhaust Flow Rate (scfm): 76,600

Exhaust Temperature (°F): 300

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-048-S6

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:**

- Pollutant - NO<sub>x</sub>
- Operational Specifications – 40 CFR 60 Appendix B
- Date of Initial System Calibration and Quality Assurance – 04/15/2005
- Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B
- Reporting & Record keeping – 40 CFR Part 60, Appendix B
- Authority for Requirement – 567 IAC 25.1 (9)

**Other Parameters**

- Pollutant – Dilute O<sub>2</sub>
- Operational Specifications – 40 CFR Part 60, Appendix B
- Date of Initial System Calibration and Quality Assurance – 04/15/2005
- Ongoing System Calibration/Quality Assurance – Engineering Experience
- Reporting & Record keeping – Engineering Experience
- 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)

## CAM Plan for EP-S10 Thermal Oxidizer

### I. Background

#### A. Emissions Unit:

Description: Natural Gas Fired Dryers A & B (45 MMBtu/hr each)  
Thermal Oxidizer (135 MMBtu/hr) (Control Device)  
Distillation Process Vents

Identification: EU-DR7103, EU-DR7203, EU-FH9201

Facility: Big River Resources West Burlington LLC  
15210 103<sup>rd</sup> St.,  
West Burlington, IA 52655

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Iowa DNR Construction Permit 03-A-048-S6

Limits: VOC limit – 4.33 lb/hr  
HAP limit – 24.4 tpy total HAPS/9.4tpy single HAP  
CO limit – 20.22 lb/hr  
PM/PM limit – 4.33 lb/hr

Control: CE-C10, Thermal Oxidizer 135 MMBtu/hr

### II. Monitoring Approach

See Table I

## **MONITORING APPROACH JUSTIFICATION**

### A. Background

The dryers/thermal oxidizer system (EP-S10) at the Big River Resources West Burlington, LLC plant is subject to the Compliance Assurance Monitoring (CAM) requirements as listed in 40 CFR Part 64. Dryers A&B (EU-P10 and associated process vents) are controlled by a 135 MMBtu/hr thermal oxidizer (CE-C10). The thermal oxidizer controls the pollutants that trigger the CAM requirements, including VOC, HAPS, CO, and PM/PM10.

### B. Rationale for Selection of Performance Indicators

The rate at which VOC, HAPS, CO, PM/PM10 are controlled is greatly affected by temperature. As such, the monitoring approach relies on the fact that low temperatures indicate potential for insufficient destruction of applicable pollutants as well as the fact that higher temperatures are related to good performance. The proposed minimum outlet combustion chamber temperature and range are based on compliance testing data and engineering knowledge of the thermal oxidizer being used. The thermal oxidizer will be maintained at a minimum temperature of 1450°F (measured as a 3-hour average). Should the temperature fall below the minimum (3- hour average), this will be logged and reported in the semiannual report.

The outlet combustion temperature is monitored on a constant basis using the CEMS system. The temperature is monitored on a constant basis to assure the temperature does not go above or below the set range. A warning message is sent when the temperature falls out of the specified range.

Implementation of a thermal oxidizer inspection and maintenance (I/M) program provides assurance that this equipment is in good repair and is being properly operated. Once per day, a plant walk through is conducted. Any excursions or abnormalities noticed are inspected closer to determine if further maintenance or repair is needed. Proper operation of the thermal oxidizers facilitates proper pollutant reduction.

C. Rationale for Selection of Indicators

The indicator for minimum temperature was selected based on manufacturer's suggested operating temperatures, performance testing, and limits in current IDNR construction permits. Baseline combustion temperature measurements are concurrent with emissions testing. The minimum temperature is listed in the background section above. Operating according to manufacturer specifications and inspections was chosen as an indicator because this can ensure proper operations of the device, especially when combined with the temperature indicator listed above.

Table 1. Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Outlet Combustion Temperature	Inspection/maintenance (I/M).
Measurement approach	Temperature of the TO is monitored on a constant basis using a CEMS in the combustion chamber outlet.	Inspection/maintenance (I/M)
II. Indicator Range	The TO will be maintained at a temperature range of 1450°F - 1625°F (measured as a 3-hour average). Should the temperature fall below the minimum (3-hour average), this will be logged and reported as required by the TV permit.	Detailed inspection twice a year and daily plant walk-throughs.
III. Performance Criteria		
A. Data Representativeness	Temperature is measured at the combustion chamber outlet using a thermocouple.	Maintenance as necessary, corrective action will be documented and completed per permit recommendation.
B. Verification of Operational Status	NA	Detailed inspection twice a year and daily plant walk-throughs.
C. QA/QC Practices and Criteria	CEMS and associated equipment inspected quarterly, quarterly cylinder gas audits and annual RATA.	NA
D. Monitoring Frequency	Constant via CEMS	Qualified personnel perform inspection
Data Collection Procedures	Records are maintained to document hourly readings and any required maintenance.	Detailed inspection twice a year and daily plant walk-throughs.
Averaging Period	3-hour Average (not to go below minimum temperature).	Records are maintained to Document any excursion or equipment needing maintenance.

## Emission Point ID Number: EP-S10B

### Associated Equipment

Associated Emission Unit ID Numbers: EU-DR7103B, EU-DR7203B, EU-B10B, EU-FH9201B  
Emissions Control Equipment ID Number: CE-C10B  
Emissions Control Equipment Description: Thermal Oxidizer  
Continuous Emissions Monitors ID Numbers: CEMS2

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

*EP=Emission Point, EU=Emission Unit*

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-S10B	EU-DR7103B	DDGS Dryer C	Natural Gas	45 MMBtu/hr
	EU-DR7203B	DDGS Dryer D	Natural Gas	45 MMBtu/hr
	EU-B10B	Heat Recovery Boiler	Waste Heat	Not Applicable
	EU-FH9201B	Thermal Oxidizer	Natural Gas	135 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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2  
567 IAC 23.3(2) "d"

<sup>(1)</sup>An exceedance of the indicator opacity of 10% 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 (PM<sub>10</sub>)

Emission Limit(s): 6.50 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 6.50 lb/hr; 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2  
567 IAC 23.4(7)

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)

Emission Limit(s): 9.89 lb/hr; 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2  
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)

Emission Limit(s): 15.75 lb/hr; 0.1 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Volatile Organic Compounds (VOC)  
Emission Limit(s): 5.42 lb/hr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Carbon Monoxide (CO)  
Emission Limit(s): 21.0 lb/hr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

<sup>(2)</sup>To remain synthetic minor for PSD.

Pollutant: Acetaldehyde  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Acrolein  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Formaldehyde  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Methanol  
Emission Limit(s): 2.1 lb/hr, 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

Pollutant: Total HAP  
Emission Limit(s): 4.17 lb/hr; 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

### **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 follow the applicable standards of Subpart VV, 40 CFR §60.480 through §60.489.
- B. The owner or operator shall follow the applicable standards of Subpart Db, 40 CFR §60.40b through §60.49b.
- C. The dryers/thermal oxidizer shall combust only natural gas and/or process off-gases.
- D. The thermal oxidizer shall be maintained at a minimum operating temperature of 1450 degrees F (measured as a three-hour average). The thermal oxidizer shall be operated at all times the dryers or distillation equipment is being used.
- E. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- F. Plant-wide, grain usage shall not exceed 46,428,573 bushels per twelve-month rolling period.
- G. Plant-wide HAP emissions shall not exceed 9.4 tons for any single HAP or 24.4 tons for all HAPs per twelve-month rolling period.

## Reporting and Recordkeeping

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

- A. The owner or operator shall keep hourly records of the operating temperature of the thermal oxidizer. The owner or operator shall record all three-hour periods (during actual operations) during which the average temperature of the thermal oxidizer is not within the range of 1450 degrees F to 1625 degrees F.
- 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 records of control equipment inspections and repairs.
- D. 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 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). The annual capacity factor is defined as the ratio between the actual heat input to a steam generating unit during a calendar year, and the potential heat input had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.
- E. The owner or operator shall maintain records of the following information for each steam generating unit operating day, as required in 40 CFR §60.49b(g). This information shall also be submitted in a report, as required in 40 CFR §60.49b(i)
  - E1. Calendar date
  - E2. Average hourly nitrogen oxides emission (as NO<sub>2</sub>) rates measured or predicted.
  - E3. 30-day average nitrogen oxides emission rates calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
  - E4. 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, with the reason for such excess emissions as well as a description of corrective actions taken.
  - E5. 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.
  - E6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data. (NOTE: when the NO<sub>x</sub> CEM is experiencing downtime, the facility is required to estimate emissions based on the 3 hour average emission rate prior to the downtime.)
  - E7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
  - E8. Identification of the times when the pollutant concentrations exceeded the full span of the continuous monitoring system.
  - E9. Description of any modifications to the continuous monitoring system that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.
  - E10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.

- F. Plant-wide record the HAP emissions for each HAP and all HAPs per twelve-month rolling period.
- G. Plant-wide record the amount of grain received per twelve-month rolling period.

**Continuous Emission Monitoring**

The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides (NO<sub>x</sub>) 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).

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

**NSPS and NESHAP Applicability**

This emission point is subject to NSPS Subpart A – General Provisions, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

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

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 66

Exhaust Flow Rate (scfm): 76,700

Exhaust Temperature (°F): 300

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-623-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.*

**Continuous Emissions Monitoring:**

**Continuous Emissions Monitoring:**

Pollutant - NO<sub>x</sub>

Operational Specifications – 40 CFR 60 Appendix B

Date of Initial System Calibration and Quality Assurance – 06/19/2008

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B

Reporting & Record keeping – 40 CFR Part 60, Appendix B

Authority for Requirement – 567 IAC 25.1 (9)

**Other Parameters**

Pollutant – Dilute O<sub>2</sub>

Operational Specifications – 40 CFR Part 60, Appendix B

Date of Initial System Calibration and Quality Assurance – 06/19/2008

Ongoing System Calibration/Quality Assurance – Engineering Experience

Reporting & Record keeping – Engineering Experience

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)

## CAM Plan for EP-S10B Thermal Oxidizer

### I. Background

#### C. Emissions Unit:

Description: Natural Gas Fired Dryers C & D (45 MMBtu/hr each)  
Thermal Oxidizer (135 MMBtu/hr) (Control Device)  
Distillation Process Vents

Identification: EU-DR7103B, EU-DR7203B, EU-FH9201B

Facility: Big River Resources West Burlington LLC  
15210 103<sup>rd</sup> St.,  
West Burlington, IA 52655

#### D. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Iowa DNR Construction Permit 06-A-623-S2

Limits: VOC limit – 5.42 lb/hr  
HAP limit – 24.4 tpy total HAPS/9.4 tpy single HAP  
CO limit – 21.00 lb/hr  
PM/PM limit – 6.50 lb/hr

Control: CE-C10B, Thermal Oxidizer 135 MMBtu/hr

### II. Monitoring Approach

See Table I

## **MONITORING APPROACH JUSTIFICATION**

### A. Background

The dryers/thermal oxidizer system (EP-S10B) at the Big River Resources West Burlington, LLC plant is subject to the Compliance Assurance Monitoring (CAM) requirements as listed in 40 CFR Part 64. Dryers C&D (EU-P10B and associated process vents) are controlled by a 135 MMBtu/hr thermal oxidizer (CE-C10B). The thermal oxidizer controls the pollutants that trigger the CAM requirements, including VOC, HAPS, CO, and PM/PM10.

### B. Rationale for Selection of Performance Indicators

The rate at which VOC, HAPS, CO, PM/PM10 are controlled is greatly affected by temperature. As such, the monitoring approach relies on the fact that low temperatures indicate potential for insufficient destruction of applicable pollutants as well as the fact that higher temperatures are related to good performance. The proposed minimum outlet combustion chamber temperature and range are based on compliance testing data and engineering knowledge of the thermal oxidizer being used. The thermal oxidizer will be maintained at a minimum temperature of 1450°F (measured as a 3-hour average). Should the temperature fall below the minimum (3- hour average), this will be logged and reported in the semiannual report.

The outlet combustion temperature is monitored on a constant basis using the CEMS system. The temperature is monitored on a constant basis to assure the temperature does not go above or below the set range. A warning message is sent when the temperature falls out of the specified range.

Implementation of a thermal oxidizer inspection and maintenance (I/M) program provides assurance that this equipment is in good repair and is being properly operated. Once per day, a plant walk through is conducted. Any excursions or abnormalities noticed are inspected closer to determine if further maintenance or repair is needed. Proper operation of the thermal oxidizers facilitates proper pollutant reduction.

C. Rationale for Selection of Indicators

The indicator for minimum temperature was selected based on manufacturer's suggested operating temperatures, performance testing, and limits in current IDNR construction permits. Baseline combustion temperature measurements are concurrent with emissions testing. The minimum temperature is listed in the background section above. Operating according to manufacturer specifications and inspections was chosen as an indicator because this can ensure proper operations of the device, especially when combined with the temperature indicator listed above.

Table 1. Monitoring Approach

	Indicator No.1	Indicator No.2
I. Indicator	Outlet Combustion Temperature	Inspection/maintenance (I/M).
Measurement approach	Temperature of the TO is monitored on a constant basis using a CEMS in the combustion chamber outlet.	Inspection/maintenance (I/M)
II. Indicator Range	The TO will be maintained at a temperature range of 1450°F - 1625°F (measured as a 3-hour average). Should the temperature fall below the minimum (3-hour average), this will be logged and reported as required by the TV permit.	Detailed inspection twice a year and daily plant walk-throughs.
III. Performance Criteria		
A. Data Representativeness	Temperature is measured at the combustion chamber outlet using a thermocouple.	Maintenance as necessary, corrective action will be documented and completed per permit recommendation.
B. Verification of Operational Status	NA	Detailed inspection twice a year and daily plant walk-throughs.
C. QA/QC Practices and Criteria	CEMS and associated equipment inspected quarterly, quarterly cylinder gas audits and annual RATA.	NA
D. Monitoring Frequency	Constant via CEMS	Qualified personnel perform inspection
Data Collection Procedures	Records are maintained to document hourly readings and any required maintenance.	Detailed inspection twice a year and daily plant walk-throughs.
Averaging Period	3-hour Average (not to go below minimum temperature).	Records are maintained to Document any excursion or equipment needing maintenance.

## **Emission Point ID Number: EP-S11**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P11  
Emissions Control Equipment ID Number: CE-F11  
Emissions Control Equipment Description: Flare  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P11  
Emission Unit Description: Biomethanator Flare  
Raw Material/Fuel: Water Stream from Evaporators  
Rated Capacity: 6.4 MMBtu/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 40%

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

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)

Emission Limit(s): 2.00 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-S2

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 1.46 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-S2

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 10.44 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-S2

Pollutant: Single HAP

Emission Limit(s): 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-S2

Pollutant: Total HAP

Emission Limit(s): 24.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-S2

#### **Operational Limits & Requirements**

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

#### **Operating Limits**

- A. The flare shall be used whenever the dryers are not in operation.
- B. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

**Reporting and Recordkeeping**

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

A. The owner or operator shall keep records of control equipment inspections and repairs.

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): NA

Exhaust Flow Rate (scfm): 3,280

Exhaust Temperature (°F): 1800

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-054-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-S20

### Associated Equipment

Associated Emission Unit ID Numbers: EU-BF176, EU-BF103A, EU-BF103B

Emissions Control Equipment ID Number: CE-C20

Emissions Control Equipment Description: Baghouse

Continuous Emissions Monitors ID Numbers: NA

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

*EP=Emission Point, EU=Emission Unit*

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-S20	EU-BF176	Grain Unloading	Shelled Corn	178.1 tons/hr
	EU-BF103A	Grain Bin		
	EU-BF103B	Grain Bin		

### 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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 03-A-049-S2  
567 IAC 23.3(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 1.33 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-049-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.33 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-049-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 control equipment shall be inspected and maintained according to manufacturer's recommendations.
- B. The grain bins shall be maintained at negative pressure at all times that the bins are in operation. The baghouse shall be operated when the grain bins are in operation and for at least 30 minutes after loading and unloading of the grain bins.

**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: Iowa DNR Construction Permit 03-A-049-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 48

Exhaust Flow Rate (scfm): 45,850

Exhaust Temperature (°F): 84

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-049-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-S30**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P30  
Emissions Control Equipment ID Number: CE-C30  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P30  
Emission Unit Description: Milling/Hammermill  
Raw Material/Fuel: Shelled Corn  
Rated Capacity: 100 tons/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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 03-A-050-S2  
567 IAC 23.3.(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 0.60 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-050-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.60 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-050-S2

#### **Operational Limits & Requirements**

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

#### **Operating Limits**

- A. The control equipment shall be inspected and maintained 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 repairs.

Authority for Requirement: Iowa DNR Construction Permit 03-A-050-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 32

Exhaust Flow Rate (scfm): 14,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-050-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-S30B**

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30B  
Emissions Control Equipment ID Number: CE-C30B  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P30B  
Emission Unit Description: Milling/Hammermill  
Raw Material/Fuel: Shelled Corn  
Rated Capacity: 100 tons/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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 05-A-816-S2  
567 IAC 23.3.(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 0.60 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-816-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.60 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-816-S2

**Operational Limits & Requirements**

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

**Operating Limits**

- A. The control equipment shall be inspected and maintained 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 repairs.

Authority for Requirement: Iowa DNR Construction Permit 05-A-816-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 32

Exhaust Flow Rate (scfm): 14,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 05-A-816-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-S40**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P40  
Emissions Control Equipment ID Number: CE-C40  
Emissions Control Equipment Description: Scrubber  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P40  
Emission Unit Description: Fermentation & Distillation Process  
Raw Material/Fuel: Anhydrous Ethanol  
Rated Capacity: 45~75 min/gal water

### **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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3  
567 IAC 23.3(2) "d"

<sup>(1)</sup>An exceedance of the indicator opacity of 10% 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 (PM<sub>10</sub>)

Emission Limit(s): 0.44 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.44 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3  
567 IAC 23.3(2) "a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 13.01 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

Pollutant: Acrolein (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

Pollutant: Formaldehyde (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

Pollutant: Methanol (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

Pollutant: Total HAP  
Emission Limit(s): 4.17 lb/hr; 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

### **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 follow the applicable standards of Subpart VV, 40 CFR 60.480 through 60.489.
- B. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- C. Sodium bisulfite shall be used at the same rate as that when tested.

#### **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*

- A. The owner or operator shall keep records as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- B. The owner or operator shall keep records of control equipment inspections and repairs.
- C. The owner or operator shall keep records of the completed testing for HAPs which show how much sodium bisulfite was used during the test.
- D. The owner or operator shall record the amount of sodium bisulfite used per day.

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

#### **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.

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

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-S3

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 20

Exhaust Flow Rate (scfm): 5,100

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 05-A-817-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

## **CAM Plan for EP-S40 Packed Bed Scrubber**

### I. Background

#### A. Emissions Unit:

Description: Fermentation (process vessels and beer well)

Identification: EU-P40

Facility: Big River Resources West Burlington LLC  
15210 103<sup>rd</sup> St.,  
West Burlington, IA 52655

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Iowa DNR Construction Permit 05-A-817-S3

Limits: VOC limit – 13.01 lb/hr

HAP limit – 24.4 tpy total HAPS/9.4 tpy single HAP

Control: CE-C40, Packed Bed Scrubber

### II. Monitoring Approach

See Table I

## **MONITORING APPROACH JUSTIFICATION**

### A. Background

The fermentation process (EP ID: S40) at the Big River Resources West Burlington, LLC plant is subject to the Compliance Assurance Monitoring (CAM) requirements as listed in 40 CFR Part 64. The fermentation process is controlled by a packed bed scrubber (C40). The scrubber controls the pollutants that trigger the CAM requirements, or VOC and HAP emissions.

### B. Rationale for Selection of Performance Indicators

The rate at which VOC's/HAPS are controlled is greatly affected by water flow rate and the amount of chemical additive injection. As such, the monitoring approach relies on the fact that low water flow and low chemical injection may indicate potential for insufficient destruction of applicable pollutants. The proposed minimum water flow rate and chemical injection rates are based on compliance testing data and engineering knowledge of the scrubber and chemical additives. The water flow rate to the scrubber is maintained at a minimum of 30 gpm. This is the rate at which scrubber VOC/HAP emissions were previously tested and passed. Also, the chemical injection rate is maintained at a minimum of 1.5 gph, the rate at which the chemical was being injected during the previous performance testing confirming compliance with VOC/HAP emissions. Should the water flow rate or chemical injection rate fall below these rates, corrective measures are taken, the incident is logged, and the incident is reported as required by the Title V Permit.

Both the water flow rate and chemical injection rate is monitored on a continual basis through the DCS. Historical and real time data can be pulled off the system to ensure average flow rates are being maintained.

An inspection and maintenance (I/M) program provides assurance that this equipment is in good repair and is being properly operated. Inspection and maintenance of the scrubber system and monitoring systems is conducted per the manufacturer's specified

recommendations. Daily walkthroughs and detailed semi-annual inspections are performed. Maintenance needs and excursions are documented and performed as needed.

C. Rationale for Selection of Indicators

The indicator for minimum flow rate for both water flow rate and chemical injection rate was selected based on manufacturer's suggested parameters, performance testing, and limits in current IDNR construction permits. Baseline flow rates and measurements are concurrent with emissions testing. Operating according to manufacturer specifications and inspections was chosen as an indicator because this can ensure proper operations of the device, especially when combined with the water flow rate and chemical injection rates as mentioned above.

Table 1. Monitoring Approach

	Indicator No.1	Indicator No.2	Indicator No.3
I. Indicator	Water Flow Rate	Sodium Bisulfite Injection	Inspection/maintenance (I/M)
Measurement approach	DCS monitors constant water flow rate	DCS and Totalizer monitor chemical injection rates	Detailed inspection twice a year and daily plant walk-throughs
II. Indicator Range	Water flow rate will be maintained at an average minimum of 30 gallon per minute. Should indicator fall below 30 gallons per minute (average), corrective measures will be made and the incident will be recorded and reported as required by the Title V Permit.	Chemical injection rate will be maintained at a minimum average injection rate of 1.5 gallons per hour. Should indicator fall below 1.5 gallons per hour (average), corrective measures will be made and the incident will be recorded and reported as required by the Title V Permit.	Maintenance as necessary, corrective action will be documented and completed per permit recommendation.
III. Performance Criteria			
A. Data Representativeness	Water flow rate is measured on the DCS	Injection rate is monitored at the DCS and totalizer	Detailed inspection twice a year and daily plant walk-throughs
B. Verification of Operational Status	NA	NA	NA
C. QA/QC Practices and Criteria			Qualified personnel perform Inspection.
D. Monitoring Frequency	Constant	Constant	Detailed inspection twice a year and daily plant walk-throughs
Data Collection Procedures	Constant via DCS	Constant via DCS	Records are maintained to Document any excursion or equipment needing maintenance
Averaging Period	Daily	Daily	NA

## **Emission Point ID Number: EP-S40B**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P40B  
Emissions Control Equipment ID Number: CE-C40B  
Emissions Control Equipment Description: Scrubber  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P40B  
Emission Unit Description: Fermentation & Distillation Process  
Raw Material/Fuel: Anhydrous Ethanol  
Rated Capacity: 46~75 gal/min of water

### **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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2  
567 IAC 23.3(2) "d"

<sup>(1)</sup>An exceedance of the indicator opacity of 10% 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 (PM<sub>10</sub>)

Emission Limit(s): 0.94 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.94 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2  
567 IAC 23.3(2) "d"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 15.53 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

Pollutant: Acrolein (HAP)

Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

Pollutant: Formaldehyde (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

Pollutant: Methanol (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

Pollutant: Total HAP  
Emission Limit(s): 4.17 lb/hr; 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

### **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 follow the applicable standards of Subpart VV, 40 CFR 60.480 through 60.489.
- B. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- C. Sodium bisulfite shall be used at the same rate as that when tested.

#### **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 as required in 40 CFR 60.486, and reports as required in 40 CFR 60.487.
- B. The owner or operator shall keep records of control equipment inspections and repairs.
- C. The owner or operator shall keep records of the completed testing for HAPs which show how much sodium bisulfite was used during the test.
- D. The owner or operator shall record the amount of sodium bisulfite used per day.

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

#### **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.

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

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 75

Stack Opening, (inches, dia.): 20

Exhaust Flow Rate (scfm): 7,400

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-624-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

## **CAM Plan for EP-S40B Packed Bed Scrubber**

### I. Background

#### A. Emissions Unit:

Description: Fermentation (process vessels and beer well)

Identification: EU-P40B

Facility: Big River Resources West Burlington LLC  
15210 103<sup>rd</sup> St.  
West Burlington, IA 52655

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Iowa DNR Construction Permit 06-A-624-S2

Limits: VOC limit – 15.53 lb/hr

HAP limit – 24.4 tpy total HAPs/9.4 tpy single HAP

Control: CE-C40B, Packed Bed Scrubber

### II. Monitoring Approach

See Table I

## **MONITORING APPROACH JUSTIFICATION**

### A. Background

The fermentation process (EP-S40B) at the Big River Resources West Burlington, LLC plant is subject to the Compliance Assurance Monitoring (CAM) requirements as listed in 40 CFR Part 64. The fermentation process is controlled by a packed bed scrubber (CE-C40B). The scrubber controls the pollutants that trigger the CAM requirements, or VOC and HAP emissions.

### B. Rationale for Selection of Performance Indicators

The rate at which VOC's/HAPS are controlled is greatly affected by water flow rate and the amount of chemical additive injection. As such, the monitoring approach relies on the fact that low water flow and low chemical injection may indicate potential for insufficient destruction of applicable pollutants. The proposed minimum water flow rate and chemical injection rates are based on compliance testing data and engineering knowledge of the scrubber and chemical additives. The water flow rate to the scrubber is maintained at a minimum of 32 gpm. This is the rate at which scrubber VOC/HAP emissions were previously tested and passed. Also, the chemical injection rate is maintained at a minimum of 1.7 gph, the rate at which the chemical was being injected during the previous performance testing confirming compliance with VOC/HAP emissions. Should the water flow rate or chemical injection rate fall below these rates, corrective measures are taken, the incident is logged, and the incident is reported as required by the Title V Permit.

Both the water flow rate and chemical injection rate is monitored on a continual basis through the DCS. Historical and real time data can be pulled off the system to ensure average flow rates are being maintained.

An inspection and maintenance (I/M) program provides assurance that this equipment is in good repair and is being properly operated. Inspection and maintenance of the scrubber system and monitoring systems is conducted per the manufacturer's specified recommendations. Daily walkthroughs and detailed semi-annual inspections are performed. Maintenance needs and excursions are documented and performed as needed.

C. Rationale for Selection of Indicators

The indicator for minimum flow rate for both water flow rate and chemical injection rate was selected based on manufacturer's suggested parameters, performance testing, and limits in current IDNR construction permits. Baseline flow rates and measurements are concurrent with emissions testing.

Operating according to manufacturer specifications and inspections was chosen as an indicator because this can ensure proper operations of the device, especially when combined with the water flow rate and chemical injection rates as mentioned above.

Table 1. Monitoring Approach

	Indicator No.1	Indicator No.2	Indicator No.3
I. Indicator	Water Flow Rate	Sodium Bisulfite Injection	Inspection/maintenance (I/M)
Measurement approach	DCS monitors constant water flow rate	DCS and Totalizer monitor chemical injection rates	Detailed inspection twice a year and daily plant walk-throughs
II. Indicator Range	Water flow rate will be maintained at an average minimum of 32 gallon per minute. Should indicator fall below 32 gallons per minute (average), corrective measures will be made and the incident will be recorded and reported as required by the Title V Permit.	Chemical injection rate will be maintained at a minimum average injection rate of 1.7 gallons per hour. Should indicator fall below 1.7 gallons per hour (average), corrective measures will be made and the incident will be recorded and reported as required by the Title V Permit.	Maintenance as necessary, corrective action will be documented and completed per permit recommendation.
III. Performance Criteria			
A. Data Representativeness	Water flow rate is measured on the DCS	Injection rate is monitored at the DCS and totalizer	Detailed inspection twice a year and daily plant walk-throughs
B. Verification of Operational Status	NA	NA	NA
C. QA/QC Practices and Criteria			Qualified personnel perform Inspection.
D. Monitoring Frequency	Constant	Constant	Detailed inspection twice a year and daily plant walk-throughs
Data Collection Procedures	Constant via DCS	Constant via DCS	Records are maintained to Document any excursion or equipment needing maintenance
Averaging Period	Daily	Daily	NA

**ission Point ID Number: EP-S50**

Associated Equipment

Associated Emission Unit ID Numbers: EU-P50  
Emissions Control Equipment ID Number: CE-C50  
Emissions Control Equipment Description: Flare  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P50  
Emission Unit Description: Truck Product Loadout  
Raw Material/Fuel: Pilot: Natural Gas; Flare: Truckling Loading Waste Gas  
Rated Capacity: Natural Gas: 0.1 MMBtu/hr; Trucking Loading Waste Gas: 6.4 MMBtu/hr

**Applicable Requirements**

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

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

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

Pollutant: Particulate Matter (PM)  
Emission Limit(s): 0.1 gr/dscf  
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxides (SO<sub>2</sub>)  
Emission Limit(s): 500 ppmv  
Authority for Requirement: 567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)  
Emission Limit(s): 1.13 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

Pollutant: Volatile Organic Compounds (VOC)  
Emission Limit(s): 0.83 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

Pollutant: Carbon Monoxide (CO)  
Emission Limit(s): 5.96 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

Pollutant: Single HAP  
Emission Limit(s): 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

Pollutant: Total HAP  
Emission Limit(s): 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

## **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 follow the applicable standards of Subpart VV, 40 CFR §60.480 through §60.489.
- B. The control equipment shall be used whenever product is loaded through the truck loadout.
- C. The flare shall be limited to operating 5000 hours per twelve-month rolling period. (Note: the pilot light may operate 8760 hours per year).
- D. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- E. Plant-wide the total amount of denatured ethanol loaded out by truck or rail shall not exceed 130,000,000 gallons per twelve-month rolling period.
- F. No switch loading (arrival with a load of denaturant, leaving with a load of denatured ethanol) shall occur at the rail loadout.

### **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 as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.
- B. The owner or operator shall keep records of control equipment inspections and repairs.
- C. The owner or operator shall keep records of the amount of product loaded out plant-wide per twelve-month rolling period.
- D. The owner or operator shall keep records of the number of hours the flare is operated per twelve-month rolling period.

Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

### **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.

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

Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 30

Exhaust Flow Rate (scfm): 6,400

Exhaust Temperature (°F): 1800

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-055-S3

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

**Monitoring Requirements**

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

**Agency Approved Operation & Maintenance Plan Required?** Yes  No

**Facility Maintained Operation & Maintenance Plan Required?** Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?** Yes  No

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: EP-S50B**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P50B  
Emissions Control Equipment ID Number: CE-C50B  
Emissions Control Equipment Description: Flare  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P50B  
Emission Unit Description: Rail & Truck Product Loadout  
Raw Material/Fuel: Pilot: Natural Gas; Flare: Truck & Rail Loading Waste Gas  
Rated Capacity: Natural Gas: 0.1 MMBtu/hr; Truck & Rail Loading Waste Gas: 13 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%

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

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

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

Pollutant: Sulfur Dioxides (SO<sub>2</sub>)

Emission Limit(s): 500 ppmv

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

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)

Emission Limit(s): 2.25 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-631

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 1.69 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-631

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 12.06 ton/yr

Authority for Requirement: Iowa DNR Construction Permit

Pollutant: Single HAP

Emission Limit(s): 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-631

Pollutant: Total HAP

Emission Limit(s): 24.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit

## **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 follow the applicable standards of Subpart VV, 40 CFR §60.480 through §60.489.
- B. The control equipment shall be used whenever product is loaded through the rail or truck loadout.
- C. The flare shall be limited to operating 5000 hours per twelve-month rolling period. (Note: the pilot light may operate 8760 hours per year).
- D. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- E. Plant-wide the total amount of denatured ethanol loaded out by truck or rail shall not exceed 130,000,000 gallons per twelve-month rolling period.
- F. No switch loading (arrival with a load of denaturant, leaving with a load of denatured ethanol) shall occur at the rail loadout.

### **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 as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.
- B. The owner or operator shall keep records of control equipment inspections and repairs.
- C. The owner or operator shall keep records of the amount of product loaded out plant-wide per twelve-month rolling period.
- D. The owner or operator shall keep records of the number of hours the flare is operated per twelve-month rolling period.

Authority for Requirement: Iowa DNR Construction Permit 06-A-631

### **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.

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

Authority for Requirement: Iowa DNR Construction Permit 06-A-631

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

- Stack Height, (ft, from the ground): 30
- Stack Opening, (inches, dia.): 72
- Exhaust Flow Rate (scfm): 8,170
- Exhaust Temperature (°F): 1,800
- Discharge Style: Vertical, Unobstructed
- Authority for Requirement: Iowa DNR Construction Permit 06-A-631

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: Storage Tanks (EP-T61, EP-T62)

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

*EP=Emission Point, EU=Emission Unit*

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	CE Description	Construction Permit
EP-T61	EU-T61	750,000 gallons Denatured Ethanol Storage Tank	NA	NA	CE-C61	Internal	03-A-056-S1
EP-T62	EU-T62				CE-C62	Floating Roof	03-A-057-S1

### Applicable Requirements

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

No emission limits required at this time.

#### Operational Limits & Requirements

*The owner/operator of each equipment listed in the table above shall comply with the operational limits and requirements listed below.*

#### **Operating Limits**

- A. The tank shall only store denatured ethanol.
- B. The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR §60.112b (a) (1), and inspect as required in 40 CFR §60.113b (a).

#### **Reporting and Recordkeeping**

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

- A. The owner or operator 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 keep records as required in 40 CFR §60.115b (a) and 40 CFR §60.116b.

Authority for Requirement: Iowa DNR Construction Permit 03-A-056-S1; 03-A-057-S1

#### **NSPS and NESHAP Applicability**

These emission points are subject to NSPS Subpart A – General Provisions and 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.

These emission points are not subject to NESHAP at this time.

Authority for Requirement: Iowa DNR Construction Permit 03-A-056-S1; 03-A-057-S1

**Emission Point Characteristics**

*Each emission point listed in the table above shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 51

Stack Opening, (inches): 4 total for each tank, 4x5 each

Exhaust Flow Rate (scfm): NA – Vent

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 03-A-056-S1; 03-A-057-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: Storage Tanks (EP-T63, EP-T64, EP-T65)**

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

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

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	CE Description	Construction Permit
EP-T63	EU-T63	Storage Tank 100,000 gal	NA	NA	CE-C63	Internal Floating Roof	03-A-058-S1
EP-T64	EU-T64	Denaturant Storage Tank 100,000 gal	NA	NA	CE-C64		03-A-059-S1
EP-T65	EU-T65	190 Proof Ethanol Storage Tank 100,000 gal	NA	NA	CE-C65		03-A-060-S1

**Applicable Requirements**

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

No emission limits required at this time.

**Operational Limits & Requirements**

*The owner/operator of each equipment listed in the table above shall comply with the operational limits and requirements listed below.*

**Operating Limits**

- A. EP-T63 shall only store E85, denaturant, 200 Proof Ethanol or 190 Proof Ethanol.
- B. EP-T64 shall only store denaturant.
- C. EP-T65 shall only store 190 Proof ethanol.
- D. The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR §60.112b (a) (1), and inspect as required in 40 CFR §60.113b (a).

**Reporting and Recordkeeping**

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

- A. The owner or operator 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 keep records as required in 40 CFR §60.115b (a) and 40 CFR §60.116b.

Authority for Requirement: Iowa DNR Construction Permit 03-A-058-S1, 03-A-059-S1, 03-A-060-S1

**NSPS and NESHAP Applicability**

These emission points are subject to NSPS Subpart A – General Provisions and 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. These emission points are not subject to NESHAP at this time.

Authority for Requirement: Iowa DNR Construction Permit 03-A-058-S1, 03-A-059-S1, 03-A-060-S1

**Emission Point Characteristics**

*Each emission point listed in the table above shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 29

Stack Opening, (inches, dia.): 4 total for each tank, 4x5 each

Exhaust Flow Rate (scfm): NA-Vent

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 03-A-058-S1, 03-A-059-S1, 03-A-060-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: Storage Tanks (EP-T66, EP-T67)

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

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

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	CE Description	Construction Permit
EP-T66	EU-T66	Denatured Ethanol Storage Tank 750,000 gal	NA	NA	CE-C66	Internal Floating Roof	06-A-628
EP-T67	EU-T67	Denatured Ethanol Storage Tank 750,000 gal	NA	NA	CE-C67		06-A-629

### Applicable Requirements

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

No emission limits required at this time.

#### Operational Limits & Requirements

*The owner/operator of each equipment listed in the table above shall comply with the operational limits and requirements listed below.*

#### **Operating Limits**

- A. These tanks shall only store denatured ethanol.
- B. The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR §60.112b (a) (1), and inspect as required in 40 CFR §60.113b (a).

#### **Reporting and Recordkeeping**

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

- A. The owner or operator 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 keep records as required in 40 CFR §60.115 b (a) and 40 CFR §60.116b.

Authority for Requirement: Iowa DNR Construction Permit 06-A-628, 06-A-629

#### **NSPS and NESHAP Applicability**

These emission points are subject to NSPS Subpart A – General Provisions and 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. These emission points are not subject to NESHAP at this time.

Authority for Requirement: Iowa DNR Construction Permit 06-A-628, 06-A-629

**Emission Point Characteristics**

*Each emission point listed in the table above shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 51

Stack Opening, (inches, dia.): 4 total for each tank, 4x5 each

Exhaust Flow Rate (scfm): NA-Vent

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 06-A-628, 06-A-629

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-T68**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-T68  
Emissions Control Equipment ID Number: CE-C68  
Emissions Control Equipment Description: Internal Floating Roof  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-T68  
Emission Unit Description: 200 Proof Ethanol Storage Tank 200,000 gal  
Raw Material/Fuel: NA  
Rated Capacity: NA

### **Applicable Requirements**

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

No emission limits required at this time.

#### **Operational Limits & Requirements**

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

#### **Operating Limits**

- A. The tank shall only store 200 Proof ethanol.
- B. The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR §60.112b (a) (1), and inspect as required in 40 CFR §60.113b(a).

#### **Reporting and Recordkeeping**

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

- A. The owner or operator 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 keep records as required in 40 CFR §60.115b (a) and 40 CFR §60.116b.

Authority for Requirement: Iowa DNR Construction Permit 06-A-630

#### **NSPS and NESHAP Applicability**

This emission point is subject to NSPS Subpart A – General Provisions and 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. This emission point is not subject to NESHAP at this time.

Authority for Requirement: Iowa DNR Construction Permit 06-A-630

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

- Stack Height, (ft, from the ground): 29
- Stack Opening, (inches, dia.): 4 total, 4x5 each
- Exhaust Flow Rate (scfm): NA-Vent
- Exhaust Temperature (°F): Ambient
- Discharge Style: Horizontal
- Authority for Requirement: Iowa DNR Construction Permit 06-A-630

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-S70**

Associated Equipment

Associated Emission Unit ID Numbers: EU-P70  
Emissions Control Equipment ID Number: CE-C70  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P70  
Emission Unit Description: DDGS Cooler  
Raw Material/Fuel: DDGS  
Rated Capacity: 26 tons/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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3  
567 IAC 23.3(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 0.94 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.94 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3  
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 3.00 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

Pollutant: Acrolein (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

Pollutant: Formaldehyde (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

Pollutant: Methanol (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

Pollutant: Total HAP  
Emission Limit(s): 4.17 lb/hr; 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

### **Operational Limits & Requirements**

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

#### **Operating Limits**

- A. The baghouse shall be operated and maintained per the manufacturer's instructions and 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. Maintain a record of all maintenance and repair to the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 30

Stack Opening, (inches, dia.): 36

Exhaust Flow Rate (scfm): 22,000

Exhaust Temperature (°F): 85

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-052-S3

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

**Monitoring Requirements**

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

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: EP-S70B**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P70B  
Emissions Control Equipment ID Number: CE-C70B  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P70B  
Emission Unit Description: DDGS Cooler  
Raw Material/Fuel: DDGS  
Rated Capacity: 26 tons/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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1  
567 IAC 23.3(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 1.24 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.24 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1  
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 3.25 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

Pollutant: Acrolein (HAP)

Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

Pollutant: Formaldehyde (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

Pollutant: Methanol (HAP)  
Emission Limit(s): 2.1 lb/hr; 9.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

Pollutant: Total HAP  
Emission Limit(s): 4.17 lb/hr; 24.4 ton/yr  
Authority for Requirement: Iowa DNR Construction Permit 06-A-625-S1

### **Operational Limits & Requirements**

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

#### **Operating Limits**

- A. The baghouse shall be operated and maintained per the manufacturer's instructions and 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. Maintain a record of all maintenance and repair to the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 06-A-625-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.): 38  
Exhaust Flow Rate (scfm): 29,000  
Exhaust Temperature (°F): 85  
Discharge Style: Vertical Unobstructed  
Authority for Requirement: Iowa DNR Construction Permit 06-A-625-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: Cooling Towers (EP-S80, EP-S80B)**

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

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

EP	EU	Emission Unit Description	Raw Material	Rated Capacity	CE	Construction Permit
EP-S80	EU-P80	Cooling Tower	NA	1,200,000 gal/hr	NA	05-A-368-S2
EP-S80B	EU-P80B			1,200,000 gal/hr	NA	06-A-626

**Applicable Requirements**

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

*The emissions from each emission point listed in the table above shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 05-A-368-S2, 06-A-626  
567 IAC 23.3(2) "d"

<sup>(1)</sup>An exceedance of the indicator opacity of 10% 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 (PM<sub>10</sub>)

Emission Limit(s): 1.50 lb/hr (for each tower)

Authority for Requirement: Iowa DNR Construction Permit 05-A-368-S2, 06-A-626

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.50 lb/hr (for each tower)

Authority for Requirement: Iowa DNR Construction Permit 05-A-368-S2, 06-A-626

**Operational Limits & Requirements**

*The owner/operator of each equipment listed in the table above shall comply with the operational limits and requirements listed below.*

**Operating Limits**

- A. The circulating water in the cooling tower shall not exceed 3,000 parts per million (ppm) total dissolved solids (TDS). Monitoring of the TDS shall be conducted on a monthly schedule.
- B. The cooling tower shall be operated and maintained per the manufacturer’s specifications and instructions.

**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. Maintain records on-site of the TDS concentration in the cooling tower circulating water. Records shall also be kept of the dates of measurement and the methods used to determine the concentration of the TDS in the cooling water.
- B. Maintain records of all maintenance and repair to the cooling tower.

Authority for Requirement: Iowa DNR Construction Permit 05-A-368-S2, 06-A-626

**Emission Point Characteristics**

*Each emission point listed in the table above shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 216

Exhaust Flow Rate (scfm): 1,560,000

Exhaust Temperature (°F): 85

Discharge Style: Vertical

Authority for Requirement: Iowa DNR Construction Permit 05-A-368-S2, 06-A-626

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

**Monitoring Requirements**

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

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: EP-S90**

### Associated Equipment

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

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Emission Unit vented through this Emission Point: EU-P90  
Emission Unit Description: DDGS Loading  
Raw Material/Fuel: DDGS  
Rated Capacity: 52 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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 03-A-053-S1  
567 IAC 23.3(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 0.21 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-053-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.21 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 03-A-053-S1  
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 baghouse shall be operated and maintained per the manufacturer's instructions and specifications.
- B. Plant-wide, DDGS Production shall not exceed 379,590 tons per rolling twelve (12) month rolling period.

**Reporting and Recordkeeping**

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

- A. Maintain a record of all maintenance and repair to the baghouse.
- B. Plant-wide, for the first twelve (12) months of operation, determine the amount of DDGS for each month of operation. After the first twelve (12) months of operation, determine the cumulative amount of DDGS on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 03-A-053-S1

**Emission Point Characteristics**

The emission point shall conform to the specifications listed below.

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

Stack Opening, (inches, dia.): 14

Exhaust Flow Rate (scfm): 5,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 03-A-053-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-S90B**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P90B  
Emissions Control Equipment ID Number: CE-C90B  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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## **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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 06-A-627  
567 IAC 23.3(2) "d"

<sup>(1)</sup>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 (PM<sub>10</sub>)

Emission Limit(s): 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-627

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-627  
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 baghouse shall be operated and maintained per the manufacturer's instructions and specifications.
- B. Plant-wide, DDGS Production shall not exceed 379,590 tons per rolling twelve (12) month rolling period.

#### **Reporting and Recordkeeping**

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

- A. Maintain a record of all maintenance and repair to the baghouse.

- B. Plant-wide, for the first twelve (12) months of operation, determine the amount of DDGS for each month of operation. After the first twelve (12) months of operation, determine the cumulative amount of DDGS on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 06-A-627

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

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

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 5,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-627

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-S101**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P101  
Emissions Control Equipment ID Number: CE-C101  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P101  
Emission Unit Description: Storage Bin  
Raw Material/Fuel: Corn  
Rated Capacity: 840 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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 06-A-111-S1  
567 IAC 23.3(2) "d"

<sup>(1)</sup>An exceedance of the indicator opacity of "10%" 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 (PM<sub>10</sub>)

Emission Limit(s): 0.34 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-111-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.34 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-111-S1  
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 control equipment shall be inspected and maintained according to manufacturer's recommendations.
- B. The grain bin shall be maintained at negative pressure at all times that the bins are in operation. The baghouse shall be operated when the grain bins are in operation and for at least 30 minutes after loading and unloading of the grain bin.

**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: Iowa DNR Construction Permit 06-A-111-S1

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 120

Stack Opening, (inches): 12x12

Exhaust Flow Rate (scfm): 2,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-111-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-S105**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-P105  
Emissions Control Equipment ID Number: CE-C105  
Emissions Control Equipment Description: Baghouse  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-P105  
Emission Unit Description: Storage Bin  
Raw Material/Fuel: Corn  
Rated Capacity: 840 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% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 06-A-112-S1  
567 IAC 23.3(2) "d"

<sup>(1)</sup>An exceedance of the indicator opacity of "10%" 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 (PM<sub>10</sub>)

Emission Limit(s): 0.34 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-112-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.34 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 06-A-112-S1  
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 control equipment shall be inspected and maintained according to manufacturer's recommendations.
- B. The grain bin shall be maintained at negative pressure at all times that the bins are in operation. The baghouse shall be operated when the grain bins are in operation and for at least 30 minutes after loading and unloading of the grain bin.

**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: Iowa DNR Construction Permit 06-A-112-S1

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 120

Stack Opening, (inches): 12x12

Exhaust Flow Rate (scfm): 2,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-112-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.

**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-F110**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-F110  
Emissions Control Equipment ID Number: NA  
Emissions Control Equipment Description: NA  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point: EU-F110  
Emission Unit Description: VOC Emissions from Equipment Leaks  
Raw Material/Fuel: NA  
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): 16.95 ton/hr  
Authority for Requirement: Iowa DNR Construction Permit 05-A-370-S4

#### **Operational Limits & Requirements**

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

#### **Operating Limits**

- A. The Component Count shall be documented as to the number and types of components used. Components include but are not limited to valves, pumps, compressor seals, flanges, etc.

#### **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. Calculate and record the VOC emissions based on the documented component count. Update the VOC emission calculations as the component count varies. Emission factors shall be based on EPA document 453/R-95-017 titled Protocol for Equipment Leak Emission Estimates.

Authority for Requirement: Iowa DNR Construction Permit 05-A-370-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.

Authority for Requirement: Iowa DNR Construction Permit 05-A-370-S4

**Monitoring Requirements**

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

## **Emission Point ID Number: EP-F120**

### Associated Equipment

Associated Emission Unit ID Numbers: EU-F120  
Emissions Control Equipment ID Number: NA  
Emissions Control Equipment Description: NA  
Continuous Emissions Monitors ID Numbers: NA

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Emission Unit vented through this Emission Point:  
Emission Unit Description: Truck Traffic  
Raw Material/Fuel: NA  
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: Particulate Matter (PM<sub>10</sub>)  
Emission Limit(s): 5.83 ton/yr <sup>(1)</sup>  
Authority for Requirement: Iowa DNR Construction Permit 05-A-369-S2

Pollutant: Particulate Matter (PM)  
Emission Limit(s): 29.90 ton/yr <sup>(1)</sup>  
Authority for Requirement: Iowa DNR Construction Permit 05-A-369-S2

(1) Based on a silt loading of 3.0 g/m<sup>2</sup>.

#### Operational Limits & Requirements

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

#### **Operating Limits**

- A. The haul road shall be paved within 90 days of the permit issuance date.
- B. Truck traffic on the haul road shall not exceed 10 mph. The speed limit shall be posted on the haul road.
- C. Any spills on the road shall be cleaned up immediately.
- D. Truck traffic emissions on the paved road shall be controlled by water flushing (except as noted in Item D4 in this section) and sweeping (Item C in Reporting and Recordkeeping section) once per day. The water spray rate shall be a minimum of 0.23 gallons per square yard.
  - D1. If water flushing followed by sweeping cannot be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35° F (1.7° C) only sweeping is required. Water flushing and/or sweeping is not required for days of inclement weather.
  - D2. Water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period or the paved road(s) will not be used on a given day.
  - D3. Water flushing and sweeping need not occur if the plant does not receive any truck traffic

that day (i.e. on a weekend).

- D4. Daily water flushing & daily sweeping need not occur provided that the haul road emissions do not exceed 20.93 tons PM (70% of PM PTE based on 3.0 g/m<sup>2</sup>) for the last twelve months. This shall be calculated using the formula in Item D in "Reporting and Recordkeeping" section. Provided emissions as calculated in Item D in "Reporting and Recordkeeping" section remain below 20.93 tons for the last twelve months only weekly sweeping is required. In the event that emissions exceed 20.93 tons for the last twelve months the plant shall be required to commence daily water flushing with daily sweeping until PM emissions fall below 20.93 tons for the last twelve months.
- E. Silt load performance testing shall be completed monthly with the initial testing being performed within 60 days of the permit issuance date. Testing shall be completed prior to water flushing and/or sweeping for that day. Provided the results demonstrate compliance with the PM & PM<sub>10</sub> ton per year emission limits in "Emission Limits" section, reduced frequency of testing may be requested after 12 performance tests have been completed (see Item D in "Reporting and Recordkeeping" section).
- F. The owner/operator shall record the number of trucks that load/unload material on a monthly basis. Based on the number of trucks the total Vehicle Miles Traveled (VMT) shall be calculated for that month.

### Reporting and Recordkeeping

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

- A. Record the frequency of sweeping performed on the haul roads. If the roads are not swept due to weather, a written record must be kept on site outlining the conditions.
- B. Performance testing on the haul road surface silt loading shall be completed on a monthly basis. For each performance test, silt loading sampling shall be done for at least 3 different locations. Performance testing shall be completed prior to water flushing and/or sweeping.
- C. The plant shall maintain a log for the haul roads that show the following:
- C1. The silt content of the road for that month based on testing;
  - C2. The date of performance testing;
  - C3. The vehicle miles traveled (VMT) for that month;
  - C4. Each day record whether or not water flushing and sweeping was accomplished. For days w/o water flushing and/or sweeping record the circumstances (i.e. weather condition, equipment malfunction);
  - C5. The amount of water applied and the areas treated;
  - C6. The operator's initials.
- D. The owner or operator shall calculate and record the monthly haul road emissions according to the following formulas, which uses the equations from AP-42 Section 13.2.1, the empirical constants, and assumes a mean vehicle weight of 28.61 tons.

$$D1. \quad E_{PM} = \frac{[(2.049 \times (sL/2)^{0.65}) - 0.00044] \times VMT}{2000}$$

Where            E = tons PM per month  
                    sL = road surface silt loading (g/m<sup>2</sup>) for each performance test  
                    VMT = Vehicle miles traveled

$$D2. \quad E_{PM10} = \frac{[(0.40 * (sL/2)^{0.65}) - 0.00044] * VMT}{2000}$$

Where            E = tons PM<sub>10</sub> per month  
                       sL = road surface silt loading (g/m<sup>2</sup>) for each performance test  
                       VMT = Vehicle miles traveled

- E. The owner or operator shall update monthly the twelve-month rolling total of PM and PM<sub>10</sub> emissions by adding up the calculated monthly emissions for the previous twelve months. The plant shall notify DNR immediately if the twelve-month rolling total exceeds 29.90 tons PM or 5.83 tons of PM<sub>10</sub>.

Authority for Requirement: Iowa DNR Construction Permit 05-A-369-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)

## **IV. General Conditions**

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

### **G1. Duty to Comply**

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

### **G2. Permit Expiration**

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

### **G3. Certification Requirement for Title V Related Documents**

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

### **G4. Annual Compliance Certification**

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status

of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

#### **G5. Semi-Annual Monitoring Report**

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

#### **G6. Annual Fee**

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
  - a. Form 1.0 "Facility Identification";
  - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
  - c. Form 5.0 "Title V annual emissions summary/fee"; and
  - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
  - a. Form 1.0 "Facility Identification";
  - b. Form 5.0 "Title V annual emissions summary/fee";
  - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for 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. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

## 2. Excess Emissions Reporting

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

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

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

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

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to

unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

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

#### **G15. Permit Deviation Reporting Requirements**

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

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

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

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

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:
  - a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
  - b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
  - c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
  - d. The changes are not subject to any requirement under Title IV of the Act.
  - e. The changes comply with all applicable requirements.
  - f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
    - i. A brief description of the change within the permitted facility,
    - ii. The date on which the change will occur,
    - iii. Any change in emission as a result of that change,
    - iv. The pollutants emitted subject to the emissions trade
    - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
    - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
    - vii. Any permit term or condition no longer applicable as a result of the change. *567 IAC 22.110(1)*
2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

## **G18. Duty to Modify a Title V Permit**

### **1. Administrative Amendment.**

- a. An administrative permit amendment is a permit revision that is required to do any of the following:
  - i. Correct typographical errors
  - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - iii. Require more frequent monitoring or reporting by the permittee; or
  - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
- b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
- c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

### **2. Minor Permit Modification.**

- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
  - i. Do not violate any applicable requirements
  - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
  - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
  - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
  - v. Are not modifications under any provision of Title I of the Act; and
  - vi. Are not required to be processed as significant modification.
- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
  - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
  - ii. The permittee's suggested draft permit
  - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
  - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. 567 IAC 22.111-567 IAC 22.113 The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. 567 IAC 22.105(1)"a"(4)

#### **G19. Duty to Obtain Construction Permits**

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

#### **G20. Asbestos**

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

#### **G21. Open Burning**

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

#### **G22. Acid Rain (Title IV) Emissions Allowances**

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

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

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

## **G24. Permit Reopenings**

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

## **G25. Permit Shield**

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
  - a. Such applicable requirements are included and are specifically identified in the permit; or
  - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
  - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
  - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
  - d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

## **G26. Severability**

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

## **G27. Property Rights**

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

## **G28. Transferability**

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

## **G29. Disclaimer**

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

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

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the

form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

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

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

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

### **G31. Prevention of Air Pollution Emergency Episodes**

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

### **G32. Contacts List**

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

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

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

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

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

**Field Office 1**

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

**Field Office 3**

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

**Field Office 5**

401 SW 7<sup>th</sup> Street, Suite I  
Des Moines, IA 50309  
(515) 725-0268

**Polk County Public Works Dept.**

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

**Field Office 2**

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

**Field Office 4**

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

**Field Office 6**

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

**Linn County Public Health Dept.**

Air Pollution Control Division  
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>