

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

Name of Permitted Facility: IPL - Lansing Generation Station
Facility Location: County Road X-52, Lansing, IA 52151
Air Quality Operating Permit Number: 98-TV-016R1-M001
Expiration Date: July 13, 2011

EIQ Number: 92-2686
Facility File Number: 03-03-001

Responsible Official

William H. Sangster
Plant Manager
Alliant Energy
2320 Power Plant Drive, Lansing, Iowa 52151
563-538-3118

Permit Contact Person for the Facility

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

For the Director of the Department of Natural Resources

Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulations
EIQ.....	emissions inventory questionnaire
°F.....	degrees Fahrenheit
gr./dscf	grains per dry standard cubic foot
hp.....	horsepower
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
lb./hr	pounds per hour
lb./MMBtu	pounds per million British thermal units
MMBtu/hr	million British thermal units per hour
MVAC.....	motor vehicle air conditioner
NSPS	new source performance standards
ppmv	parts per million by volume
scfm.....	standard cubic feet per minute
SIC	Standard Industrial Classification
T-R set.....	A Transformer-Rectifier set in an electrostatic precipitator
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
CO ₂	carbon dioxide
HAPs.....	hazardous air pollutants

I. Facility Description and Equipment List

Facility Name: IPL - Lansing Generating Station

Permit Number: 98-TV-016R1-M001

Facility Description: Electric Services (SIC 4911)

Equipment List

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description	Iowa DNR Construction Permit
BST1	LB1	Boiler #1	74-A-097
	LB2	Boiler #2	74-A-098
BST3	LB3	Boiler #3	73-A-132
BST4	LB4	Boiler #4	75-A-014-S5
D1	LD1	#1 Diesel Engine Stack	N/A
D2	LD2	#2 Diesel Engine Stack	N/A
ASH2C	LASH2	Unit #4 Ash Storage Silo	95-A-846-S2
	LASH2A	Unit #4 Ash Storage Silo	
	LASH2B	Unit #4 Ash Storage Silo	
ASH2	LASH2	Ash Silo Unloader and C-Stone Production	N/A
ASH2B	LASH2B	Ash Silo Unloader and C-Stone Production	N/A
ASH3	LASH3	Ash Pile	N/A
DC1A	LDC1	Coal Handling Dust Baghouse Vent A	75-A-190
DC1B		Coal Handling Dust Baghouse Vent B	75-A-191
DC2	LDC2	Coal Bunker Rooms Dust Collecting System	75-A-192-S2
CP1	LCP1	Coal Pile	N/A
CP2	LCP2	Coal Pile	N/A
CP3	LCP3	Coal Unloading	N/A
CP4	LCP4	Coal Stockpiling	N/A
CP5	LCP5	Coal Conveying	N/A
CP6	LCP6	Coal Bulldozing	N/A

Note: Equipment enclosed in double borders is grouped in a table in the Emission Point-Specific Conditions section of the permit.

Insignificant Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
LEG1	Emergency Generator (311 hp)
LGLY	Ethylene Glycol Storage Tank (5,000 gallons)
LTF	Tractor Fuel Oil Tank (1,047 gallons)
LDF1	Diesel Generator #1 Fuel Oil Storage Day Tank #1 (540 gallons)
LDF2	Diesel Generator #2 Fuel Oil Storage Day Tank #2 (540 gallons)
LFOV	#2 Fuel Oil Tank (110,000 gallons)
LBFPOV4	Unit 4 Turbine-Driven Boiler Feed Pump Oil Reservoir (1,400 gallons)
LTO4	Unit 4 Motor Driven Boiler Feed Pump Oil Reservoir (50 gallons)
LTO3	Unit 3 Turbine Oil Reservoir (1,400 gallons)
LGO4	Unit 4 Turbine Oil Reservoir (3,500 gallons)
LTOS4	Unit 4 Turbine Oil Storage (7,000 gallons)
LTOS3	Unit 1, 2, 3 Turbine Oil Storage (2,400 gallons)
LTO1	Unit 1 Turbine Oil Reservoir (1,200 gallons)
LTO2	Unit 2 Turbine Oil Reservoir (800 gallons)
LSDT	Demin Sulfuric Acid Day Tank (125 gallons)
LCDT	Demin Caustic Day Tank (150 gallons)
LCF1	Unit 1 Nalco 19, 7211, 7220, 356, TriPO4 Tank (51 gallons)
LCF2	Unit 1, 2 Common Nalco 19, 7211, 7220, 356, TriPO4 Tank (110 gallons)
LCF3	Unit 2 Nalco 19, 7211, 7220, 356, TriPO4 Tank (51 gallons)
LCF4	Unit 3 Nalco 19, 7211, 7220, 356, TriPO4 Tank (110 gallons)
LCF5	Unit 4 Morpholine Nalco 353 Tank (226 gallons)
LCF6	Unit 4 PO4 Tank (177 gallons)
L-33	Gasoline Storage Tank (300 Gallons)

II. Plant-Wide Conditions

Facility Name: IPL - Lansing Generating Station

Permit Number: 98-TV-016R1-M001

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

Permit Duration

The term of this permit is: 5 years

Commencing on: July 14, 2006

Ending on: July 13, 2011

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

Emission Limits

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

Opacity (visible emissions): 40% opacity

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

Sulfur Dioxide (SO₂): 500 parts per million by volume

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

Particulate Matter (state enforceable only)¹:

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" (as revised 7/21/1999)

¹ Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered state enforceable only.

Particulate Matter ²:

The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

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"

Compliance Plan

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

Unless otherwise noted in Section III of this permit, IPL – Lansing Generating Station is in compliance with all applicable requirements and shall continue to comply with all such

² Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP.

requirements. For those applicable requirements which become effective during the permit term, IPL – Lansing Generating Station shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

40 CFR 60 Subpart D Requirements

This facility is subject to Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971 – 40 CFR 60 subpart D and the affected unit is LB4 (BST4: Boiler #4). Applicable subpart D requirements are incorporated into the Emission-Point Specific Conditions Section.

Authority for Requirement: 567 IAC 23.1(2)"a" (Iowa DNR Construction Permit 75-A-014-S5)

40 CFR 60 Subpart D

40 CFR 63 Subpart DDDDD Requirements

This facility may be subject to National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters – 40 CFR 63 subpart DDDDD. The subpart was promulgated on September 12, 2004 and the effective date was November 12, 2004.

Per 40 CFR 63.7491(c), EUs LB1 and LB2 (Boilers #1 and #2, 205.3 MMBtu/hr each) are not exempted from this subpart because it has a capacity of less than 25 megawatts (≈ 250 MMBtu/hr). However, the EPA is currently working on the single applicability policy for both the industrial boiler MACT and the CAMR rules so that boilers will be subject to either the industrial boiler MACT or the CAMR rules, but not both. Until the single applicability issue is determined, the facility should assume that boilers #1 and #2 may be subject to the boiler MACT.

Authority for Requirement: 567 IAC 23.1(4)"dd", 40 CFR 63 Subpart DDDDD

40 CFR 63 Subpart ZZZZ Requirements

This facility is subject to subpart ZZZZ and the affected units are EU LD1 (#1 Diesel Engines) and EU LD2 (#2 Diesel Engine) because each of them has a rated capacity of 1,440 hp which is greater than the threshold of 500 hp. 40 CFR 63.6590(a).

Because the affected units are existing compression ignition stationary RICEs, the facility does not have to meet the requirements of this subpart and of subpart A of part 63. No initial notification is necessary. 40 CFR 63.6590(b)(3).

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

III. Emission Point-Specific Conditions

Facility Name: IPL - Lansing Generating Station
Permit Number: 98-TV-016R1-M001

Emission Point ID Number: BST1

Associated Equipment

Associated Emission Unit ID Numbers: LB1 & LB2
Emissions Control Equipment ID Number: ESP1 (for LB1) & ESP2 (for LB2)
Emissions Control Equipment Description: Electrostatic Precipitators
Continuous Emissions Monitors ID Numbers (for Common Stack EP BST1):
CS1OPAC, CS1CO2, CS1NOX, CS1CO2, and CS1FLOW

Emission Unit vented through this Emission Point: LB1
Emission Unit Description: Boiler #1, Dry-Bottom Pulverized Coal Unit
Raw Material/Fuel: Coal, #2 Fuel Oil
Rated Capacity: 205.3 MMBtu/hr

Emission Unit vented through this Emission Point: LB2
Emission Unit Description: Boiler #2, Dry-Bottom Pulverized Coal Unit
Raw Material/Fuel: Coal, #2 Fuel Oil
Rated Capacity: 205.3 MMBtu/hr

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limits: 40%
Authority for Requirement: 567 IAC 23.3(2)"d" (Iowa DNR Construction Permits 74-A-097 and 74-A-098)

Pollutant: Particulate Matter
Emission Limits: 0.6 lb/MMBtu (Only boiler LB1 or boiler LB2 in operation)
Multiple Units Limits: 0.37 lb/MMBtu for Units LB1/LB2 and LB3 in operation
0.6 lb/MMBtu for Units LB1 and LB2 (common stack)
Authority for Requirement: 567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: 5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: Sulfur Dioxide Allowances
Authority for Requirement: 567 IAC 22.108(7) (Attached Phase II Acid Rain Permit)

Pollutant: Nitrogen Oxide (NO_x)
Emission Limits: See attached Phase II Permit
Authority for Requirement: 567 IAC 22.125(4) (Attached Phase II Permit)
40 CFR Part 76

Monitoring Requirements for Common Stack EP BST1 for LB1 and LB2

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

Continuous Emissions Monitoring:

Pollutant - Opacity
Operational Specifications - 40 CFR Part 75
Initial System Calibration/Quality Assurance – 10/19/99
Ongoing System Calibration/Quality Assurance - 40 CFR Part 75
Reporting & Record keeping - 40 CFR Part 75
Authority for Requirement - 567 IAC 25.1(1) and 567 IAC 25.2

Pollutant - Sulfur Dioxide (SO₂)
Operational Specifications - 40 CFR Part 75
Initial System Calibration/Quality Assurance – 10/19/99
Ongoing System Calibration/Quality Assurance - 40 CFR Part 75
Reporting & Record keeping - 40 CFR Part 75
Authority for Requirement - 567 IAC 25.2

Pollutant - Nitrogen Oxides (NO_x)
Operational Specifications - 40 CFR Part 75
Initial System Calibration/Quality Assurance - 10/19/99
Ongoing System Calibration/Quality Assurance - 40 CFR Part 75
Reporting & Record keeping - 40 CFR Part 75
Authority for Requirement - 567 IAC 25.2

Other Parameters

Pollutant - Other - Carbon Dioxide (CO₂)
Operational Specifications - 40 CFR Part 75
Initial System Calibration/Quality Assurance - 10/19/99
Ongoing System Calibration/Quality Assurance - 40 CFR Part 75
Reporting & Record keeping - 40 CFR Part 75
Authority for Requirement - 567 IAC 25.2

Pollutant - Other - Flow
Operational Specifications - 40 CFR Part 75
Initial System Calibration/Quality Assurance - 10/19/99
Ongoing System Calibration/Quality Assurance - 40 CFR Part 75
Reporting & Record keeping - 40 CFR Part 75
Authority for Requirement - 567 IAC 25.2

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 tests 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

Relevant requirements of CAM plans for ESP1 and ESP2: Particulate Matter

Authority for Requirement: 567 IAC 22.108(3)

**Compliance Assurance Monitoring (CAM) Plan for ESP1
Electrostatic Precipitators for PM Control**

I. Background

A. Emissions Unit:
 ID (Description): EU LB1 (Boiler #1, Dry-Bottom Pulverized Coal Unit)
 Facility: IPL – Lansing Generating Station (LGS)

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

Regulation: 567 IAC 23.3(2)"b"
 Opacity Limit: 40%
 PM Emission Limits: See the Following Table

Boiler Operating Scenario	lb/MMBtu
LB1	0.6
LB2	0.6
LB3	0.6
LB1 & LB2	0.6
LB1, LB2, & LB3	0.37

C. Current Monitoring Requirements:

Continuous Opacity Monitoring Systems
[ESP1 Audible Precipitator Malfunction Alarm \(control room\)](#)

D. Control Technology: Electrostatic Precipitator

II. Monitoring Approach

1. Indicator	Opacity of ESP exhaust (common stack)	TR Operations – ESP Audible Precipitator Malfunction Alarm
Measurement Approach	COMS in ESP exhaust (stack)	Numbers of TRs in operation will be recorded using a data acquisition system.
2. Indicator Range	A CAM excursion is defined as an hourly block average opacity exceeding the opacity levels specified in the following table – Opacity Excursion Levels under Different Operating Scenarios (*) during normal operations except during a period of startup, shutdown, or cleaning of control equipment. Excursions trigger an inspection, corrective action, and a reporting requirement.	A CAM excursion is defined as an event when the number of ESP TRs that are out of service is more than: Zero (0) TR set out of total of 4. Inspections and corrective actions will be taken when an excursion occurs. Reporting requirements will also be fulfilled.

II. Monitoring Approach (continued)

3. Performance Criteria		
A. Data Representativeness	The COMS was installed at a representative location in the ESP exhaust per 40 CFR 60, Appendix B, Performance Specification 1 (PS-1).	Continuously (more than or equal to 4 times an hour) monitor the number of TR sets that are out of services. In case of computer failure, manual readings will be taken once a shift (3 times every 24 hours).
B. Verification of Operational Status	Results of initial COMS performance evaluation conducted per PS-1 (10/19/99).	N/A
C. QA/QC Practices/Criteria	The COMS was initially installed and evaluated per PS-1. The continuous opacity monitor will be automatically calibrated for zero and span adjustments daily.	N/A
D. Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds).	Continuously (more than or equal to 4 times an hour) monitor the number of TR sets that are out of services. In case of computer failure, manual readings will be taken once a shift (3 times every 24 hours).
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	The status of ESP TRs out of service will be continuously recorded in the data logger.
Averaging period	Use the 10-second opacity data to calculate 6-minute average. Use the 6-minute average to calculate the hourly block average opacity for the CAM.	N/A

(*) Opacity Excursion Levels under Different Operating Scenarios

Boiler Operating Scenario	Boiler #1	Boiler #2	Boiler #3
Boiler #1 Operates Alone	28%	-	-
Boiler #2 Operates Alone	-	38%	-
Boiler #3 Operates Alone	-	-	30%
Boilers #1 & #2 Operate Simultaneously	33%	33%	-
Boilers #1 & #3 Operate Simultaneously	28%	-	30%
Boilers #2 & #3 Operate Simultaneously	-	38%	30%
Boilers #1, #2, & #3 Operate Simultaneously	29%	29%	23%

For additional operational procedures for ESPs #1 and #2, please see Operating and Instructional Procedure for Cottrell Automation System (CAS) on page 20.

III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required to submit to the IDNR if an accumulation of excursions of either the opacity indicator or the **TR indicator** exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

IV. Quality Assurance and Quality Control

In addition to monitoring the opacity and **TR indicators**, Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Audible Precipitator Malfunction Alarm

The precipitator malfunction alarm will continuously monitor the following parameters:

1. ESP Section Malfunction – **TR set on and off**
2. Power Loss to Rappers / Vibrators
3. 480V Distribution Panel Undervoltage

Corrective actions will be implemented upon the occurrence of a malfunction alarm. The appropriate actions to correct the alarm condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

B. Daily Monitoring & Corrective Actions

- Inspection of rapper operation.
- Inspection of T-R set operation.
- Inspection of ash removal system operation.

Corrective actions will be implemented upon the occurrence of an abnormal condition. Abnormal conditions will include the following:

1. T-R set failure
2. Rapper system failure
3. Ash transport system failure

The appropriate actions to correct the abnormal condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

C. Inspections during Planned Unit Outages (Annually)

- Inspect the plates and electrodes for alignment and correct as necessary.
- Inspect the plates and electrodes for excess fouling and signs of corrosion.
- Inspect the T-R set mechanical condition.
- Inspect the insulator housings for mechanical condition.

- Inspect internal structural components for signs of corrosion, air leakage, and mechanical failure.

Corrective actions will be devised and implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented in a timely manner.

D. Record Keeping and Reporting

- Records of all daily inspections and any actions resulting from these inspections will be kept for five (5) years.
- Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five (5) years.
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken. 40 CFR 64.9(a)(2)(i).
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). 40 CFR 64.9(a)(2)(ii).
- All excursions and monitor downtime incidents will be reported in semi-annual monitoring reports and annual compliance certifications.

E. Quality Control

- All instruments and equipment will be calibrated, maintained, and operated according to the manufacturer's specifications.
- An inventory of spare parts will be maintained. Parts will be re-ordered as they are used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

**Compliance Assurance Monitoring (CAM) Plan for ESP2
Electrostatic Precipitators for PM Control**

I. Background

A. Emissions Unit:
 ID (Description): EU LB2 (Boiler #2, Dry-Bottom Pulverized Coal Unit)
 Facility: IPL – Lansing Generating Station (LGS)

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

Regulation: 567 IAC 23.3(2)"b"
 Opacity Limit: 40%
 PM Emission Limits: See the Following Table

Boiler Operating Scenario	lb/MMBtu
LB1	0.6
LB2	0.6
LB3	0.6
LB1 & LB2	0.6
LB1, LB2, & LB3	0.37

C. Current Monitoring Requirements:

Continuous Opacity Monitoring Systems
[ESP2 Audible Precipitator Malfunction Alarm \(control room\)](#)

D. Control Technology: Electrostatic Precipitator

II. Monitoring Approach

1. Indicator	Opacity of ESP exhaust (common stack)	TR Operations – ESP Audible Precipitator Malfunction Alarm
Measurement Approach	COMS in ESP exhaust (stack)	Numbers of TRs in operation will be recorded using a data acquisition system.
2. Indicator Range	A CAM excursion is defined as an hourly block average opacity exceeding the opacity levels specified in the following table – Opacity Excursion Levels under Different Operating Scenarios (*) during normal operations except during a period of startup, shutdown, or cleaning of control equipment. Excursions trigger an inspection, corrective action, and a reporting requirement.	A CAM excursion is defined as an event when the number of ESP TRs that are out of service is more than: One (1) TR set out of total of 4. Inspections and corrective actions will be taken when an excursion occurs. Reporting requirements will also be fulfilled.

II. Monitoring Approach (continued)

3. Performance Criteria		
A. Data Representativeness	The COMS was installed at a representative location in the ESP exhaust per 40 CFR 60, Appendix B, Performance Specification 1 (PS-1).	Continuously (more than or equal to 4 times an hour) monitor the number of TR sets that are out of services. In case of computer failure, manual readings will be taken once a shift (3 times every 24 hours).
B. Verification of Operational Status	Results of initial COMS performance evaluation conducted per PS-1 (10/19/99).	N/A
C. QA/QC Practices/Criteria	The COMS was initially installed and evaluated per PS-1. The continuous opacity monitor will be automatically calibrated for zero and span adjustments daily.	N/A
D. Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds).	Continuously (more than or equal to 4 times an hour) monitor the number of TR sets that are out of services. In case of computer failure, manual readings will be taken once a shift (3 times every 24 hours).
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	The status of ESP TRs out of service will be continuously recorded in the data logger.
Averaging period	Use the 10-second opacity data to calculate 6-minute average. Use the 6-minute average to calculate the hourly block average opacity for the CAM.	N/A

(*) Opacity Excursion Levels under Different Operating Scenarios

Boiler Operating Scenario	Boiler #1	Boiler #2	Boiler #3
Boiler #1 Operates Alone	28%	-	-
Boiler #2 Operates Alone	-	38%	-
Boiler #3 Operates Alone	-	-	30%
Boilers #1 & #2 Operate Simultaneously	33%	33%	-
Boilers #1 & #3 Operate Simultaneously	28%	-	30%
Boilers #2 & #3 Operate Simultaneously	-	38%	30%
Boilers #1, #2, & #3 Operate Simultaneously	29%	29%	23%

For additional operational procedures for ESPs #1 and #2, please see Operating and Instructional Procedure for Cottrell Automation System (CAS) on page 20.

III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required to submit to the IDNR if an accumulation of excursions of either the opacity indicator or the **TR indicator** exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

IV. Quality Assurance and Quality Control

In addition to monitoring the opacity and **TR indicators**, Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Audible Precipitator Malfunction Alarm

The precipitator malfunction alarm will continuously monitor the following parameters:

1. ESP Section Malfunction – **TR set on and off**
2. Power Loss to Rappers / Vibrators
3. 480V Distribution Panel Undervoltage

Corrective actions will be implemented upon the occurrence of a malfunction alarm. The appropriate actions to correct the alarm condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

B. Daily Monitoring & Corrective Actions

- Inspection of rapper operation.
- Inspection of T-R set operation.
- Inspection of ash removal system operation.

Corrective actions will be implemented upon the occurrence of an abnormal condition. Abnormal conditions will include the following:

1. T-R set failure
2. Rapper system failure
3. Ash transport system failure

The appropriate actions to correct the abnormal condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

C. Inspections during Planned Unit Outages (Annually)

- Inspect the plates and electrodes for alignment and correct as necessary.
- Inspect the plates and electrodes for excess fouling and signs of corrosion.
- Inspect the T-R set mechanical condition.
- Inspect the insulator housings for mechanical condition.

- Inspect internal structural components for signs of corrosion, air leakage, and mechanical failure.

Corrective actions will be devised and implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented in a timely manner.

D. Record Keeping and Reporting

- Records of all daily inspections and any actions resulting from these inspections will be kept for five (5) years.
- Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five (5) years.
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken. 40 CFR 64.9(a)(2)(i).
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). 40 CFR 64.9(a)(2)(ii).
- All excursions and monitor downtime incidents will be reported in semi-annual monitoring reports and annual compliance certifications.

E. Quality Control

- All instruments and equipment will be calibrated, maintained, and operated according to the manufacturer's specifications.
- An inventory of spare parts will be maintained. Parts will be re-ordered as they are used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

Electrostatic Precipitators (ESP# 1 & ESP #2)
Operating and Instructional Procedure
Cottrell Automation System (CAS)

PURPOSE: The purpose of the electrostatic precipitators are to remove fly ash from the exhaust stream (gas) of boilers #1 and #2

SCOPE: Each of the ESPs consists of one unit wide by four sections long in the direction of gas flow. Each section has 80 collecting plates arranged in four banks of five plates each. High voltage, uni-directional power for energizing the precipitator is supplied by four 45 KV, AVG; 500 MA, AVG; transformer-rectifier (TR) sets. Each TR set energizes one high tension, wire supporting frame in each section with full wave voltage. Collecting plates are cleaned of collected material by action of 16 Magnetic Impulse, Gravity Impact (MIGI) rappers. There are four rappers per section.

Performance: Optimal performance of the ESPs are achieved when the power level is maintained at a level which maximizes the high tension discharge electrodes (wires) longevity, run time duration between required outages for mechanical cleaning and minimization of particulate emissions and opacity.

Automatic Control: Three signals (spark, current and voltage) are managed to optimize ESP performance as described above. When all three control functions are properly adjusted the ESP will be energized at all times at its optimal or maximum level. For example, as spark rate decreases - input power level increases.

Manual Control: Manual operation shall be initiated when opacity is observed approaching the CAM opacity excursion level for a specific operating scenario. (See the tables of Opacity Excursion Levels under Different Operating Scenarios on pages 13 and 17.) Operating personnel shall alert technicians to manually increase spark rate in order to provide increased power input to the ESPs. Should opacity continue to increase beyond the CAM opacity excursion levels and the spark rate set to 250 per minute, shutdown of the corresponding boiler should be initiated.

Emission Point ID Number: BST3

Associated Equipment

Associated Emission Unit ID: LB3

Emissions Control Equipment ID Number: ESP3

Emissions Control Equipment Description: Electrostatic Precipitator

Continuous Emissions Monitors ID Numbers: CS3SO₂, CS3CO₂, CS3OPAC, CS3NO_x, and CS3FLOW

Emission Unit vented through this Emission Point: LB3

Emission Unit Description: Boiler #3, Dry-Bottom Pulverized Coal Unit

Raw Material/Fuel: Coal, #2 Oil

Rated Capacity: 395 MMBtu/hr

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limits: 40%

Authority for Requirement: Iowa DNR Construction Permit: 73-A-132
567 IAC 23.3(2)"d"

Pollutant: Particulate Matter

Emission Limits: 0.6 lb/MMBtu (Only boiler LB3 in operation)

Multiple Units Limits: 0.37 lb/MMBtu for Units LB1/LB2 and LB3 in operation

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limits: 5 lb/MMBtu

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

Pollutant: Sulfur Dioxide (SO₂)

Emission Limits: Sulfur Dioxide Allowances

Authority for Requirement: 567 IAC 22.108(7) (Attached Phase II Acid Rain Permit)

Pollutant: Nitrogen Oxide (NO_x)

Emission Limits: See attached Phase II Permit

Authority for Requirement: 567 IAC 22.125(4) (Attached Phase II Permit)
40 CFR Part 76

Monitoring Requirements

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

Continuous Emissions Monitoring:

Pollutant - Opacity

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance - 11/21/1980

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.1(1) and 567 IAC 25.2

Pollutant - Sulfur Dioxide (SO₂)

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance – 4/26/2006 (RATA)

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.2

Pollutant - Nitrogen Oxides (NO_x)

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance - 4/26/2006 (RATA)

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.2

Other Parameters

Pollutant - Other - Carbon Dioxide (CO₂)

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance - 4/26/2006 (RATA)

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.2

Pollutant - Other - Flow

Operational Specifications - 40 CFR Part 75

Initial System Calibration/Quality Assurance - 12/30/94

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.2

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 tests 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

Relevant requirements of CAM plan for ESP3: Particulate Matter

Authority for Requirement: 567 IAC 22.108(3)

**Compliance Assurance Monitoring (CAM) Plan for ESP3
Electrostatic Precipitators for PM Control**

I. Background

A. Emissions Unit:
 ID (Description): EU LB3 (Boiler #3, Dry-Bottom Pulverized Coal Unit)
 Facility: IPL – Lansing Generating Station (LGS)

B. Applicable Regulation, Emission Limit, and Monitoring Requirements:
 Regulation: 567 IAC 23.3(2)"b"
 Opacity Limit: 40%
 PM Emission Limits: See the Following Table

Boiler Operating Scenario	lb/MMBtu
LB1	0.6
LB2	0.6
LB3	0.6
LB1 & LB2	0.6
LB1, LB2, & LB3	0.37

C. Current Monitoring Requirements:
 Continuous Opacity Monitoring Systems
[ESP3 Audible Precipitator Malfunction Alarm \(control room\)](#)
[Neundorfer Precipitator Optimization System \(POS\)](#)

D. Control Technology: Electrostatic Precipitator

II. Monitoring Approach

1. Indicator	Opacity of ESP exhaust (common stack)	TR Operations – ESP Audible Precipitator Malfunction Alarm Precipitator Optimization System (POS)
Measurement Approach	COMS in ESP exhaust (stack)	Numbers of TRs in operation will be recorded using a data acquisition system. POS continuously monitor voltage control operating parameters including primary and secondary voltages, power level, control status (communication error, running, tripped, etc.), spark rate, operating mode and opacity signals, load signal and power optimization information to optimize the ESP performance to reduce PM emissions.

II. Monitoring Approach (continued)

D. Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds).	<p>POS continuously monitor voltage control operating parameters including primary and secondary voltages, power level, control status (communication error, running, tripped, etc.), spark rate, operating mode and opacity signals, load signal and power optimization information to optimize the ESP performance to reduce PM emissions.</p> <p>Continuously (more than or equal to 4 times an hour) monitor the number of TR sets that are out of services. In case of computer failure, manual readings will be taken once a shift (3 times every 24 hours).</p>
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	<p>POS continuously monitor voltage control operating parameters including primary and secondary voltages, power level, control status (communication error, running, tripped, etc.), spark rate, operating mode and opacity signals, load signal and power optimization information to optimize the ESP performance to reduce PM emissions.</p> <p>The status of ESP TRs out of service will be continuously recorded in the data logger.</p>
Averaging period	Use the 10-second opacity data to calculate 6-minute average. Use the 6-minute average to calculate the hourly block average opacity for the CAM.	POS continuously collect data and optimize ESP performance.

^(*) Opacity Excursion Levels under Different Operating Scenarios

Boiler Operating Scenario	Boiler #1	Boiler #2	Boiler #3
Boiler #1 Operates Alone	28%	-	-
Boiler #2 Operates Alone	-	38%	-
Boiler #3 Operates Alone	-	-	30%
Boilers #1 & #2 Operate Simultaneously	33%	33%	-
Boilers #1 & #3 Operate Simultaneously	28%	-	30%
Boilers #2 & #3 Operate Simultaneously	-	38%	30%
Boilers #1, #2, & #3 Operate Simultaneously	29%	29%	23%

III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required to submit to the IDNR if an accumulation of excursions of either the opacity indicator or the [TR indicator](#) exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

IV. Quality Assurance and Quality Control

In addition to monitoring the opacity and [TR indicators](#), Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Audible Precipitator Malfunction Alarm

The precipitator malfunction alarm will continuously monitor the following parameters:

1. [ESP Section Malfunction – TR set on and off](#)
2. [Power Loss to Rappers / Vibrators](#)
3. [480V Distribution Panel Undervoltage](#)

Corrective actions will be implemented upon the occurrence of a malfunction alarm. The appropriate actions to correct the alarm condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

B. Daily Monitoring & Corrective Actions

- Inspection of rapper operation.
- Inspection of T-R set operation.
- Inspection of ash removal system operation.

Corrective actions will be implemented upon the occurrence of an abnormal condition.

Abnormal conditions will include the following:

1. T-R set failure
2. Rapper system failure
3. Ash transport system failure

The appropriate actions to correct the abnormal condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

C. Inspections during Planned Unit Outages (Annually)

- Inspect the plates and electrodes for alignment and correct as necessary.
- Inspect the plates and electrodes for excess fouling and signs of corrosion.
- Inspect the T-R set mechanical condition.
- Inspect the insulator housings for mechanical condition.
- Inspect internal structural components for signs of corrosion, air leakage, and mechanical failure.

Corrective actions will be devised and implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented in a timely manner.

D. Record Keeping and Reporting

- Records of all daily inspections and any actions resulting from these inspections will be kept for five (5) years.
- Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five (5) years.
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken. 40 CFR 64.9(a)(2)(i).
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). 40 CFR 64.9(a)(2)(ii).
- All excursions and monitor downtime incidents will be reported in semi-annual monitoring reports and annual compliance certifications.

E. Quality Control

- All instruments and equipment will be calibrated, maintained, and operated according to the manufacturer's specifications.
- An inventory of spare parts will be maintained. Parts will be re-ordered as they are used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

Emission Point ID Number: BST4

Associated Equipment

Associated Emission Unit ID: LB4

Emissions Control Equipment ID Number: ESP4

Emissions Control Equipment Description: Electrostatic Precipitator

Continuous Emissions Monitors ID Numbers: CS4SO₂, CS4CO₂, CS4OPAC, CS4NO_x, and CS4FLOW

Emission Unit vented through this Emission Point: LB4

Emission Unit Description: Boiler #4, Dry-Bottom Pulverized Coal Unit, w/Low NO_x Burners

Raw Material/Fuel: Subbituminous Coal, #2 Oil

Rated Capacity: 2,603 MMBtu/hr

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limits: 32% ⁽¹⁾

Authority for Requirement: 567 IAC 23.1(2)"a" (Iowa DNR Construction Permit 75-A-014-S5)
40 CFR 60.42(b)(2)

⁽¹⁾ As specified in 40 CFR Part 60 Subpart D §60.42(b)(2), Boiler #4 shall not cause to be discharged into the atmosphere any gases which exhibit greater than 32 percent opacity, except that a maximum of 39 percent opacity shall be permitted for not more than six minutes in any hour.

Pollutant: Particulate Matter

Emission Limits: 0.1 lb/MMBtu (Front Half – EPA Method 5)

Authority for Requirement: 567 IAC 23.1(2)"a" (Iowa DNR Construction Permit 75-A-014-S5)
40 CFR 60.42(a)(1)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limits: 1.2 lb/MMBtu ⁽²⁾

Authority for Requirement: 567 IAC 23.1(2)"a" (Iowa DNR Construction Permit 75-A-014-S5)
40 CFR 60.43(a)(2)

⁽²⁾ As specified in 40 CFR Part 60 Subpart D §60.43(a)(2). Limit based arithmetic average of three contiguous one-hour periods as measured by a continuous monitoring system as specified in 40 CFR Part 60 Subpart D §60.45(g)(2).

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit: Sulfur Dioxide Allowances

Authority for Requirement: 567 IAC 22.108(7) (Attached Phase II Acid Rain Permit)

Pollutant: Nitrogen Oxides (NO_x)⁽³⁾

Emission Limits: 0.70 lb/MMBtu

Authority for Requirement: 567 IAC 23.1(2)"a" (Iowa DNR Construction Permit 75-A-014-S5)
40 CFR 60.44(a)(3)

⁽³⁾ As specified in 40 CFR Part 60 Subpart D §60.44(a)(3). Limit based arithmetic average of three contiguous one-hour periods as measured by a continuous monitoring system as specified in 40 CFR Part 60 Subpart D §60.45(g)(3).

Pollutant: Nitrogen Oxide (NO_x)

Emission Limits: See attached Phase II Permit

Authority for Requirement: 567 IAC 22.125(4) (Attached Phase II Permit)
40 CFR 76.5(a)(2)

Operational Limits & Requirements

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

NSPS Requirements:

- A. Boiler #4 is subject to 40 CFR Part 60 Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators as specified in 40 CFR 60.40.
- B. Boiler #4 is subject to 40 CFR Part 60 Subpart A - General Provisions.

Authority for Requirement: Iowa DNR Construction Permit 75-A-014-S5
NSPS Subpart D

Acid Rain Requirements:

- A. Boiler #4 is subject to provisions of the Acid Rain Program.

Authority for Requirement: Iowa DNR Construction Permit 75-A-014-S5

Operating Limits:

- A. Control equipment associated with Boiler #4 shall be inspected and maintained according to manufacturer's specifications and maintenance schedule.

Authority for Requirement: Iowa DNR Construction Permit 75-A-014-S5

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:

- A. Maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of control equipment associated with Boiler #4.

- B. The owner or operator shall submit quarterly reports on opacity, SO₂, NO_x, CO₂, and airflow to the Administrator and IDNR. For those items only required to be submitted to the Administrator regarding the Acid Rain requirements, do not send a duplicate copy of these items to IDNR. These reports shall conform to the requirements of 40 CFR Part 75.

Authority for Requirement: Iowa DNR Construction Permit 75-A-014-S5

Continuous Emission Monitoring

- A. Continuous emission monitoring is required for Opacity, Sulfur Dioxide, Nitrogen Oxides, Carbon Dioxide, and airflow. The monitoring shall be maintained in accordance with the most recent version of the Title V Operating Permit, 40 CFR Part 75, and 40 CFR Part 60.

Authority for Requirement: Iowa DNR Construction Permit 75-A-014-S5

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet, from the ground): 306

Stack Opening (inches, dia): 141

Exhaust Temperature (°F): 400

Exhaust Flowrate (scfm): 460,100

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-014-S5

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

Monitoring Requirements

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

Continuous Emissions Monitoring:

Pollutant - Opacity

Operational Specifications - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Initial System Calibration/Quality Assurance - 11/25/80

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Reporting & Record keeping - 40 CFR Part 75, Part 60 Subpart A & D

Authority for Requirement - 567 IAC 25.1(1), 567 IAC 25.2, and 567 IAC 23.1(2)

Pollutant - Sulfur Dioxide (SO₂)

Operational Specifications - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Initial System Calibration/Quality Assurance - 12/30/94

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Reporting & Record keeping - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D.

Authority for Requirement - 567 IAC 25.2 and 567 IAC 23.1(2)

Pollutant - Nitrogen Oxides (NO_x)

Operational Specifications - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D.

Initial System Calibration/Quality Assurance - 12/30/94

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.2

Other Parameters

Pollutant - Other - Carbon Dioxide (CO₂)

Operational Specifications - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Initial System Calibration/Quality Assurance - 12/30/94

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D.

Reporting & Record keeping - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D.

Authority for Requirement - 567 IAC 25.2 and 567 IAC 23.1(2)

Pollutant - Other - Flow

Operational Specifications -40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Initial System Calibration/Quality Assurance - 12/30/94

Ongoing System Calibration/Quality Assurance - 40 CFR Part 75, Part 60 Subpart A, and Part 60 Subpart D

Reporting & Record keeping - 40 CFR Part 75

Authority for Requirement - 567 IAC 25.2

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 tests 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

Relevant requirements of CAM plan for ESP4: Particulate Matter

Authority for Requirement: 567 IAC 22.108(3)

**Compliance Assurance Monitoring (CAM) Plan for ESP4
Electrostatic Precipitators for PM Control**

I. Background

- A. Emissions Unit:
 ID (Description): EU LB4 (Boiler #4, Dry-Bottom Pulverized Coal Unit)
 Facility: IPL – Lansing Generating Station (LGS)

- B. Applicable Regulation, Emission Limit, and Monitoring Requirements:
 Regulations: 567 IAC 23.1(2)"a"
 40 CFR 60 Subpart D
 Iowa DNR Construction Permit 75-A-014-S5
 Opacity Limit: 32%
 PM Emission Limits: 0.1 lb/MMBtu

- C. Current Monitoring Requirements:
 Continuous Opacity Monitoring Systems
[ESP4 Audible Precipitator Malfunction Alarm \(control room\)](#)
[Neundorfer Precipitator Optimization System \(POS\)](#)

- D. Control Technology: Electrostatic Precipitator

II. Monitoring Approach

1. Indicator	Opacity of ESP exhaust (common stack)	TR Operations – ESP Audible Precipitator Malfunction Alarm Precipitator Optimization System (POS)
Measurement Approach	COMS in ESP exhaust (stack)	Numbers of TRs in operation will be recorded using a data acquisition system. POS continuously monitor voltage control operating parameters including primary and secondary voltages, power level, control status (communication error, running, tripped, etc.), spark rate, operating mode and opacity signals, load signal and power optimization information to optimize the ESP performance to reduce PM emissions.

II. Monitoring Approach (continued)

D. Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds).	<p>POS continuously monitor voltage control operating parameters including primary and secondary voltages, power level, control status (communication error, running, tripped, etc.), spark rate, operating mode and opacity signals, load signal and power optimization information to optimize the ESP performance to reduce PM emissions.</p> <p>Continuously (more than or equal to 4 times an hour) monitor the number of TR sets that are out of services. In case of computer failure, manual readings will be taken once a shift (3 times every 24 hours).</p>
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	<p>POS continuously monitor voltage control operating parameters including primary and secondary voltages, power level, control status (communication error, running, tripped, etc.), spark rate, operating mode and opacity signals, load signal and power optimization information to optimize the ESP performance to reduce PM emissions.</p> <p>The status of ESP TRs out of service will be continuously recorded in the data logger.</p>
Averaging period	Use the 10-second opacity data to calculate 6-minute average. Use the 6-minute average to calculate the hourly block average opacity for the CAM.	POS continuously collect data and optimize ESP performance.

III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required to submit to the IDNR if an accumulation of excursions of either the opacity indicator or the **TR indicator** exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period. All the requirements in 40 CFR 64.8(b) shall be fulfilled if a QIP plan is required.

IV. Quality Assurance and Quality Control

In addition to monitoring the opacity and [TR indicators](#), Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Audible Precipitator Malfunction Alarm

The precipitator malfunction alarm will continuously monitor the following parameters:

1. [ESP Section Malfunction – TR set on and off](#)
2. [Power Loss to Rappers / Vibrators](#)
3. [480V Distribution Panel Undervoltage](#)

Corrective actions will be implemented upon the occurrence of a malfunction alarm. The appropriate actions to correct the alarm condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

B. Daily Monitoring & Corrective Actions

- Inspection of rapper operation.
- Inspection of T-R set operation.
- Inspection of ash removal system operation.

Corrective actions will be implemented upon the occurrence of an abnormal condition. Abnormal conditions will include the following:

1. T-R set failure
2. Rapper system failure
3. Ash transport system failure

The appropriate actions to correct the abnormal condition will be implemented within 8 hours, and if necessary, within an additional period of time until alternate generating capacity is available to meet consumer demand.

C. Inspections during Planned Unit Outages (Annually)

- Inspect the plates and electrodes for alignment and correct as necessary.
- Inspect the plates and electrodes for excess fouling and signs of corrosion.
- Inspect the T-R set mechanical condition.
- Inspect the insulator housings for mechanical condition.
- Inspect internal structural components for signs of corrosion, air leakage, and mechanical failure.

Corrective actions will be devised and implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented in a timely manner.

D. Record Keeping and Reporting

- Records of all daily inspections and any actions resulting from these inspections will be kept for five (5) years.
- Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five (5) years.
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken. 40 CFR 64.9(a)(2)(i).
- LGS shall record the summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). 40 CFR 64.9(a)(2)(ii).
- All excursions and monitor downtime incidents will be reported in semi-annual monitoring reports and annual compliance certifications.

E. Quality Control

- All instruments and equipment will be calibrated, maintained, and operated according to the manufacturer's specifications.
- An inventory of spare parts will be maintained. Parts will be re-ordered as they are used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

Emission Point ID Number: D1

Associated Equipment

Associated Emission Unit ID Numbers: LD1

Emission Unit vented through this Emission Point: LD1
Emission Unit Description: #1 Diesel Engine Stack, Oil Fired Engine
Raw Material/Fuel: Distillate Oil
Rated Capacity: 10.3 MMBtu/hr, 1,440 hp

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 Limits: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

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

Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"

Monitoring Requirements

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

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)

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: D2

Associated Equipment

Associated Emission Unit ID Numbers: LD2

Emission Unit vented through this Emission Point: LD2
Emission Unit Description: #2 Diesel Engine Stack, Oil Fired Engine
Raw Material/Fuel: Distillate Oil
Rated Capacity: 10.3 MMBtu/hr, 1,440 hp

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 Limits: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

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

Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(3)"b"

Monitoring Requirements

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

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)

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: ASH2C

Associated Equipment

Associated Emission Unit ID Numbers: LASH2, LASH2A, and LASH2B

Emissions Control Equipment ID Number: BAG1

Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: LASH1

Emission Unit Description: Unit #4 Ash Storage Silo

Raw Material/Fuel: Fly Ash

Rated Capacity: 150 tons

Emission Unit vented through this Emission Point: LASH2A

Emission Unit Description: Unit #4 Ash Storage Silo

Raw Material/Fuel: Fly Ash

Rated Capacity: 1,000 tons

Emission Unit vented through this Emission Point: LASH2B

Emission Unit Description: Unit #4 Ash Storage Silo

Raw Material/Fuel: Fly Ash

Rated Capacity: 100 tons

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 Limits: 40%⁽¹⁾

⁽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).

Authority for Requirement: 567 IAC 23.3(2)"d" (Iowa DNR Construction Permit 95-A-846-S2)

Pollutant: Particulate Matter (PM)

Emission Limits: 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 95-A-846-S2)

Pollutant: PM₁₀

Emission Limits: 0.27 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 95-A-846-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet, from the ground): 75

Stack Opening (inches): 4 × 10

Exhaust Temperature (°F): 70

Exhaust Flowrate (acfm): 1,000

Discharge Style: N/A

Authority for Requirement: Iowa DNR Construction Permit 95-A-846-S2

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ASH2 (Fugitive)

Associated Equipment

Associated Emission Unit ID Numbers: LASH2

Emission Unit vented through this Emission Point: LASH2
Emission Unit Description: Ash Silo Unloader and C-Stone Production
Raw Material/Fuel: Ash
Rated Capacity: 25 tons/hr

Applicable Requirements

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

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

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

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

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: ASH2B (Fugitive)

Associated Equipment

Associated Emission Unit ID Numbers: LASH2B

Emission Unit vented through this Emission Point: LASH2B
Emission Unit Description: Ash Silo Unloader and C-Stone Production
Raw Material/Fuel: Ash
Rated Capacity: 25 tons/hr

Applicable Requirements

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

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

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

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

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: ASH3

Associated Equipment

Associated Emission Unit ID Numbers: LASH3

Emission Unit vented through this Emission Point: LASH3
Emission Unit Description: Ash Pile
Raw Material/Fuel: Fly ash
Size: 6.0 Acres

Applicable Requirements

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

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

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

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

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: DC1A

Associated Equipment

Associated Emission Unit ID: LDC1
Emissions Control Equipment ID Number: BAG2A
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: LDC1
Emission Unit Description: Coal Handling Dust Baghouse Vent A
Raw Material/Fuel: Coal
Rated Capacity: 650 Tons/hr

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limits: 40%
Authority for Requirement: 567 IAC 23.3(2)"d" (Iowa DNR Construction Permit 75-A-190)

Pollutant: Particulate Matter
Emission Limits: 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 75-A-190)

Monitoring Requirements

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

Stack Testing:

Pollutant - Particulate Matter
Stack Test to be Completed by: July 13, 2008
Test Method - Iowa Compliance Sampling Manual Method 5
Authority for Requirement - 567 IAC 22.108(3)

The owner of this equipment or his 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 tests 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

Relevant requirements of CAM plan for this equipment: Particulate Matter

Authority for Requirement: 567 IAC 22.108(3)

Compliance Assurance Monitoring (CAM) Plan for CE BAG2A

I. Background

A. Emissions Unit

Facility: IPL – Lansing Generating Station
Description: Coal Handling Dust Baghouse Vent A
Identification: LDC1

B. Control Equipment

Description: Baghouse
Identification: CE BAG2A

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulations: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 75-A-190)
PM Emission Limit: 0.1 gr/dscf

II. Monitoring Approach

A. Indicator

Pressure drop across the baghouse is the indicator of the performance of the baghouse.

B. Indicator Range

Normal operating pressure drop range is between 1.0 and 8.0 inches of water. An excursion is triggered when the pressure drop across the baghouse is outside the normal operating range for a period of more than five (5) minutes.

C. Measurement Approach

Pressure drop shall be checked daily to ensure that the baghouse is operating inside the normal operating pressure drop range.

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is triggered when total excursion time exceeds 5% of the operating time in a semi-annual reporting period (January 1 to June 30, or July 1 to December 31). A deviation shall be reported in the semi-annual report when the QIP threshold is triggered.

E. Performance Criteria

Data representativeness:	Pressure drop of less than 1.0 or more than 8.0 inches of water would indicate a decrease in the performance of the baghouse and potentially indicate an increase of particulate emissions.
Verification of operational status:	Records of pressure drop readings will be maintained for five years.
QA/QC practices and criteria:	The facility shall check the pressure drop daily when the baghouse is in operation. If a pressure drop of less than 1.0 or more than 8.0 inches of water for more than five (5) minutes is observed, corrective action will be taken within 8 hours.
Monitoring frequency and data Collection procedure:	Pressure drop readings shall be conducted daily during a period when the baghouse is in operation. Records of the readings shall be maintained for five years.

III. Regular Maintenance

In addition to monitoring the pressure drop, Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Weekly Monitoring and Corrective Actions

- Inspect the compressed air pulsing system for any abnormal conditions.
- Inspect the rotary airlock, reducer, and drive motor for signs of jamming, leakage, wear or broken parts.
- Visible emissions from the exhaust vents shall be observed on a weekly basis to ensure that there are no visible emissions during the operation of the baghouse. If visible emissions are observed, corrective actions must be taken to reduce the emissions within 8 hours.

Corrective actions will be implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented within 8 hours.

B. Record Keeping and Reporting

- Records of all weekly inspections and any actions resulting from these inspections will be kept for five (5) years, including the visual opacity observations.
- Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five (5) years.
- Whenever an excursion is triggered, Lansing Generating Station will document the duration and cause (including unknown cause) of the excursion and the corrective actions taken.

- All excursions will be reported in semi-annual monitoring reports and annual compliance certifications.

D. Quality Control

- All instruments and equipment will be maintained and operated according to the manufacturer's recommendations.
- Appropriate spare parts are maintained as needed. Parts will be re-ordered as used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

Emission Point ID Number: DC1B

Associated Equipment

Associated Emission Unit ID: LDC1
Emissions Control Equipment ID Number: BAG2B
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: LDC1
Emission Unit Description: Coal Handling Dust Baghouse Vent B
Raw Material/Fuel: Coal
Rated Capacity: 650 Tons/hr

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limits: 40%
Authority for Requirement: 567 IAC 23.3(2)"d" (Iowa DNR Construction Permit 75-A-191)

Pollutant: Particulate Matter
Emission Limits: 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 75-A-191)

Monitoring Requirements

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

Stack Testing:

Pollutant - Particulate Matter
Stack Test to be Completed by: July 13, 2008
Test Method - Iowa Compliance Sampling Manual Method 5
Authority for Requirement - 567 IAC 22.108(3)

The owner of this equipment or his 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 tests 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

Relevant requirements of CAM plan for this equipment: Particulate Matter

Authority for Requirement: 567 IAC 22.108(3)

Compliance Assurance Monitoring (CAM) Plan for CE BAG2B

I. Background

A. Emissions Unit

Facility: IPL – Lansing Generating Station
Description: Coal Handling Dust Baghouse Vent B
Identification: LDC1

B. Control Equipment

Description: Baghouse
Identification: CE BAG2B

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulations: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 75-A-191)
PM Emission Limit: 0.1 gr/dscf

II. Monitoring Approach

A. Indicator

Pressure drop across the baghouse is the indicator of the performance of the baghouse.

B. Indicator Range

Normal operating pressure drop range is between 1.0 and 8.0 inches of water. An excursion is triggered when the pressure drop across the baghouse is outside the normal operating range for a period of more than five (5) minutes.

C. Measurement Approach

Pressure drop shall be checked daily to ensure that the baghouse is operating inside the normal operating pressure drop range.

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is triggered when total excursion time exceeds 5% of the operating time in a semi-annual reporting period (January 1 to June 30, or July 1 to December 31). A deviation shall be reported in the semi-annual report when the QIP threshold is triggered.

E. Performance Criteria

Data representativeness:	Pressure drop of less than 1.0 or more than 8.0 inches of water would indicate a decrease in the performance of the baghouse and potentially indicate an increase of particulate emissions.
Verification of operational status:	Records of pressure drop readings will be maintained for five years.
QA/QC practices and criteria:	The facility shall check the pressure drop daily when the baghouse is in operation. If a pressure drop of less than 1.0 or more than 8.0 inches of water for more than five (5) minutes is observed, corrective action will be taken within 8 hours.
Monitoring frequency and data Collection procedure:	Pressure drop readings shall be conducted daily during a period when the baghouse is in operation. Records of the readings shall be maintained for five years.

III. Regular Maintenance

In addition to monitoring the pressure drop, Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Weekly Monitoring and Corrective Actions

- Inspect the compressed air pulsing system for any abnormal conditions.
- Inspect the rotary airlock, reducer, and drive motor for signs of jamming, leakage, wear or broken parts.
- Visible emissions from the exhaust vents shall be observed on a weekly basis to ensure that there are no visible emissions during the operation of the baghouse. If visible emissions are observed, corrective actions must be taken to reduce the emissions within 8 hours.

Corrective actions will be implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented within 8 hours.

B. Record Keeping and Reporting

- Records of all weekly inspections and any actions resulting from these inspections will be kept for five (5) years, including the visual opacity observations.
- Records of all planned unit outage inspections and any actions resulting from these inspections will be kept for five (5) years.
- Whenever an excursion is triggered, Lansing Generating Station will document the duration and cause (including unknown cause) of the excursion and the corrective actions taken.

- All excursions will be reported in semi-annual monitoring reports and annual compliance certifications.

C. Quality Control

- All instruments and equipment will be maintained and operated according to the manufacturer's recommendations.
- Appropriate spare parts are maintained as needed. Parts will be re-ordered as used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

Emission Point ID Number: DC2

Associated Equipment

Associated Emission Unit ID Number: LDC2
Emissions Control Equipment ID Number: BAG3
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: LDC2
Emission Unit Description: Coal Bunker Rooms Dust Collecting System^(*)
Raw Material/Fuel: Coal Dust Collected
Rated Capacity: 650 Tons Coal/hr (Used to calculate actual emissions)
^(*) Construction permit 75-A-192-S2 identifies the units as: Coal Bunker Rooms #1, 2, 3, & 4, Coal-Handling Equipment in Transfer Tower #2, Tripper Conveyor 7, and Tripper Conveyor C.

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 Limits: 40%⁽¹⁾

Authority for Requirement: 567 IAC 23.3(2)"d" (Iowa DNR Construction Permit 75-A-192-S2)

⁽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: Particulate Matter (PM)

Emission Limits: 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 75-A-192-S2)

Pollutant: Particulate Matter (PM)

Emission Limits: 9.96 lb/hr expressed as the average of 3 runs

Authority for Requirement: Iowa DNR Construction Permit 75-A-192-S2

Pollutant: PM₁₀

Emission Limits: 9.96 lb/hr expressed as the average of 3 runs

Authority for Requirement: Iowa DNR Construction Permit 75-A-192-S2

Operational Limits & Requirements

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

Operating Limits:

- A. The control equipment shall be operated and maintained per the manufacturer’s instructions

Authority for Requirement: Iowa DNR Construction Permit 75-A-192-S2

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:

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

Authority for Requirement: Iowa DNR Construction Permit 75-A-192-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet, from the ground): 159.08

Stack Opening (inches, dia): 44

Exhaust Temperature (°F): Ambient

Exhaust Flowrate (scfm): 30,581

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 75-A-192-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.

Stack Testing:

Pollutant - Particulate Matter
Stack Test to be Completed by: July 13, 2008
Test Method - Iowa Compliance Sampling Manual Method 5
Authority for Requirement - 567 IAC 22.108(3)

Pollutant – PM₁₀
Stack Test to be Completed by: July 13, 2008
Test Method – 40 CFR 51, Appendix M, 201A with 202, (or approved alternative)
Authority for Requirement - 567 IAC 22.108(3)

The owner of this equipment or his 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 tests 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

Relevant requirements of CAM plan for this equipment: Particulate Matter

Authority for Requirement: 567 IAC 22.108(3)

Compliance Assurance Monitoring (CAM) Plan for CE BAG3

I. Background

A. Emissions Unit

Facility: IPL – Lansing Generating Station
Description: Bunker Rooms Dust Collecting System
Identification: LDC2

B. Control Equipment

Description: Baghouse
Identification: CE BAG3

C. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulations: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 75-A-192-S2)
PM Emission Limit: 0.1 gr/dscf, 9.96 lb/hr

II. Monitoring Approach

A. Indicator

Pressure drop across the baghouse is the indicator of the performance of the baghouse.

B. Indicator Range

Normal operating pressure drop range is between 1.0 and 10.0 inches of water. An excursion is triggered when the pressure drop across the baghouse is outside the normal operating range for a period of more than five (5) minutes.

C. Measurement Approach

Pressure drop shall be checked daily to ensure that the baghouse is operating inside the normal operating pressure drop range.

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is triggered when total excursion time exceeds 5% of the operating time in a semi-annual reporting period (January 1 to June 30, or July 1 to December 31). A deviation shall be reported in the semi-annual report when the QIP threshold is triggered.

E. Performance Criteria

Data representativeness:

Pressure drop of less than 1.0 or more than 10.0 inches of water would indicate a decrease in the performance of the baghouse and potentially indicate an increase of particulate emissions.

Verification of operational status:

Records of pressure drop readings will be maintained for five years.

QA/QC practices and criteria:

The facility shall check the pressure drop daily when the baghouse is in operation. If a pressure drop of less than 1.0 or more than 10.0 inches of water for more than five (5) minutes is observed, corrective action will be taken within 8 hours.

Monitoring frequency and data

Collection procedure:

Pressure drop readings shall be conducted daily during a period when the baghouse is in operation. Records of the readings shall be maintained for five years.

III. Regular Maintenance

In addition to monitoring the pressure drop, Lansing Generating Station will conduct the following activities to assure compliance. The following monitoring is not required during periods of time greater than one day in which the source does not operate.

A. Continuous Monitoring and Corrective Actions

The baghouse has sensors and alarms to indicate problems that require maintenance. The equipment that is monitored by the control system includes:

- Hopper level
- Rotary valve (empties the hopper)
- Cleaning system drive mechanism
- Broken bag detector
- Pressure drop across bags
- Fire detection (temperature and CO)

If there is a problem with any of this equipment an alarm is triggered. If the alarm is severe, the control system will shut the baghouse down and the baghouse cannot operate until the problem is corrected and the alarm is cleared. Corrective actions will be taken to diagnose the problem and make repairs.

B. Weekly Monitoring and Corrective Actions

- Visible emissions from the exhaust vents shall be observed on a weekly basis to ensure that there are no visible emissions during the operation of the baghouse. If visible emissions are observed, corrective actions must be taken to reduce the emissions within 8 hours.

Corrective actions will be implemented upon the occurrence of an abnormal condition. The appropriate actions to correct the abnormal condition will be implemented within 8 hours.

C. Record Keeping and Reporting

- Records of the corrective actions and maintenance activities will be kept for five (5) years
- Whenever an excursion is triggered, Lansing Generating Station will document the duration and cause (including unknown cause) of the excursion and the corrective actions taken.
- All excursions will be reported in semi-annual monitoring reports and annual compliance certifications.

D. Quality Control

- All instruments and equipment will be maintained and operated according to the manufacturer's recommendations.
- Appropriate spare parts are maintained as needed. Parts will be re-ordered as used.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 64

Emission Point ID Number: Fugitive Sources

Associated Equipment

EP	EU	EU Description	Raw Material/Fuel	Rated Capacity
CP1	LCP1	Coal Pile	Coal	7.35 Acres
CP2	LCP2	Coal Pile	Coal	5.17 Acres
CP3	LCP3	Coal Unloading	Coal	1,250 Tons/hr
CP4	LCP4	Coal Stockpiling	Coal	1,250 Tons/hr
CP5	LCP5	Coal Conveying	Coal	650 Tons/hr
CP6	LCP6	Coal Bulldozing	Coal	17,520 Bulldozer operating hours/yr

Applicable Requirements

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

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

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

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

Monitoring Requirements

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

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

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

G1. Duty to Comply

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

G2. Permit Expiration

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

G3. Certification Requirement for Title V Related Documents

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

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the

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

G5. Semi-Annual Monitoring Report

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

G6. Annual Fee

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

8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

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

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

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

G8. Duty to Provide Information

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

G9. General Maintenance and Repair Duties

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

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

G10. Recordkeeping Requirements for Compliance Monitoring

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

records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

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

- a. Comply with all terms and conditions of this permit specific to each alternative scenario.
- b. Maintain a log at the permitted facility of the scenario under which it is operating.
- c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

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

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

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

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

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

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

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

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

G13. Hazardous Release

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

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process

equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

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

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

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

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.

- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

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

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

G15. Permit Deviation Reporting Requirements

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

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

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

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

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

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

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

- i. Correct typographical errors
- ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
- iii. Require more frequent monitoring or reporting by the permittee; or
- iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

- i. Do not violate any applicable requirements
- ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
- iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
- iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
- v. Are not modifications under any provision of Title I of the Act; and
- vi. Are not required to be processed as significant modification.

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
- ii. The permittee's suggested draft permit
- iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

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

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

G19. Duty to Obtain Construction Permits

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

G20. Asbestos

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

G21. Open Burning

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

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the

owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

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

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

a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.

b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.

c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

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

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

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

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,

5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
 - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.
 - 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 June 25, 1993, 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 an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test

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

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

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

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

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

G31. Prevention of Air Pollution Emergency Episodes

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

567 IAC 26.1(1)

G32. Contacts List

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

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

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

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

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

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

Field Office 2
P.O. Box 1443
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

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

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

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

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

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

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

V. Appendix A: Acid Rain Phase II Permit



AIR QUALITY BUREAU
7900 Hickman Rd, Suite 1
Urbandale, IA 50322

Phase II Acid Rain Permit

Issued to: Lansing Station
Operated by: Alliant Power
ORIS code: 1047
Effective: July 14, 2006 through July 13, 2011

For the Director of the Department of Natural Resources

Douglas A. Campbell, Supervisor of Operating Permits Section

Date

Acid Rain Permit comprises the following:

- 1) Statement of Basis.
- 2) SO₂ allowances allocated under this permit and NO_x requirements for each affected unit.
- 3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.
- 4) The permit application submitted for this source, as corrected by the Iowa Department of Natural Resources (IDNR), Air Quality Bureau, Operating Permit Section. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

1) Statement of Basis

Statutory and Regulatory Authorities: In accordance with Iowa Code paragraph 455B.133[8"a"], and Titles IV and V of the Clean Air Act, the Iowa Department of Natural Resources (IDNR), Air Quality Bureau, Operating Permit Section issues this permit pursuant to 567 Iowa Administrative Code (IAC) 22.135(455B) to 22.145(455B) and 567 IAC 22.100(455B) to 22.116(455B). The compliance options are approved as proposed in the attached application.

2) SO₂ Allowance Allocations and NO_x Requirements for each affected unit

		2006	2007	2008	2009	2010	2011
Unit 1	SO ₂ allowances, under Table 2 of 40 CFR part 73.	0*	0*	0*	0*	0*	0*
	NO _x limit (Averaging Plan through Dec 31, 2009)	<p>Pursuant to 40 CFR part 76, The Iowa Department of Natural Resources approves a NO_x compliance plan which includes an emission averaging plan for Unit 1. The NO_x emission averaging plan is effective from January 1, 2005 through December 31, 2009. Under the NO_x averaging plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the alternative contemporaneous annual emission limitation of 0.59 lbs/mmBtu, and this unit's actual annual heat input shall not be more than the annual heat input of 43,061 mmBtu.</p> <p>The other units in the averaging plan are Prairie Creek Unit 3, Milton L Kapp Unit 2, Sutherland Unit 1, Sutherland Unit 2, Sixth Street Unit 2, Sixth Street Unit 3, Sixth Street Unit 4, Sixth Street Unit 5, Dubuque Unit 1, Dubuque Unit 5, Lansing Unit 2 and Lansing Unit 3. For each year under the plan, the actual Btu-weighted annual average emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitation in 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A) and (B)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous emission limitation and annual heat input limit.</p> <p>On January 1, 2010, under the remainder of the NO_x compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation under 40 CFR 76.7(a)(2), which is 0.46 lbs/mmBtu for dry bottom wall-fired units.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x averaging plan and the requirements covering excess emissions.</p>					

SO₂ Allowance Allocations and NO_x Requirements for each affected unit continued

		2006	2007	2008	2009	2010	2011
Unit 2	SO ₂ allowances, under Table 2 of 40 CFR part 73	0*	0*	0*	0*	0*	0*
	NO _x limit (Averaging Plan through Dec 31, 2009)	<p>Pursuant to 40 CFR part 76, The Iowa Department of Natural Resources approves a NO_x compliance plan which includes an emission averaging plan for Unit 2. The NO_x emission averaging plan is effective from January 1, 2005 through December 31, 2009. Under the NO_x averaging plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the alternative contemporaneous annual emission limitation of 0.59 lbs/mmBtu, and this unit's actual annual heat input shall not be more than the annual heat input of 30,850 mmBtu.</p> <p>The other units in the averaging plan are Prairie Creek Unit 3, Milton L. Kapp Unit 2, Sutherland Unit 1, Sutherland Unit 2, Sixth Street Unit 2, Sixth Street Unit 3, Sixth Street Unit 4, Sixth Street Unit 5, Dubuque Unit 1, Dubuque Unit 5, Lansing Unit 1 and Lansing Unit 3. For each year under the plan, the actual Btu-weighted annual average emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitation in 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A) and (B)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous emission limitation and annual heat input limit.</p> <p>On January 1, 2010, under the remainder of the NO_x compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation under 40 CFR 76.7(a)(2), which is 0.46 lbs/mmBtu for dry bottom wall-fired units.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x averaging plan and the requirements covering excess emissions.</p>					

SO₂ Allowance Allocations and NO_x Requirements for each affected unit continued

		2006	2007	2008	2009	2010	2011
Unit 3	SO ₂ allowances, under Tables 2 of 40 CFR part 73	478*	478*	478*	478*	479*	479*
	NO _x limit (Averaging Plan through Dec 31, 2009)	<p>Pursuant to 40 CFR part 76, The Iowa Department of Natural Resources approves a NO_x compliance plan which includes an emission averaging plan for Unit 3. The NO_x emission averaging plan is effective beginning January 1, 2005 through December 31, 2009. Under the NO_x averaging plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the alternative contemporaneous annual emission limitation of 0.67 lbs/mmBtu, and this unit's actual annual heat input shall not be more than the annual heat input of 1,842,897 mmBtu.</p> <p>The other units in the averaging plan are Prairie Creek Unit 3, Milton L. Kapp Unit 2, Sutherland Unit 1, Sutherland Unit 2, Sixth Street Unit 2, Sixth Street Unit 3, Sixth Street Unit 4, Sixth Street Unit 5, Dubuque Unit 1, Dubuque Unit 5, Lansing Unit 1, and Lansing Unit 2. For each year under the plan, the actual Btu-weighted annual average emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitation in 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A) and (B)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous emission limitation and annual heat input limit.</p> <p>On January 1, 2010, under the remainder of the NO_x compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation under 40 CFR 76.7(a)(2), which is 0.46 lbs/mmBtu for dry bottom wall-fired units.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x averaging plan and the requirements covering excess emissions.</p>					

SO₂ Allowance Allocations and NO_x Requirements for each affected unit continued

		2006	2007	2008	2009	2010	2011
Unit 4	SO ₂ allowances, under Table 2 of 40 CFR part 73.	4628*	4628*	4628*	4628*	4344*	4344*
	NO _x limit (Early Elect through Dec 31, 2007)	<p>Pursuant to 40 CFR part 76, The Iowa Department of Natural Resources approves a NO_x compliance plan for Unit 4. The early election portion of the NO_x compliance plan is effective beginning January 1, 1997 through December 31, 2007. Under the early election portion of the NO_x compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation under 40 CFR 76.5(a)(2), which is 0.50 lbs/mmBtu for dry bottom wall-fired units.</p> <p>On January 1, 2008, under the remainder of the NO_x compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation under 40 CFR 76.7(a)(2), which is 0.46 lbs/mmBtu for dry bottom wall-fired units.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and the requirements covering excess emissions.</p>					

* The number of allowances allocated to Phase II affected units by U.S. EPA in 40 CFR part 73 Table 2 (Revised September 28, 1998). In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

3) Comments, Notes and Justifications:

Renewal of the Phase II SO₂ and NO_x permit.

The NO_x Averaging Plan portion of this Phase II Permit will cover the period from January 1, 2005 through December 31, 2009 (IDNR). On January 1, 2010 the NO_x emission limit changes to the Revised NO_x emission limitations for Group 1, Phase II boilers (40 CFR 76.7). An application for a new averaging plan must be submitted no later than January 1, 2010 (See 40 CFR 76.11(b)(1)) in lieu of complying with the Revised NO_x emission limitations for Group 1, Phase II boilers (40 CFR 76.7)

Note that the annual average nitrogen oxides (NO_x) emission limits are covered by the EPA approved NO_x Early Election Plan which is in effect from January 1, 1997 through December 31, 2007. On January 1, 2008 the NO_x emission limits (for Unit 4) change to the Revised NO_x emission limitations for Group 1, Phase II boilers (40 CFR 76.7).

4) Permit Application: Attached.

Lansing Generating Station
Plant Name (from Step 1)

STEP 3

Read the
standard
requirements

Permit Requirements

- (1) The designated representative of each affected source and each affected unit at the source shall:
 - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
 - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
 - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - (ii) Have an Acid Rain Permit.

Monitoring Requirements

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

- (1) The owners and operators of each source and each affected unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another affected unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right

STEP 3,
Cont'd.

Nitrogen Oxides Requirements The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

- (1) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
 - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
 - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
 - (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

Lansing Generating Station
Plant Name (from Step 1)

Step 3,
Cont'd.

Liability, Cont'd

- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

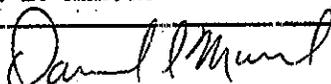
- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Read the certification statement, sign, and date

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Daniel L. Mineck	
Signature 	Date 3-21-02



Phase II NO_x Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

Page 1

This submission is: New Revised

Page 1 of 3

STEP 1

Identify the units participating in this averaging plan by plant name, State, and boiler ID# from NADB. In column (a), fill in each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7. In column (b), assign an alternative contemporaneous annual emissions limitation (ACEL) in lb/mmBtu to each unit. In column (c), assign an annual heat input limitation in mmBtu to each unit. Continue to page 3 if necessary.

Plant Name	State	ID#	(a) Emission Limitation	(b) ACEL	(c) Annual Heat Input Limit
Prairie Creek	IA	3	0.46	0.49	4077211
Sutherland	IA	1	0.46	0.51	2582461
Sutherland	IA	2	0.46	0.46	2677905
Sixth Street	IA	2	0.46	0.38	1434836
Sixth Street	IA	3	0.46	0.50	1621128
Sixth Street	IA	4	0.46	0.45	936813
Sixth Street	IA	5	0.46	0.56	2505658
Dubuque	IA	1	0.46	0.67	2644457
Dubuque	IA	5	0.46	0.92	1812316

STEP 2

Use the formula to enter the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan and the Btu-weighted annual average emission rate for the same units if they are operated in compliance with 40 CFR 76.5, 76.6, or 76.7. The former must be less than or equal to the latter.

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan

Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7

.450

.456

$$\frac{\sum_{i=1}^n (R_{Li} \times HI_i)}{\sum_{i=1}^n HI_i}$$

$$\frac{\sum_{i=1}^n [R_{Li} \times HI_i]}{\sum_{i=1}^n HI_i}$$

Where,

- R_{Li} = Alternative contemporaneous annual emission limitation for unit i, in lb/mmBtu, as specified in column (b) of Step 1;
- R_{Li} = Applicable emission limitation for unit i, in lb/mmBtu, as specified in column (a) of Step 1;
- HI_i = Annual heat input for unit i, in mmBtu, as specified in column (c) of Step 1;
- n = Number of units in the averaging plan

Plant Name (from Step 1)

STEP 3

Mark one of the two options and enter dates.

This plan is effective for calendar year 2005 through calendar year 2009 unless notification to terminate the plan is given

Treat this plan as identical plans, each effective for one calendar year for the following calendar years: _____ and _____ unless notification to terminate one or more of these plans is given

STEP 4

Read the special provisions and certification, enter the name of the designated representative, and sign and date.

Special Provisions

Emission Limitations

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO_x under the plan only if the following requirements are met:

- (i) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/mmBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and
- (a) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan,
- (b) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan; or
- (ii) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7.
- (iii) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i)

Liability

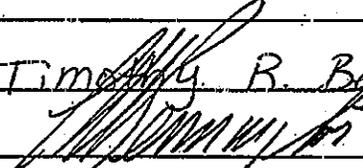
The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act

Termination

The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for which the plan is to be terminated

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment

Name	<u>Timothy R. Behnington</u>	
Signature		Date <u>12/9/04</u>