Iowa Department of Natural Resources
Title V Operating Permit

Name of Permitted Facility: Ajinomoto Heartland, Inc.
Facility Location: 1 Heartland Drive, Eddyville, IA 52553
Air Quality Operating Permit Number: 00-TV-028R2
Expiration Date: March 9, 2019

Permit Renewal Application Deadline: September 9, 2018

EIQ Number: 92-2456
Facility File Number: 68-09-002

Responsible Official
Name: Randy Schreiner
Title: Plant Manager
Mailing Address: 1 Heartland Drive, Eddyville, IA 52553
Phone #: (641) 696-3389

Permit Contact Person for the Facility
Name: Mark Wilson
Title: SER Staff Manager
Mailing Address: 1 Heartland Drive, Eddyville, IA 52553
Phone #: (641) 969-3389

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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Lori Hanson, Supervisor of Air Operating Permits Section Date

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Abbreviations

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

Pollutants
PM.....particulate matter
PM_{10}.....particulate matter ten microns or less in diameter
SO_2.....sulfur dioxide
NO_x .....nitrogen oxides
VOC.....volatile organic compound
CO.....carbon monoxide
HAP.....hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: Ajinomoto Heartland, Inc.
Permit Number: 00-TV-028R2

Facility Description: Prepared Feeds Manufacturing (SIC 2048)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-09	EU-09	Lysine E-0 Dryer	84-A-111-S1
EP-10	EU-10	Lysine E-2 Dryer	90-A-278-S2
EP-11	EU-11	Lysine Packaging	90-A-279-S1
EP-12	EU-12	Soybean Meal Hydrolyzing	92-A-415
EP-14	EU-14	Lysine E-5 Dryer	97-A-523-S1
EP-15	T-4220A	Hydrochloric Acid Storage Tank	98-A-871-S4
	T-4220B	Hydrochloric Acid Storage Tank	
	T-4220C	Hydrochloric Acid Storage Tank	
EP-22	EU-22	ET-0 Threonine Dryer	01-A-777-S2
EP-29	EU-29	DBC Dryer	02-A-188-S3
EP-30	EU-30A	Boiler #1	07-A-1096-S2
	EU-30B	Boiler #2	
EP-30BP	EU-30A	Boiler #1	92-A-296-S2
	EU-30B	Boiler #2	
EP-31	EU-31A	Boiler #3	07-A-1097-S2
	EU-31B	Boiler #4	
EP-31BP	EU-31A	Boiler #3	96-A-894-S3
	EU-31B	Boiler #4	
EP-32	EU-32	Soybean Meal Storage	03-A-1052-S1
EP-33	EU-33	ET-2 Threonine Dryer	05-A-309-S1
EP-38	EU-38	Salt Tank	02-A-620-S4
EP-39	EU-39	ET-3 Threonine Dryer	07-A-727
EP-45	EU-45	Lysine Dryer	13-A-010
EP-G1	EU-G1	Fire Pump	NA
EP-G2	EU-G2	Fire Pump	NA

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
HEAT	6 Natural Gas Fired Heaters (5 @ 0.275 MMBtu/hr and 1 @ 0.4 MMBtu/hr)
T-4220A	Gasoline Storage Tank (300 gallons)
T-4220B	Diesel Storage Tank (300 gallons)
T-4220C	Kerosene Storage Tank (300 gallons)
EU-46 – EU-52	Lysine Seed Fermenters
EU-53 – EU-59	Lysine Main Fermenters
EU-60 – EU-67	Threonine Seed Fermenters
EU-68 – EU-75	Threonine Main Fermenters
EU- 77 – EU-86	South Cooling Towers 1 - 10
EU-88 – EU-94	Utility Cooling Towers 1 - 7
EU-95 – EU 100	Threonine Cooling Tower I – Towers 1 – 6
EU-101 – EU-106	Threonine Cooling Tower II – Towers 1 – 6

Insignificant Activities Equipment List (Small Unit Exemption) [(1)]

Insignificant Emission Unit Number	Insignificant Emission Unit Description
EU-34	Lysine Flow Agent Hoppers
EU-35	Threonine Packaging Hopper
EU-36	DBC Bulk Loadout Hopper
EU-37	Threonine Hopper
EU-40	Threonine Bulk Loadout
EU-41	Threonine Packaging
EU-42	Ajipro-L Lysine Crusher
EU-43	Ajipro-L Lysine Dryer
EU-44	Vector Flo-Coater
EU-87	Lysine Bulk Loadout

(1) Emission Units qualify for Small Unit Exemption under 567 IAC 22.1(2)"w". Records shall be kept in accordance with 567 IAC 22.1(2)"w"(3).

II. Plant-Wide Conditions

Facility Name: Ajinomoto Heartland LLC
Permit Number: 00-TV-028R2

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

Permit Duration

The term of this permit is: Five (5) years from permit issuance
Commencing on: March 10, 2014
Ending on: March 9, 2019

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

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

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

Sulfur Dioxide (SO_2): 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"

III. Emission Point-Specific Conditions

Facility Name: Ajinomoto Heartland LLC
Permit Number: **00-TV-028R2**

Emission Point ID Number: EP-09

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-09	Lysine E-0 Dryer	S-2612: Cyclone S-2611: Baghouse	L-lysine	1.76 tons/hr.	84-A-111-S1

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 84-A-111-S1
567 IAC 23.3(2)"d"

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

Pollutant: PM_{10}
Emission Limit(s): 0.53 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 84-A-111-S1

Pollutant: Particulate Matter
Emission Limit(s): 5.96 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 84-A-111-S1

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 87
Stack Opening, (inches): 36 x 25
Exhaust Flow Rate (scfm): 12,200
Exhaust Temperature (°F): 170
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 84-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** ☐
(Required for S-2612 & S-2611)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-10

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-10	Lysine E-2 Dryer	S-2666: Cyclone S-2661: Baghouse	Lysine	2.20 tons/hr.	90-A-278-S2

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 90-A-278-S2
567 IAC 23.3(2)"d"

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

Pollutant: PM_{10}
Emission Limit(s): 0.50 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 90-A-278-S2

Pollutant: Particulate Matter
Emission Limit(s): 1.0 lbs/hr., 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 90-A-278-S2
567 IAC 23.3(2)"a"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 73
Stack Opening, (square inches): 32 x 23
Exhaust Flow Rate (scfm): 12,000
Exhaust Temperature (°F): 180
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 90-A-278-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** ☐
(Required for S-2666 & S-2661)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-11

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-11	Lysine Packaging	S-2735: Baghouse	Lysine	23.93 tons/hr.	90-A-279-S1

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 90-A-279-S1
567 IAC 23.3(2)"d"

[(1)] 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: PM_{10}
Emission Limit(s): 0.50 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 90-A-279-S1

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 90-A-279-S1
567 IAC 23.3(2)"a"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 58
Stack Opening, (inches, dia.): 9
Exhaust Flow Rate (scfm): 4,385
Exhaust Temperature (°F): 120
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 90-A-279-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.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-12

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-12	Soybean Meal Hydrolyzing	S-5110: Wet Scrubber	Sulfuric Acid	48.2 gallons/hr.	92-A-415

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: Sulfuric Acid (H_2SO_4)
Emission Limit(s): 9×10^{-12} lb/hr., 2.2×10^{-11} tons/yr., 1.2×10^{-13} gms/scuft
Authority for Requirement: Iowa DNR Construction Permit 92-A-415

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 34
Stack Opening, (feet, dia.): 1.167
Exhaust Flow Rate (acfm): 4,800
Exhaust Temperature (°F): 140
Discharge Style: NA
Authority for Requirement: Iowa DNR Construction Permit 92-A-415

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.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-14

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-14	Lysine E-5 Dryer	S-2672: Cyclone S-2671: Baghouse	Lysine	2.68 tons/hr.	97-A-523-S1

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 97-A-523-S1
567 IAC 23.3(2)"d"

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

Pollutant: PM_{10}
Emission Limit(s): 1.00 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 97-A-523-S1

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 97-A-523-S1
567 IAC 23.3(2)"a"

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 77
Stack Opening, (inches): 32 x 19
Exhaust Flow Rate (scfm): 16,645
Exhaust Temperature (°F): 181
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 97-A-523-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** ☐
(Required for S-2672 & S-2671)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-15

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
T-4220A	Hydrochloric Acid Storage Tank	T-4222: Wet Scrubber	Hydrochloric Acid	28,635 gallons	98-A-871-S4
T-4220B	Hydrochloric Acid Storage Tank		Hydrochloric Acid	28,635 gallons	
T-4220C	Hydrochloric Acid Storage Tank		Hydrochloric Acid	28,635 gallons	

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 98-A-871-S4
567 IAC 23.3(2)"d"

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

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 98-A-871-S4
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Process throughput:

1. These three tanks (T-4220A, T-4220B and T-4220C) shall only store hydrochloric acid.
2. The amount of hydrochloric acid transferred to these three tanks (T-4220A, T-4220B, and T-4220C) shall not exceed a maximum of 35,000 tons per twelve (12) month rolling period.

Control equipment parameters:

1. No scrubber liquid shall be recycled through the scrubber.
2. Water shall be the only material used as the scrubber liquid for this equipment.
3. The scrubber liquid feed rate shall be maintained between 3.6 gallons per minute and 4.4 gallons per minute.

Reporting & Record keeping:
Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner/operator shall install and operate a strip chart recorder or other device to continually record the scrubber liquid feed rate.
2. Each time that hydrochloric acid is transferred to any of these tanks (T-4220A, T-4220B and T-4220C), record the date and time acid transfer was initiated as well as the amount of hydrochloric acid transferred at that time.
3. At the end of each month, record the amount of hydrochloric acid transferred to these tanks (T-4220A, T-4220B and T-4220C) over the previous month.
4. At the end of each month, record the amount of hydrochloric acid transferred to these tanks (T-4220A, T-4220B and T-4220C) over the previous twelve (12) months.

Authority for Requirement: Iowa DNR Construction Permit 98-A-871-S4

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 54
Stack Opening, (inches, dia.): 6
Exhaust Flow Rate (scfm): NA*
Exhaust Temperature (°F): Ambient
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 98-A-871-S4
* The exhaust from this emission point is the result of the working and breathing losses from the three storage tanks.

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.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.
Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-22

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-22	ET-0 Threonine Dryer	CY-2613: Cyclone FL-2615: Baghouse	Threonine	1.87 tons/hr.	01-A-777-S2

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 01-A-777-S2
567 IAC 23.3(2)"d"

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

Pollutant: PM_{10}
Emission Limit(s): 1.25 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 01-A-777-S2

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 01-A-777-S2
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Control equipment parameters:

1. The owner or operator shall inspect and maintain the control equipment according to manufacturer's specifications.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner or operator shall keep records of all control equipment inspections and maintenance activities.

Authority for Requirement: Iowa DNR Construction Permit 01-A-777-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 97
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 8,855
Exhaust Temperature (°F): 230
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 01-A-777-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** ☐
(Required for CY-2613 & FL-2615)

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

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

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-29

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-29	DBC Dryer	CY-3605: Cyclone FL-3607: Baghouse	Bacterial Cells	2.30 tons/hr.	02-A-188-S3

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 02-A-188-S3
567 IAC 23.3(2)"d"

[(1)] 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: PM_{10}
Emission Limit(s): 1.26 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 02-A-188-S3

Pollutant: Particulate Matter
Emission Limit(s): 1.26 lb/hr., 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 02-A-188-S3
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Control equipment parameters:

1. The control equipment associated with this emission point shall be maintained and operated in accordance with the manufacturer's specifications.

Reporting & Record keeping:
Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. Maintain a log of all inspections as well as all maintenance which is performed on the control equipment associated with this emission unit.

Authority for Requirement: Iowa DNR Construction Permit 02-A-188-S3

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 97
Stack Opening, (inches, dia.): 18
Exhaust Flow Rate (scfm): 2,900
Exhaust Temperature (°F): 247
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 02-A-188-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** ☐
(Required for CY-3605 & FL-3607)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP-30 & EP-30BP

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-30A	Boiler #1	NA	Natural Gas	78.24 MMBtu/hr	07-A-1096-S2 (EP-30) 92-A-296-S2(EP-30BP)
EU-30B	Boiler #2	NA	Natural Gas	78.24 MMBtu/hr	

Applicable Requirements

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

The emissions from each of these emission points shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permits 07-A-1096-S2 & 92-A-296-S2
567 IAC 23.3(2)"d"

[(1)] 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: PM_{10} (EP-30 Only)
Emission Limit(s): 1.50 lb/hr.
Authority for Requirement: Iowa DNR Construction Permits 07-A-1096-S2

Pollutant: Particulate Matter
Emission Limit(s): 0.6 lb/MMBtu
Authority for Requirement: Iowa DNR Construction Permits 07-A-1096-S2 & 92-A-296-S2
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 500 ppmv
Authority for Requirement: Iowa DNR Construction Permits 07-A-1096-S2 & 92-A-296-S2
567 IAC 23.3(3)"e"

Operational Limits & Requirements

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

Process throughput:

1. These emissions units (i.e. Boiler #1 and Boiler #2) shall be limited to burning natural gas only. Prior to burning any other fuels, the permittee shall submit an application to the Iowa DNR - Air Quality Bureau to modify this permit.

Reporting & Record keeping:
Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. In accordance with §60.48c(g)(3), the permittee shall record and maintain records of the amounts of each fuel delivered to the property during each calendar month.

Authority for Requirement: Iowa DNR Construction Permits 07-A-1096-S2 & 92-A-296-S2
567 IAC 23.1(2)"lll"
40 CFR Part 60 Subpart Dc

NSPS:
Both Boiler #1 and Boiler #2 are subject to the requirements of 40 CFR, Part 60, Subpart Dc, "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units".

Because the units are restricted to burning only natural gas, the potential sulfur dioxide emission rate will be below 0.32 lb/MMBTU heat input. Therefore, in accordance with 60.48c (g), the fuel record keeping requirement is reduced to monthly.
Authority for Requirement: 567 IAC 23.1(2)"lll"
40 CFR Part 60 Subpart Dc

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Emission Point	**EP-30**	**EP-30BP**
Stack Height, (ft, from the ground)	40	35
Stack Opening, (inches, dia.)	40	66
Exhaust Flow Rate (scfm)	31,950	30,500
Exhaust Temperature (°F)	130	311
Discharge Style	Vertical Unobstructed	Vertical Unobstructed
Authority for Requirement	07-A-1096-S2	92-A-296-S2

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

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP-31 & EP-31BP

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-31A	Boiler #3	NA	Natural Gas	98.11 MMBtu/hr	07-A-1097-S2 (EP-31) 96-A-894-S3 (EP-31BP)
EU-31B	Boiler #4	NA	Natural Gas	97 MMBtu/hr.	

Applicable Requirements

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

The emissions from each of these emission points shall not exceed the levels specified below.

Emission Unit	Opacity	PM_{10}	Particulate Matter	Sulfur Dioxide (SO_2)	Nitrogen Oxides (NO_x)	Authority for Requirement
EU-31A	40%(1)	0.90 lb/hr.	0.6 MMBtu/hr.	500 ppmv	6.1 lb/hr., 26.7 tons/yr.	07-A-1097-S2, 96-A-894-S3, 23.3(2)"d", 23.3(2)"b", 23.3(3)"e"
EU-31B	40%(1)	0.61 lb/hr.	0.90 lb/hr., 0.03 lb/MMBtu/hr.	500 ppmv	9.0 lb/hr., 39.4 tons/yr.	07-A-1097-S2, 96-A-894-S3, 23.3(2)"d", 23.1(2)"lll", 23.3(3)"e"

(1) 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).

Operational Limits & Requirements

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

Process throughput:

1. These emissions units (i.e. Boiler #3 and Boiler #4) shall be limited to burning natural gas only. Prior to burning any other fuels, the permittee shall submit an application to the Iowa DNR - Air Quality Bureau to modify this permit.

Reporting & Record keeping:
Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. In accordance with §60.48c(g)(3), the permittee shall record and maintain records of the amounts of each fuel delivered to the property during each calendar month.

Authority for Requirement: Iowa DNR Construction Permits 07-A-1097-S2 & 96-A-894-S3

NSPS:
Both Boiler #3 and Boiler #4 are subject to the requirements of 40 CFR, Part 60, Subpart Dc, "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units".

Because the units are restricted to burning only natural gas, the potential sulfur dioxide emission rate will be below 0.32 lb/MMBTU heat input. Therefore, in accordance with 60.48c (g), the fuel record keeping requirement is reduced to monthly.
Authority for Requirement: 567 IAC 23.1(2)"lll"
40 CFR Part 60 Subpart Dc

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Emission Point	**EP-31**	**EP-31BP**
Stack Height, (ft, from the ground)	40	40
Stack Opening, (inches, dia.)	48	84
Exhaust Flow Rate (scfm)	43,500	27,270
Exhaust Temperature (°F)	130	299
Discharge Style	Vertical Unobstructed	Vertical Unobstructed
Authority for Requirement	07-A-1097-S2	96-A-894-S3

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

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-32

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-32	Soybean Meal Storage	S-5200: Bin Vent Filter	Soybean Meal	26 tons/hr	03-A-1052-S1

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 03-A-1052-S1
567 IAC 23.3(2)"d"

[(1)] An exceedance of the indicator opacity of (25%) 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: PM_{10}
Emission Limit(s): 0.02 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 03-A-1052-S1

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 03-A-1052-S1
567 IAC 23.3(2)"a"

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 37
Stack Opening, (inches, dia.): 12
Exhaust Flow Rate (scfm): 25[(2)]
Exhaust Temperature (°F): Ambient
Discharge Style: Vertical Obstructed
Authority for Requirement: Iowa DNR Construction Permit 03-A-1052-S1

[(1)] There is no mechanical fan on this emission point. Exhaust from is the result of air displaced during the filling of the bin.

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.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-33

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-33	ET-2 Threonine Dryer	CY-2613B: Cyclone FL-2615B: Baghouse	Threonine	1.87 tos/hr.	05-A-309-S1

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 05-A-309-S1
567 IAC 23.3(2)"d"

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

Pollutant: PM_{10}
Emission Limit(s): 1.04 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 05-A-309-S1

Pollutant: Particulate Matter
Emission Limit(s): 1.04 lb/hr., 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 05-A-309-S1
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Control equipment parameters:

1. The owner or operator shall maintain the control equipment according to manufacturer's specifications and maintenance schedule.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of the control equipment.

Authority for Requirement: Iowa DNR Construction Permit 05-A-309-S1

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 106
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 8,760
Exhaust Temperature (°F): 230
Discharge Style: Horizontal
Authority for Requirement: Iowa DNR Construction Permit 05-A-309-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** ☐
(Required for CY-2613B & FL-2615B)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-38

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-38	Salt Tank	S-6701: Bagfilter	Salt	6 tons/hr.	02-A-620-S4

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): No Visible Emissions
Authority for Requirement: Iowa DNR Construction Permit 02-A-620-S4

Pollutant: PM_{10}
Emission Limit(s): 0.56 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 02-A-620-S4

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 02-A-620-S4
567 IAC 23.3(2)"a"

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 4
Stack Opening, (inches, dia.): 8
Exhaust Flow Rate (scfm): 650
Exhaust Temperature (°F): 70
Discharge Style: Downward
Authority for Requirement: Iowa DNR Construction Permit 02-A-620-S4

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.

Opacity:

Visible emissions shall be observed during any time period that a bulk truck is pneumatically transferring rock salt to this tank. If visible emissions are observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet.

Maintain a written record of the observation and any action resulting from the observation for a minimum of five years.

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

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

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

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

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-39

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-39	ET-3 Threonine Dryer	CY-2613C: Cyclone FL-2615C: Baghouse	Threonine	3,749 lb/hr	07-A-727

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 07-A-727
567 IAC 23.3(2)"d"

[(1)] 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: PM_{10}
Emission Limit(s): 1.04 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 07-A-727

Pollutant: Particulate Matter
Emission Limit(s): 1.04 lb/hr., 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 07-A-727
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Control equipment parameters:

1. The owner or operator shall maintain the control equipment according to manufacturer's specifications and maintenance schedule.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of the control equipment.

Authority for Requirement: Iowa DNR Construction Permit 07-A-727

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 125
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 8,900
Exhaust Temperature (°F): 210
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 07-A-727

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** ☐
(Required for CY-2613C & FL-2615C)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-45

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-45	Lysine Dryer	S-2682: Cyclone S-2681: Baghouse	Lysine	1.20 tons/hr.	13-A-010

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permit 13-A-010
567 IAC 23.3(2)"d"

[(1)] 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: PM_{10}
Emission Limit(s): 1.4 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 13-A-010

Pollutant: Particulate Matter
Emission Limit(s): 1.4 lb/hr., 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permit 13-A-010
567 IAC 23.3(2)"a"

Operational Limits & Requirements

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

Control equipment parameters:

1. Maintain the control equipment according to the manufacturer's specifications.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. Record any maintenance performed on the control equipment.

Authority for Requirement: Iowa DNR Construction Permit 13-A-010

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 100
Stack Opening, (inches, dia.): 28
Exhaust Flow Rate (scfm): 16,049
Exhaust Temperature (°F): 187
Discharge Style: Vertical Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 13-A-010

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.

Stack Testing:

Pollutant - Opacity
Stack Test to be Completed by – March 29, 2014
Test Method - 40 CFR 60, Appendix A, Method 9
Authority for Requirement – Iowa DNR Construction Permit 13-A-010

Pollutant – PM_{10}
Stack Test to be Completed by – March 29, 2014
Test Method - 40 CFR 51, Appendix M, 201A with 202*
Authority for Requirement – Iowa DNR Construction Permit 13-A-010
* Or approved alternative

Pollutant – Particulate Matter
Stack Test to be Completed by – March 29, 2014
Test Method - 40 CFR 60, Appendix A, Method 5 with 40 CFR 51 Appendix M Method 202
Authority for Requirement – Iowa DNR Construction Permit 13-A-010

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** ☐
(Required for S-2682 & S-2681)

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: EP-G1 & EP-G2

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EP-G1	EU-G1	Fire Pump	NA	Diesel Fuel	150 hp	NA
EP-G2	EU-G2	Fire Pump	NA	Diesel Fuel	150 hp	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: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

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

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"(2)

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

Process throughput:

1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.
2. Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting & Record keeping:
The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

NESHAP:
The emergency engine is subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(1)(iii) this compression ignition emergency engine, located at an area source, is an existing stationary RICE as it was constructed prior to June 12, 2006.

Compliance Date

Per 63.6595(a)(1) you must comply with the provisions of Subpart ZZZZ that are applicable by May 3, 2013.

Operation and Maintenance Requirements 40 CFR 63.6603, 63.6625, 63.6640 and Tables 2d and 6 to Subpart ZZZZ

1. Change oil and filter every 500 hours of operation or annually, whichever comes first. (See 63.6625(i) for the oil analysis option to extend time frame of requirements.)
2. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary.
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
4. Operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
5. Install a non-resettable hour meter if one is not already installed.
6. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

Operating Limits 40 CFR 63.6640(f)

1. Any operation other than emergency operation, maintenance and testing, emergency demand response and operation in non-emergency situations (*up to*) 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. You may operate your emergency stationary RICE up to 100 combined hours per calendar year for maintenance checks and readiness testing, emergency demand response and periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. See 40 CFR 63.6640(f)(2) for additional information and restrictions.
4. You may operate your emergency stationary RICE up to 50 hours per calendar year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing and emergency demand response.

Recordkeeping Requirements 40 CFR 63.6655

1. Keep records of the maintenance conducted on the stationary RICE.
2. Keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Document how many hours are spend for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. See 40 CFR 63.6655(f) for additional information.

Notification and Reporting Requirements 40 CFR 63.6645, 63.6650 and Table 2d to Subpart ZZZZ

1. An initial notification is not required per 40 CFR 63.6645(a)(5)
2. A report may be required for failure to perform the work practice requirements on the schedule required in Table 2d. (See Footnote 2 of Table 2d for more information.)

Authority for Requirement: 40 CFR 63 Subpart ZZZZ
567 IAC 23.1(4)"cz"

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

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source’s right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permits, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

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

G4. Annual Compliance Certification

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

G5. Semi-Annual Monitoring Report

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

G6. Annual Fee

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

7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

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

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

G8. Duty to Provide Information

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

G9. General Maintenance and Repair Duties

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

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
    a. The date, place and time of sampling or measurements
    b. The date the analyses were performed.
    c. The company or entity that performed the analyses.
    d. The analytical techniques or methods used.
    e. The results of such analyses; and
    f. The operating conditions as existing at the time of sampling or measurement.
    g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

a. Comply with all terms and conditions of this permit specific to each alternative scenario.

b. Maintain a log at the permitted facility of the scenario under which it is operating.

c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

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

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

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

a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;

b. Compliance test methods specified in 567 Chapter 25; or

c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

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

a. Any monitoring or testing methods provided in these rules; or

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

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

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

G13. Hazardous Release

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

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control

measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. 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 <u>except</u> 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. 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. At the department's request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

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

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9545

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.
567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

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

G32. Contacts List

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

Chief of Air Permits
U.S. EPA Region 7
Air Permits and Compliance Branch
11201 Renner Blvd.
Lenexa, KS 66219
(913) 551-7020

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

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9500

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

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

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

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

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

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

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

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

Linn County Public Health
Air Quality Branch
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

V. Appendix A: Compliance Assurance Monitoring Plans

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-09**
Emission Unit name:	**E-0 Lysine Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-09
Emission unit name:	E-0 Lysine dryer
Applicable emission limit or standard:	Construction permit 84-A-111-S1
Description of the control technology 1:	Cyclone S2612
Description of the control technology 2:	Baghouse 2611

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Baghouse differential pressure (DPT 226)** The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (AIT-211) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Baghouse differential pressure (DPT 226)** A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (AIT-211) A signal of 100% for greater than one hour may indicate a broken bag.

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Description of the Performance Criteria for Monitoring

Item	Data
Specifications for obtaining representative data:	**Baghouse differential pressure (DPT 226)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (AIT-211) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Baghouse differential pressure (DPT 226)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (AIT-211) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Baghouse differential pressure (DPT 226)** Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (AIT-211) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Baghouse differential pressure (DPT 226)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (AIT-211) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Baghouse differential pressure (DPT 226)** Real time is displayed. No data averaging is used.
	Broken bag detector (AIT-211) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the baghouse. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

Emissions Test Data

There are no emissions test data from this particular dryer.

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-10**
Emission Unit name:	**E-2 Lysine Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-10
Emission unit name:	E-2 Lysine dryer
Applicable emission limit or standard:	Construction permit 90-A-278-S2
Description of the control technology 1:	Cyclone S2666
Description of the control technology 2:	Baghouse 2661

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Baghouse differential pressure (DPT 276)** The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (AIT-261) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Baghouse differential pressure (DPT 276)** A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (AIT-261) A signal of 100% for greater than one hour may indicate a broken bag.

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Description of the Performance Criteria for Monitoring

Item	Data
Specifications for obtaining representative data:	**Baghouse differential pressure (DPT 276)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (AIT-261) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Baghouse differential pressure (DPT 276)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (AIT-261) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Baghouse differential pressure (DPT 276)** Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (AIT-261) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Baghouse differential pressure (DPT 276)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (AIT-261) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Baghouse differential pressure (DPT 276)** Real time is displayed. No data averaging is used.
	Broken bag detector (AIT-261) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the bag house. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

Emissions Test Data

There are no emissions test data from this particular dryer.

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-14**
Emission Unit name:	**E-5 Lysine Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-14
Emission unit name:	E-5 Lysine dryer
Applicable emission limit or standard:	Construction permit 97-A-523-S1
Description of the control technology 1:	Cyclone S-2672
Description of the control technology 2:	Baghouse S-2671

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Baghouse differential pressure (DPT 286)** The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (AIT-271) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Baghouse differential pressure (DPT 286)** A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (AIT-271) A signal of 100% for greater than one hour may indicate a broken bag.

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Description of the Performance Criteria for Monitoring

Item	Data
Specifications for obtaining representative data:	**Baghouse differential pressure (DPT 286)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (AIT-271) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Baghouse differential pressure (DPT 286)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (AIT-271) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Baghouse differential pressure (DPT 286)** Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (AIT-271) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Baghouse differential pressure (DPT 286)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (AIT-271) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Baghouse differential pressure (DPT 286)** Real time is displayed. No data averaging is used.
	Broken bag detector (AIT-271) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the bag house. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

Emissions Test Data

There are no emissions test data from this particular dryer.

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-29**
Emission Unit name:	**DBC Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-29
Emission unit name:	DBC dryer
Applicable emission limit or standard:	Construction permit 02-A-188-S3
Description of the control technology 1:	Cyclone CY-3605A
Description of the control technology 2:	Cyclone CY-3605B
Description of the control technology 3:	Baghouse FL-3607

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Baghouse differential pressure (3601A-PDISH-13)** The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (3601A-AIT-11) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Baghouse differential pressure (3601A-PDISH-13)** A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (3601A-AIT-11) A signal of 100% for greater than one hour may indicate a broken bag.

Description of the Performance Criteria for Monitoring

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Item	Data
Specifications for obtaining representative data:	**Baghouse differential pressure (3601A-PDISH-13)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (3601A-AIT-11) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Baghouse differential pressure (3601A-PDISH-13)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (3601A-AIT-11) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Baghouse differential pressure (3601A-PDISH-13)** Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (3601A-AIT-11) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Baghouse differential pressure (3601A-PDISH-13)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (3601A-AIT-11) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Baghouse differential pressure (3601A-PDISH-13)** Real time is displayed. No data averaging is used.
	Broken bag detector (3601A-AIT-11) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

Comment [u1]: See comments on eu09

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the bag house. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

Emissions Test Data

There are no emissions test data from this particular dryer. Testing is scheduled for January, 2014.

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-33**
Emission Unit name:	**ET-2 Threonine Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-33
Emission unit name:	ET-2 Threonine dryer
Applicable emission limit or standard:	Construction permit 05-A-309-S1
Description of the control technology 1:	Cyclone CY2613B
Description of the control technology 2:	Baghouse FL2615B

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Cyclone differential pressure (2601C-PDISH-16)** The cyclone differential pressure indicates the degree of cyclone scaling.
	Baghouse differential pressure (2601C-PDISH-18) The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (2601C-AIT-23) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Cyclone differential pressure (2601C-PDISH-16)** A cyclone differential pressure: a signal of >3.5 inches of water may indicate scaling inside the cyclone.
	Baghouse differential pressure (2601C-PDISH-18) A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (2601C-AIT-23) A signal of 100% for greater than one hour may indicate a broken

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Item	Data
	bag.

Description of the Performance Criteria for Monitoring

Item	Data
Specifications for obtaining representative data:	**Cyclone differential pressure (2601C-PDISH-16)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Baghouse differential pressure (2601C-PDISH-18) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (2601C-AIT-23) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Cyclone differential pressure (2601C-PDISH-16)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Baghouse differential pressure (2601C-PDISH-18) Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (2601C-AIT-23) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Cyclone differential pressure (2601C-PDISH-16)** Cyclone differential pressure transmitters are calibrated as requested.
	Baghouse differential pressure (2601C-PDISH-18) Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (2601C-AIT-23) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Cyclone differential pressure (2601C-PDISH-16)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Baghouse differential pressure (2601C-PDISH-18) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (2601C-AIT-23) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Cyclone differential pressure (2601C-PDISH-16)** Real time is displayed. No data averaging is used.
	Baghouse differential pressure (2601C-PDISH-18) Real time is displayed. No data averaging is used.

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

Item	Data
	Broken bag detector (2601C-AIT-23) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the bag house. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

Emissions Test Data

There are no emissions test data from this particular dryer. However, an emissions test conducted on 11/19/2002 on a similar dryer, the Ajinomoto Heartland ET-0 threonine dryer demonstrated the following emissions rates:

- TSP concentration: 0.009 gr/scf
- TSP emission rate: 0.84 lbs/hr

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-39**
Emission Unit name:	**ET-3 Threonine Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-39
Emission unit name:	ET-3 Threonine dryer
Applicable emission limit or standard:	Construction permit 07-A-727
Description of the control technology 1:	Cyclone CY2613C
Description of the control technology 2:	Baghouse FL2615C

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Cyclone differential pressure (2601E-PDISH-16)** The cyclone differential pressure indicates the degree of cyclone scaling.
	Baghouse differential pressure (2601E-PDISH-18) The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (2601E-AIT-23) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Cyclone differential pressure (2601E-PDISH-16)** A cyclone differential pressure: a signal of >3.5 inches of water may indicate scaling inside the cyclone.
	Baghouse differential pressure (2601E-PDISH-18) A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (2601E-AIT-23) A signal of 100% for greater than one hour may indicate a broken

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Item	Data
	bag.

Description of the Performance Criteria for Monitoring

Item	Data
Specifications for obtaining representative data:	**Cyclone differential pressure (2601E-PDISH-16)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Baghouse differential pressure (2601E-PDISH-18) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (2601E-AIT-23) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Cyclone differential pressure (2601E-PDISH-16)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Baghouse differential pressure (2601E-PDISH-18) Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (2601E-AIT-23) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Cyclone differential pressure (2601E-PDISH-16)** Cyclone differential pressure transmitters are calibrated as requested.
	Baghouse differential pressure (2601E-PDISH-18) Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (2601E-AIT-23) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Cyclone differential pressure (2601E-PDISH-16)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Baghouse differential pressure (2601E-PDISH-18) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (2601E-AIT-23) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Cyclone differential pressure (2601E-PDISH-16)** Real time is displayed. No data averaging is used.
	Baghouse differential pressure (2601E-PDISH-18) Real time is displayed. No data averaging is used.

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

Item	Data
	Broken bag detector (2601E-AIT-23) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the bag house. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

Emissions Test Data

There are no emissions test data from this particular dryer. However, an emissions test conducted on 11/19/2002 on a similar dryer, the Ajinomoto Heartland ET-0 threonine dryer demonstrated the following emissions rates:

- TSP concentration: 0.009 gr/scf
- TSP emission rate: 0.84 lbs/hr

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.

Compliance Assurance Monitoring (CAM) Plan[1]
Ajinomoto Heartland LLC

Emission Unit no.:	**EU-45**
Emission Unit name:	**Lysine Dryer**
Pollutant:	**PM (includes PM and PM-10)**

Applicability

Pollutant specific emission units (PSEU)[2] must have a CAM plan developed if the PSEU meets all of the following requirements:

1. The PSEU is located at a major source required to obtain a Title V operating permit.
2. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is not exempt.
3. A control device is used to achieve compliance with the emission limitation or standard.
4. The potential uncontrolled emissions of the applicable regulated air pollutant are greater than or equal to the major source thresholds (100 tons/yr of PM-10, NOx, SO2, VOC, CO, or lead; 10 tons/yr of any HAP, or 25 tons/yr of any combination of HAPs.)
5. The PSEU is not an exempt backup utility power emissions unit.

Identification of the Emission Unit

Item	Data
Facility name:	Ajinomoto Heartland LLC
Emission unit number	EU-45
Emission unit name:	Lysine dryer
Applicable emission limit or standard:	Construction permit 13-A-010
Description of the control technology 1:	Cyclone S-2682
Description of the control technology 2:	Baghouse S-2681

Indicators

Item	Data
Description of the indicator(s) to be monitored:	**Baghouse differential pressure (DPIT2681)** The baghouse differential pressure indicates the degree of plugging or failure of bags in the baghouse.
	Broken bag detector (AIT2681) The broken bag detector monitors the exhaust stream for the presence of dust particles using the triboelectric or frictional electrification principal.
Description of the indicator ranges, or the process by which indicators are to be established:	**Baghouse differential pressure (DPIT2681)** A baghouse differential pressure: a signal of >3.5 inches of water may indicate pluggage of the bags.
	Broken bag detector (AIT2681) A signal of 100% for greater than one hour may indicate a broken bag.

[1] Source: 567 IAC 22.108(3)"d", 40 CFR 64, and 1990 Clean Air Act, as amended, Section 504, and DNR Form 542-4016, revised December 2007.

[2] An emission unit considered separately with respect to each regulated air pollutant.

Description of the Performance Criteria for Monitoring

Item	Data
Specifications for obtaining representative data:	**Baghouse differential pressure (2601E-PDISH-18)** The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
	Broken bag detector (2601E-AIT-23) The 4-20 mA signal from the monitoring instrument will be monitored continuously by the Delta V Distributed Control System (DCS). Excursions from a predetermined alarm set point will trigger an audible alarm.
Verification procedures to confirm the monitoring equipment's operational status:	**Baghouse differential pressure (2601E-PDISH-18)** Operators occasionally view the differential pressure measurement for this pollution control equipment.
	Broken bag detector (2601E-AIT-23) The signal from the broken bag detector is observed and manually recorded by operators once per 12 hour shift.
Quality assurance and control procedures:	**Baghouse differential pressure (2601E-PDISH-18)** Baghouse differential pressure transmitters are calibrated as requested.
	Broken bag detector (2601E-AIT-23) Broken bag detectors are calibrated annually.
Monitoring frequency[3]:	**Baghouse differential pressure (2601E-PDISH-18)** The signal is monitored continuously by the Delta V Distributed Control System (DCS).
	Broken bag detector (2601E-AIT-23) The signal is monitored continuously by the Delta V Distributed Control System (DCS).
Data averaging period:	**Baghouse differential pressure (2601E-PDISH-18)** Real time is displayed. No data averaging is used.
	Broken bag detector (2601E-AIT-23) Real time is displayed. No data averaging is used.

Justification for Proposed Monitoring

We believe that the broken bag detector is a robust piece of technology appropriate for monitoring the integrity of the bags in the bag house. We feel that it is superior to the differential pressure sensors in the cyclone and baghouse for detecting a failure in the pollution control equipment.

The broken bag detector measures triboelectricity, also referred to as frictional electrification, which is an electric charge transfer which results when dust particles collide with the sensor probe. The broken bag detector detects changes in the dust level downstream of the bag house to warn when a filter is failing before emissions become visible. The 4-20 mA output signal from the broken bag detector is sent to the computer control system for continuous monitoring.

[3] 4 times per hour (minimum) if **post**-control emissions are greater than or equal to the major source thresholds or 1 time per day (minimum) if **post**-control emission are less than the major source thresholds

Emissions Test Data

There are no emissions test data from this particular dryer. Testing is scheduled for January, 2014.

Implementation Plan for Installing, Testing and Operating the Monitoring Equipment

Monitoring equipment is already installed for this dryer. The monitoring equipment was calibrated at installation and will recalibrated as indicated in the "quality assurance and control procedures" box above. The monitoring equipment will be operated continuously. The Distributed Control System (DCS) will monitor the signal continuously and sound an alarm if the signal exceeds certain preset alarm set point. If an alarm sounds, operators will respond to the alarm and take appropriate action.