

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

**Name of Permitted Facility: IPL - Prairie Creek Generating Station**  
**Facility Location: 3300 C Street SW, Cedar Rapids, IA 52404**

**Air Quality Operating Permit Number: 99-TV-010R2-M001**  
**Expiration Date: February 19, 2024**  
**Permit Renewal Application Deadline: August 19, 2023**

**EIQ Number: 92-9050**  
**Facility File Number: 57-01-042**

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**Responsible Official**

**Name: John Watts**  
**Title: Plant Manager**  
**Mailing Address: 3300 C Street SW, Cedar Rapids, IA 52404**  
**Phone #: 319-786-8440**

**Permit Contact Person for the Facility**

**Name: Michael Li**  
**Title: Sr. Environmental Specialist**  
**Mailing Address: 200 First Street SE, Cedar Rapids, IA 52401**  
**Phone #: 319-786-4635**

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

**For the Director of the Department of Natural Resources**



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Lori Hanson, Supervisor of Air Operating Permits Section

05/28/19

Date

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## Abbreviations

AC	activated carbon
ACO	administrative consent order
acfm	actual cubic feet per minute
ATI	authorization to install
CaBr <sub>2</sub>	calcium bromide
CO <sub>2</sub>	carbon dioxide
CFR	Code of Federal Regulation
CE	control equipment
CEMS	continuous emission monitoring system
CSAPR	Cross-State Air Pollution Rule
DNR	Department of Natural Resources
°F	degrees Fahrenheit
ESP	electrostatic precipitator
EIQ	emissions inventory questionnaire
EP	emission point
EU	emission unit
FGR	flue gas recirculation
gr./dscf	grains per dry standard cubic foot
H	Horizontal discharge
IAC	Iowa Administrative Code
LCPH	Linn County Public Health
LCO	Linn County Ordinance
LFGC	liquid flue gas conditioning
MVAC	motor vehicle air conditioner
NSPS	new source performance standard
NAICS	North American Industry Classification System
N/A	not applicable
O <sub>2</sub>	oxygen
ppmv	parts per million by volume
lb./hr	pounds per hour
lb./MMBtu	pounds per million British thermal units
PTO	permit to operate
scfm	standard cubic feet per minute
SIC	Standard Industrial Classification
tph	tons per hour
tpy	tons per year
USEPA	United States Environmental Protection Agency
V	Vertical (without rain cap or with unobstructing rain cap)

### **Pollutants**

CO	carbon monoxide
HAP	hazardous air pollutants
NO <sub>x</sub>	nitrogen oxides
PM	particulate matter
PM <sub>10</sub>	particulate matter ten microns or less in diameter
SO <sub>2</sub>	sulfur dioxide
VOC	volatile organic compounds

# I. Facility Description and Equipment List

Facility Name: IPL - Prairie Creek Generating Station

Permit Number: 99-TV-010R2-M001

Facility Description: Fossil Fuel Electric Power Generation (NAICS 221112; SIC 4911)

## Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	Construction Permit Number(s)
001	301-301	Boiler 1	LCPH ATI 6838 / PTO 6561-R2 DNR PSD 97-A-998-P5
	301-302	Boiler 2	
003	302-303	Unit 3	LCPH ATI 6551 / PTO 6512-R2 DNR PSD 08-A-181-P2
015	303-304	Unit 4	LCPH ATI 6552 / PTO 6513-R2
100	503-100	Boiler 3 Coal Storage Bunker	LCPH ATI 6308 / PTO 6314
	504-100	Boiler 4 Coal Storage Bunker	
	100-100B, C & D	Coal Belt Dust Handling Pick Ups for Bunkers 3 & 4	
104	501-100	Boiler 1 Coal Storage Bunker	LCPH ATI 6309 / PTO 6315
	502-100	Boiler 2 Coal Storage Bunker	
	100-100E	Coal Belt Dust Handling Pick Ups for Bunkers 1 & 2	
120	404-405	Boiler 3 Fly Ash Transfer	LCPH ATI 637 / PTO 683
	405-406	Boiler 4 Fly Ash Transfer	
121	522-521	Boilers 1 & 2 Fly Ash Transfer System	LCPH ATI 6906 / PTO 6843
	523-521	Boilers 1, 2 & 3 Bottom Ash Transfer System	
122	524-521	Boilers 1 & 2 Fly Ash Silo	LCPH ATI 6907 / PTO 6644
123	525-521	Boilers 1, 2 & 3 Bottom Ash Silo	LCPH ATI 6881 / PTO 6630
331	331-331	Emergency Generator	LCPH ATI 5718 / PTO 5543
500	500	Boiler 5	LCPH ATI 3696 / PTO 3957 DNR PSD 97-A-999-S1
600	600	Boiler 6	LCPH ATI 6379 / PTO 6421
601	601	AC Silo	LCPH ATI 6553 / PTO 6514
110	110-110	Reclaim Hopper	Fugitive (Subject to NSPS Y)
401	401-401	Coal Unloading	
402	402-402	Coal Crushing House	
403	403-403	Coal Load Out	
120a	406-407	Ash Loadout	
121a	521-521	Ash Loadout	Fugitive
400	102-102	Coal Stacker	
	400-400	Open Coal Storage Pile	
501	501-501	AGPAVE Production	

## Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
91-416	#4 Hydrogen Purge Vent B-22
90-415	# 4 Hydrogen Seal Oil Vent B-22
89-414	#4 Vapor Extractor from Seal Oil
85-412	#4 Main Oil Vapor Extractor
83-411	Water Heater
82-413	Water Heater
73-410	#3 Main Oil Tank Vapor Extractor
66-409	#2 Battery Room Vent B-29
342-453	Maintenance Welding Activities
341-452	#1 Boiler Natural Gas Vent
340-451	Jet Spray Washer Vent B-19
338-450	Natural Gas Bleed Off Vent
335-449	B-13 Decarbonator Tank Vent
333-461	Natural Gas Vent #4 Boiler B-20
332-448	Natural Gas Vent #4 Boiler B-20
325-444	Natural Gas Safety Vent B-36
324-443	Natural Gas Safety Vent
323-442	Natural Gas Safety Vent
322-441	Natural Gas Safety Vent B-36
265-440	Gas Heater (2) Vent B-1
702-702	Boiler #6 Gas Vent
239-437	Gas Heater Vent B-8
237-436	Caustic Tank Vent
235-435	Gas Furnace Vent
230-432	Water Treatment Room Ventilation B-19
700-700	Ecostone Pile
189-429	Natural Gas Vent #3 B-13
169-428	Natural Gas Vent #4 Boiler Gas Manifold B-20
159-427	Natural Gas Vent #4 Boiler Gas Manifold B-22
128-426	#3 Natural Gas Vent B-23
127-425	#2 Boiler Main Line Natural Gas Vent B-33
124-424	Gas Heater Vent B-38
123-123	Gas Heater Vent B-37
117-420	Gas Heater Vent B-37
116-419	Gas Heater Vent B-37
115-418	Gas Heater Vent B-37
400-400	Bottom Ash Pile (2 acres)
701-701	Turbine Generator 1A Lube Oil Tank
120-120	New Battery Room
120-121	#4 Sootblower Pressure Relief 4PSV-55-01
102-103	Coal Scale Loading Chute
401-401	Hypochlorite Tank
402-402	Sodium Hypochlorite – River Intake
403-403	Sodium Bromide Tank – River Intake
404-404	Sodium Bisulfite Tank – Water Treatment
405-405	Caustic Tank – Water Treatment
406-406	Sulfuric Acid Tank – Water Treatment
407-407	500 gallon Unleaded Gasoline Tank
408-408	500 gallon #2 Fuel Oil Tank
409-409	1000 gallon #2 Fuel Oil Tank

## II. Plant-Wide Conditions

Facility Name: IPL - Prairie Creek Generating Station

Permit Number: 99-TV-010R2-M001

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

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### Permit Duration

The term of this permit is: Five years

Commencing on: February 20, 2019

Ending on: February, 2024

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

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### Emission Limits

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

Opacity (visible emissions): 20 % opacity

Authority for Requirement: LCO Sec. 10-60(a)

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

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

LCO Sec. 10-65(a)(2)

#### Particulate Matter:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed on or 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"

#### Particulate Matter:

No person shall permit, cause, suffer or allow the emission of particulate matter into the atmosphere in any one hour from any emission point from any process equipment at a rate in excess of that specified in Table I for the process weight rate allocated to such emission point. The emission standards in LCO Sec. 10-62(a)(1) shall apply and those specified in LCO Sec.'s 10-61, 10-62 and Table I shall not apply to each process of the types listed in those sections, with the following exception: whenever the compliance status, history of operations, ambient air quality in the vicinity, or the type of control equipment utilized, would warrant maximum control, the Air Pollution Control Officer may enforce 0.1 grain per standard cubic foot of exhaust gas, or Table I of this section, whichever would result in the lowest allowable emission rate.

Authority for Requirement: LCO Sec. 10-62(a)

Fugitive Dust:

Attainment and Unclassified Areas - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is State Only) All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not be limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, 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.
6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

Authority for Requirement: 567 IAC 23.3(2)"c"  
LCO Sec. 10-66

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**Regulatory Authority**

This facility is located in Linn County, Iowa. Linn County Public Health Department, under agreement with the Iowa Department of Natural Resources (DNR), is the primary regulatory agency in Linn County. This Title V permit is issued by the Iowa Department of Natural Resources, however, required contacts and information submittals referred to in this permit as required by "the Department" should continue to be directed to the Linn County Public Health Department office. This will include such items as stack test notification, stack test results submittal, oral and written excess emission reports, and reports and records required in the Linn County construction permits. Information specifically required by the Title V permit such as the annual EIQ and fees, annual compliance certification, semi-annual monitoring report and any Title V forms submitted for updates, modifications, renewals, etc. must be submitted to the Iowa DNR.

Authority for Requirement: 567 IAC 22.108

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

This facility is subject to Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units. Affected units at the facility are EU500 (Boiler 5) and EU600 (Boiler 6). Applicable Subpart Dc requirements are incorporated into the Emission Point Specific Conditions Section.

Authority for Requirement: 40 CFR Part 60 Subpart Db  
567 IAC 23.1(2)"ccc"  
LCO Sec. 10-62(b)(55)

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#### **40 CFR 60 Subpart Y Requirements**

This facility is subject to Standards of Performance for Coal Preparation Plants. Affected units at the facility are EU503-100, EU504-100, EU100-100B, C, and D (Boilers 3 & 4 Coal Bunkers), EU501-100, EU502-100, EU100-100E (Boilers 1 & 2 Coal Bunkers), EU110-110 (Reclaim Hopper), EU401-401 (Coal Unloading), EU402-402 (Coal Crushing House), and EU403-403 (Coal Load Out).

Authority for Requirement: 40 CFR Part 60 Subpart Y  
567 IAC 23.1(2)"v"  
LCO Sec. 10-62(b)(22)

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#### **40 CFR 60 Subpart IIII Requirements**

This facility is subject to Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Affected unit at the facility is EU331-331 (Emergency Generator).

Authority for Requirement: 40 CFR Part 60 Subpart IIII  
567 IAC 23.1(2)"yyy"  
LCO Sec. 10-62(b)(77)

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#### **40 CFR 63 Subpart ZZZZ Requirements**

This facility is subject to National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Affected unit at the facility is EU331-331 (Emergency Generator).

Authority for Requirement: 40 CFR Part 63 Subpart ZZZZ  
567 IAC 23.1(4)"cz"  
LCO Sec. 10-62(d)(104)

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#### **40 CFR 63 Subpart DDDDD Requirements**

This facility is subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Affected units at the facility are EU301-301 (Boiler 1), EU301-302 (Boiler 2), EU500 (Boiler 5) and EU600 (Boiler 6).

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

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#### **40 CFR 63 Subpart UUUUU Requirements**

This facility is subject to National Emission Standards for Hazardous Air Pollutants from Coal and Oil-fired Electric Utility Steam Generating units (EGU-MATS). The affected unit at the facility is EU302-303 (Boiler 3).

Authority for Requirement: 40 CFR Part 63 Subpart UUUUU

### III. Emission Point-Specific Conditions

Facility Name: IPL - Prairie Creek Generating Station

Permit Number: 98-TV-010R2-M001

#### Emission Point ID Number: 001

**Boilers 1 and 2 Table 1**

EP	EU	EU Description	Fuel	Rated Capacity
1	301-301	Boiler 1, Spreader Stoker	Coal	304 MMBtu/hr
			Fuel Oil	1.75 1000 gal/hr
			Natural Gas	0.240 MMCF/hr
	301-302	Boiler 2, Spreader Stoker	Coal	304 MMBtu/hr
			Fuel Oil	2.17 1000 gal/hr
			Natural Gas	0.298 MMCF/hr

**Boilers 1 and 2 Table 2**

EP	EU	CE ID	CE Description	CEMS
1	301-301	102	Dry Electrostatic Precipitator	ME205 – Opacity
		102A	Calcium Bromide Injection	ME206 – CO
	301-302	202	Dry Electrostatic Precipitator	ME207 – PM
		202A	Calcium Bromide Injection	ME208 – SO <sub>2</sub>
				ME209 - CO <sub>2</sub>
				ME210 – Flow

#### 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.*

##### **Boilers 1 and 2 Specific Consent Decree Emission Limits<sup>1</sup>**

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits were established by the Consent Decree [*United States of America and The State of Iowa, and The County of Linn, Iowa and Sierra Club v. Interstate Power and Light Company*, Civil Action No.: C15-0061; United States District Court for the Northern District of Iowa (September 2, 2015)] and shall not be exceeded:

Pollutant	3-hr Average	30-day Rolling Average <sup>2,3</sup>	12-month Rolling Average <sup>4</sup>
Filterable Particulate Matter (PM) – Federal	NA	0.030 lb/MMBTU <sup>5</sup>	NA
Sulfur Dioxide (SO <sub>2</sub> )	NA	NA	0.900 lb/MMBTU <sup>6</sup>
Nitrogen Oxides (NO <sub>x</sub> )	0.600 lb/MMBTU <sup>7,8</sup>	NA	NA

<sup>1</sup> With the exception of NO<sub>x</sub>, compliance with the emission limits listed in Consent Decree Emission Limits table shall be demonstrated through the use of Continuous Emission Monitoring Systems (CEMS). Please see Conditions "Continuous Monitoring Systems" and "System-wide Consent Decree Requirements" of this permit for the monitoring procedures to be used for each individual pollutant.

<sup>2</sup> As defined by Consent Decree Paragraph 6, the 30-day rolling average emission rate shall be determined by calculating an arithmetic average of all hourly emission rates in lb/MMBTU for the current Unit Operating Day and all hourly emission rates in lb/MMBTU for the previous 29 Unit Operating Days. A new 30-day rolling average emission rate shall be calculated for each new Unit Operating Day. Each 30-day rolling average emission rate shall include all emissions that occur during all periods within any Unit Operating Day, including emissions from Startup, Shutdown, and Malfunction (SSM).

<sup>3</sup> As defined by Consent Decree Paragraph 75, a Unit Operating Day is any day on which the boiler fires a fossil fuel.

- <sup>4</sup> As defined by Consent Decree Paragraph 5, the 12-month rolling average emission rate shall be determined by calculating an average of all hourly emission rates in lb/MMBTU for the current month and all hourly emission rates in lb/MMBTU from the previous twelve (12) Unit Operating Months. A new 12-month rolling average emission rate shall be calculated for each new complete month in accordance with the provisions of the Consent Decree. Each 12-month rolling average emission rate shall include all emissions that occur during all periods of operating, including SSM. For purposes of calculating a 12-month rolling average emission rate, a Unit Operating Month means any month during which the boiler fires fossil fuel.
- <sup>5</sup> As required by Consent Decree Paragraph 145, the emission limit is in effect until Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) are either "Retired" or "Refueled" within their meanings in the Consent Decree which are:
- Retire: As defined in Consent Decree Paragraph 62, means to permanently shut down a unit such that it cannot physically or legally burn a fossil fuel and to comply with applicable state and federal requirements for permanently ceasing operation of the unit as a fossil fuel-fired electric generating unit, including removing the unit from Iowa's air emission inventory and amending all applicable permits so as to reflect the permanent shutdown status of the unit.
  - Refuel: As defined in Consent Decree Paragraph 59, means that a unit is "*Refueled to Natural Gas*" which according to Consent Decree Paragraph 60 means the modification of a unit such that the modified unit generates electricity solely through the combustion of natural gas.
- Because Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) exhaust to a common stack, the emission rate calculation for the two (2) boilers shall be measured and calculated for the two (2) boilers together as if they were a single boiler (*e.g.*, the emission rate calculation will be based on the total filterable PM emissions and heat input for the two (2) boilers together measure at the stack). A violation of any such 30-day rolling average emission rate shall be considered to be two (2) violations, unless the owner or operator establishes that the violation was due solely to the mal-performance of one (1) of the two (2) boilers.
- <sup>6</sup> Established per Paragraph 121 of the Consent Decree and is in effect until Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) are either Retired or Refueled within their meanings in the Consent Decree. Because Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) exhaust to a common stack, the emission rate calculation for the two (2) boilers shall be measured and calculated for the two (2) boilers together as if they were a single boiler (*e.g.*, the emission rate calculation will be based on the total SO<sub>2</sub> emissions and heat input for the two (2) boilers together measure at the stack). A violation of any such 12-month rolling average emission rate shall be considered to be two (2) violations, unless the owner or operator establishes that the violation was due solely to the mal-performance of one (1) of the two (2) boilers.
- <sup>7</sup> As required by Consent Decree Paragraph 97, the emission limit is in effect until Boiler 1 (EU 301-301) is either Retired or Refueled within their meanings in the Consent Decree. Because Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) exhaust to a common stack, the emission rate calculation for the two (2) boilers shall be measured and calculated for the two (2) boilers together as if they were a single boiler (*e.g.*, the emission rate calculation will be based on the total NO<sub>x</sub> emissions and heat input for the two (2) boilers together measure at the stack).
- <sup>8</sup> As required by Consent Decree Paragraph 98, the emission limit is in effect until Boiler 2 (EU 301-302) is either Retired or Refueled within their meanings in the Consent Decree. Because Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) exhaust to a common stack, the emission rate calculation for the two (2) boilers shall be measured and calculated for the two (2) boilers together as if they were a single boiler (*e.g.*, the emission rate calculation will be based on the total NO<sub>x</sub> emissions and heat input for the two (2) boilers together measure at the stack).

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2

### Consent Decree Annual Tonnage Limits for Prairie Creek

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The Consent Decree established combined total annual tonnage limitations for Boiler 1 (EU 301-301), Boiler 2 (EU 301-302), Unit 3 (EU 302-303), and Unit 4 (EU 303-304). The following limits shall not be exceeded:

Pollutant	Calendar Year	tons/yr <sup>1</sup>	Consent Decree Paragraph
Sulfur Dioxide (SO <sub>2</sub> )	2016-2018	5,500	Paragraph 125
	2019-2020	3,500	
	2021-2025	3,000	
	2026-∞ <sup>2</sup>	100	
Nitrogen Oxides (NO <sub>x</sub> )	2015-2018	3,250	Paragraph 101
	2019-2025	2,650	
	2026-∞ <sup>3</sup>	1,500	

<sup>1</sup> The tonnage limitation shall not be exceeded during each calendar year (January 1 – December 31).

<sup>2</sup> The tonnage limitation applies calendar year 2026 and continuing each calendar year thereafter.

<sup>3</sup> The tonnage limitation applies calendar year 2026 and continuing each calendar year thereafter.

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2

**Other Emission Limits**

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Pollutant	lb/hr <sup>1</sup>	tons/yr <sup>2</sup>	Other Limits	Reference/Basis
Total Particulate Matter (PM) – State	40 <sup>8</sup>	NA	0.16 lb/MMBTU <sup>3</sup>	NAAQS Requested Limit
PM <sub>10</sub>	40 <sup>8</sup>	NA	NA	NAAQS
Opacity	NA	NA	20% <sup>4,5</sup>	LCO Sec. 10-60(a)
			40% <sup>4,5</sup>	567 IAC 23.3(2)"d"
Sulfur Dioxide (SO <sub>2</sub> )	2,745 <sup>8, 9</sup>	NA	5.0 lb/MMBTU <sup>6</sup>	NAAQS Administrative Consent Order No. 97-AQ-20 LCO Sec. 10-65(a)(1)(a)
Nitrogen Oxides (NO <sub>x</sub> )	235 <sup>8</sup>	NA	NA	NAAQS
Carbon Monoxide (CO)	NA	NA	0.3 lb/MMBTU <sup>7</sup>	NAAQS

- <sup>1</sup> The emission limit is expressed as the average of three (3) runs.
- <sup>2</sup> The emission limit is based on a twelve (12) month rolling total.
- <sup>3</sup> Standard is expressed as the average of three (3) stack test runs.
- <sup>4</sup> The emission limit is based on a six (6) minute average.
- <sup>5</sup> An exceedance of the indicator opacity of 20% will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).
- <sup>6</sup> IPL shall limit the sulfur content of the fuels burned in EU301-301 and EU301-302, pursuant to Administrative Consent Order 97-AQ-20, so as to limit emissions from EU301-301 and EU301-302 to 5.0 lbs SO<sub>2</sub>/MMBTu of heat input, maximum two (2) hour average.
- <sup>7</sup> Standard is a 30-day rolling average. The equivalent hourly emission rate of 164.7 lb/hr was used in facility-wide PSD modeling for Project Number 14-337 to demonstrate no exceedance of NAAQS.
- <sup>8</sup> Emission limits were established in Project Number 97-066 to demonstrate no exceedances of the NAAQS or of the PSD increment.
- <sup>9</sup> The emission limit is based on a thirty (30) day rolling average.

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2

**Operational Limits & Requirements**

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

**Federal Standards**

**A. National Emission Standards for Hazardous Air Pollutants (NESHAP):**

The following subparts apply to the emission unit(s) (EUs 301-301 and 301-302) in this permit:

These emission units are subject to the following federal regulation: *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters* [40 CFR Part 63, Subpart DDDDD].

Authority for Requirement: DNR PSD Permit 97-A-998-P4; LCPH ATI 6838 / PTO 6561-R1

**Operating Requirements with Associated Monitoring and Recordkeeping**

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

- A. The heat input to Boiler 1 (EU301-301) shall not exceed 245 MMBtu/hr based on a 30-day rolling average. The owner or operator shall demonstrate compliance with this requirement by the following:
  - (1) Maintain daily records of the combined heat input of Boiler 1 (E301-301) and Boiler 2 (EU301-302) via CEMS and assigning a percentage of the total heat input by steam load to each boiler.
  - (2) Calculate and record 30-day rolling averages of Boiler 1 (EU301-301) heat input on a daily basis.

- B. When Number 1 or Number 2 fuel oil is burned, the sulfur content of the fuel oil shall not exceed 0.5% by weight. The owner or operator shall retain receipts of each fuel oil shipment which indicate the sulfur content.
- C. The control equipment, (CE102 and CE202), associated with Boiler 1 (EU301-301) and Boiler 2 (EU301-302) shall be inspected and maintained according to the manufacturer's specifications or best engineering practice. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of control equipment.
- D. The owner or operator shall collect and maintain coal supplier analysis documentation, including collection and preparation of samples to follow latest applicable standards published by the American Society of Testing and Materials (ASTM).
- E. As required by Consent Decree Paragraph 122, the owner or operator shall burn only Powder River Basin (PRB) or equivalent fuel resulting in less than 1.00 lb/MMBtu SO<sub>2</sub>.
- F. As required by Consent Decree Paragraph 88, beginning in calendar year 2021 and continuing until Boiler 1 (EU 301-301) and Boiler 2 (EU 301-302) are retired or refueled, the owner or operator shall only operate Boiler 1 (EU 301-301) and/or Boiler 2 (EU 301-302) during times when the boilers are required to serve steam supply needs pursuant to steam supply contracts in effect as of December 31, 2013. The owner or operator may cogenerate electricity during such times, but the boilers and turbines will not be dispatched to meet electricity demand unless the boilers and turbines are also required to meet steam supply needs pursuant to a steam supply contract in effect as of December 31, 2013. The terms "retire" and "refuel" are defined in the Consent Decree as:
- (1) Retire: Per paragraph 62 of the Consent Decree means to permanently shut down a unit such that the unit cannot physically or legally burn fossil fuel and to comply with applicable state and federal requirements for permanently ceasing operation of the unit as a fossil-fuel fired electric generating unit, including removing the unit from Iowa's air emissions inventory, and amending all applicable permits so as to reflect the permanent shutdown status of each unit.
  - (2) Refuel: Per Paragraph 59 of the Consent Decree means that a unit is "*Refueled to Natural Gas*" which according to Consent Decree Paragraph 60 means the modification of a unit such that the modified unit generates electricity solely through the combustion of natural gas.
- G. As required by Consent Decree Paragraph 89, the owner or operator shall either "Retire" or "Refuel" Boiler 1 (EU301-301) and Boiler 2 (EU301-302) by December 31, 2025.
- H. As required by Consent Decree Paragraphs 137 and 138, the owner or operator shall:
- (1) Continuously operate each PM control device to maximize emission reductions at all times when the unit is in operation. Notwithstanding the foregoing sentence, the owner or operator is not required to continuously operate an electrostatic precipitator (ESP) on any unit if a baghouse is installed and operating to replace the PM control device function of the ESP on that unit.
  - (2) Except as required during correlation testing under 40 CFR Part 60, Appendix B, PS11 and QA/QC requirements under Appendix F, Procedure 2, the owner or operator shall, at a minimum, ensure that to the extent reasonably practicable:
    - (a) Where the control device is an ESP, each section of each ESP is fully energized, and where the control device is a baghouse, each compartment, except for any compartment specifically designated and designed as a spare compartment, of each baghouse is operational;
    - (b) Any failed ESP section or baghouse compartment is repaired at the next planned outage (or unplanned outage of sufficient length);
    - (c) Where applicable, the automatic control systems on each ESP are operated to maximize PM collection efficiency;
    - (d) Each opening in the casings, ductwork, and expansion joints for each ESP and each baghouse is inspected and repaired during the next planned unit outage (or unplanned outage of sufficient length) to minimize air leakage;
    - (e) Where applicable, the power levels delivered to each ESP are maintained consistent with manufacturer's specifications, the operational design of the unit and good engineering practices;

- (f) Where applicable, the plate-cleaning and discharge-electrode-cleaning systems for each ESP are optimized by varying the cycle time, cycle frequency, rapper-vibrator intensity, and number of strikes per cleaning event; and
  - (g) For each unit with one (1) or more baghouses, a bag leak detection program is developed and implemented to ensure that leaking bags are promptly replaced.
- I. As required by Consent Decree Paragraph 145, the owner or operator shall "continuously operate" ESPs (CEs 102 and 202) until Boilers #1 (EU 301-301) and #2 (EU 301-302) are either "Retired" or "Refueled" as defined by the Consent Decree. Per Paragraph 15 of the Consent Decree, the term "continuously operate" means the ESP shall be operated at all times when Boilers #1 (EU 301-301) and #2 (EU 301-302) are in operation consistent with the technological limitations, manufacturer's specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions [as defined in 40 CFR §60.11(d)]. Upon termination of the Consent Decree, the owner or operator shall submit a report in coordination with its Title V reporting schedule that includes the following information regarding ESPs (CEs 102 and 202):
- (1) All information necessary to determine compliance during the reporting period with:
    - (a) The obligation to optimize PM emissions controls.
- J. Upon termination of the Consent Decree, the owner or operator shall submit periodic reports as required by Title V to demonstrate compliance with all Consent Decree requirements contained within Condition 1a. (Consent Decree Emission Limits). At a minimum, the information in the reports shall include all information necessary to determine compliance during the reporting period with:
- (a) The 12-month rolling average emission rate for SO<sub>2</sub>;
  - (b) The 30-day rolling average emission rate for PM; and
  - (c) The 3-hr average emission rate for NO<sub>x</sub>.

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2

### **Continuous Monitoring Systems (CMS)**

The following continuous monitoring requirements apply to this emission point (EP001) and its associated emission units (EU301-301 and 301-302) and control equipment (CE102, 102A, 202, and 202A).

- A. The following monitoring systems are required:
- (1) *Opacity:*  
Compliance with the opacity limit of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous opacity monitoring system (COMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a COMS and record the output of the system, for measuring the opacity of emissions discharged to the atmosphere.
  - (2) *CO:*  
Compliance with the carbon monoxide (CO) emission limits of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous emission monitoring system (CEMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring CO emissions discharged to the atmosphere and record the output of the system.  
  
The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 4A (PS4A) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.
  - (3) *SO<sub>2</sub>:*  
Compliance with the sulfur dioxide (SO<sub>2</sub>) emission limits of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous emission monitoring system (CEMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring SO<sub>2</sub> emissions discharged to the atmosphere and record the output of the system.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.

This monitor shall also be used to demonstrate compliance with the non-Consent Decree emission standards in this permit.

(4) *O<sub>2</sub> or CO<sub>2</sub>*:

The owner or operator shall install, calibrate, maintain, and operate a CEMS and record the output of the system, for measuring the oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) content of the flue gasses at each location where SO<sub>2</sub> emissions are monitored.

(5) *Flowmeter*:

The owner or operator shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6 of 40 CFR 60, Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere or

Alternatively, data from a continuous flow monitoring system certified according to the requirements of 40 CFR 75.20(c) and 40 CFR 75, Appendix A, and continuing to meet the applicable quality control and quality assurance requirements of 40 CFR 75.21 and 40 CFR 75, Appendix B, may be used.

(6) *Particulate Matter*:

As required by Consent Decree Paragraph 150, the owner or operator shall install, correlate, maintain, and operate a PM CEMS on the combined stack (EP 001). The following requirements shall apply:

(a) As required by Consent Decree Paragraph 150, each PM CEMS shall:

- (i) Comprise a continuous particle mass monitoring measuring filterable particulate matter concentration (directly or indirectly) on an hourly average basis and a diluent monitor used to convert the concentration to units expressed in lb/MMBTU.
- (ii) Be appropriate for the anticipated stack conditions and capable of measuring filterable PM concentrations on an hourly average basis and the owner or operator shall maintain an electronic database that stores the hourly average emission values (in lb/MMBTU) of all PM CEMS data for at least five (5) years.
- (iii) Operate at all times the unit it serves is operating except for periods of monitor malfunction, maintenance, or repair.

(b) As required by Consent Decree Paragraph 153, the owner or operator shall:

- (i) Use criteria set forth in 40 CFR 60, Appendix B, Performance Specification 11 (PS11) and 40 CFR 60, Appendix F, Procedure 2. The specifications of 40 CFR 60, Appendix F (QA/QC) shall apply.
- (ii) Conduct relative correlation audits no less frequently than once every three (3) calendar years or twelve (12) operating quarters, whichever comes first, or earlier if the characteristics of the PM or gas change such that the PM CEMS measurement technology is no longer valid.

(c) As required by Consent Decree Paragraph 153, the owner or operator may use the correlation method specified in 40 CFR §63.10010(i) [at the temperature specified in 40 CFR Part 60, Appendix A-3] for purposes of correlating the PM CEMS under the Consent Decree. Diluent capping (i.e., 5% CO<sub>2</sub>) will be applied to the PM rate data for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.

(d) As required by Consent Decree Paragraph 152, the owner or operator shall follow the Quality Assurance/Quality Control (QA/QC) protocol approved by EPA for each PM CEMS.

(e) As required by Consent Decree Paragraph 154, the owner or operator shall:

- (i) Ensure compliance with the PM CEMS installation and correlation plans submitted to and approved by EPA in accordance with Consent Decree Paragraphs 151 and 152.
- (ii) Ensure performance specification tests on the PM CEMS are conducted.
- (iii) Operate the PM CEMS in accordance with the approved plan and QA/QC protocol.

- (f) As required by Consent Decree Paragraph 148(c), the owner or operator shall conduct condensable PM testing each time a relative correlation audit is performed for the PM CEMS and stack sampling for filterable PM shall be performed pursuant to PS11. When PM stack tests are required, the owner or operator shall:
- (i) Conduct the PM stack test using EPA Method 5 (filterable portion only) or any alternate method approved by EPA under the terms of the Consent Decree.
  - (ii) Conduct the condensable PM stack test using the reference methods and procedures set for in 40 CFR 51, Appendix M, Method 202.
  - (iii) Ensure:
    - Each stack test consists of three (3) separate runs performed under representative operating conditions not including SSM.
    - The sampling time for each run shall be at least sixty (60) minutes and the volume of each run shall be at least 0.85 dry standard cubic meters (30 dry standard cubic feet).
    - The PM emission rate from the stack test results is calculated in accordance with 40 CFR §60.8(f).
    - The results of each PM stack test is submitted to the appropriate regulatory agency (i.e. the Department or Linn County).
- B. The CEMS required in Condition 6.A. for SO<sub>2</sub> and CO shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.
- C. As required by Consent Decree Paragraph 127, the following requirements apply to the SO<sub>2</sub> CEMS for the Consent Decree emission standards in this permit:
- (1) The owner or operator shall use SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75 for all thirty (30) day rolling average emission rates and all twelve (12) month rolling average emission rates.
  - (2) The SO<sub>2</sub> emissions data is not required to be bias adjusted and the missing data substituting procedures of 40 CFR Part 75 shall not apply.
  - (3) Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the SO<sub>2</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.
- D. The following data requirements shall apply to all CEMS for non-Consent Decree emission standards in this permit:
- (1) The CEMS required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
  - (2) The 1-hour average SO<sub>2</sub> and CO emission rates measured by the CEMS required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
- E. If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
1	327	V	192	470	320,500	Iowa DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**System-wide Consent Decree Requirements for IPL Facilities in Iowa**

Refer to Appendix A, System-wide Consent Decree Requirements for IPL Facilities in Iowa.

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2

**Monitoring Requirements**

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

**Stack Testing**

Refer to Appendix D, Stack Testing, for the applicable requirements.

**Continuous Emissions Monitoring**

Pollutant:	Opacity	Filterable PM - Federal
Continuous Emissions Monitor ID:	ME205	ME207
Operational Specifications:	40 CFR Part 60	40 CFR Part 60
Ongoing System Calibration/Quality Assurance:	40 CFR Part 60	40 CFR Part 60
Reporting & Recordkeeping:	40 CFR Part 60	40 CFR Part 60
Authority for Requirement:	567 IAC 25.1(1) LCO 10.17(1) DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2	DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2

Pollutant:	SO <sub>2</sub>	CO
Continuous Emissions Monitor ID:	ME206	ME208
Operational Specifications:	40 CFR Part 60	40 CFR Part 60
Ongoing System Calibration/Quality Assurance:	40 CFR Part 60	40 CFR Part 60
Reporting & Recordkeeping:	40 CFR Part 60	40 CFR Part 60
Authority for Requirement:	DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2	DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2

Other Parameter:	CO <sub>2</sub>	Flow
Continuous Emissions Monitor ID:	ME209	ME210
Operational Specifications:	40 CFR Part 60	40 CFR 60
Ongoing System Calibration/Quality Assurance:	40 CFR Part 60	40 CFR 60
Reporting & Recordkeeping:	40 CFR Part 60	40 CFR 60
Authority for Requirement:	DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2	DNR PSD Permit 97-A-998-P5 LCPH ATI 6838 / PTO 6561-R2

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   
 Authority for Requirement: 567 IAC 22.108(3)

### Compliance Assurance Monitoring Plan Electrostatic Precipitator (CE102) for PM/PM<sub>10</sub> Control

I. Background

A. Emissions Unit

Description: Boiler 1, Spreader Stoker  
 Identification: EU301-301  
 Facility: IPL – Prairie Creek Generating Station

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No: LCPH ATI 6838 / PTO 6561-R2  
 DNR PSD Permit 97-A-998-P5  
 Emission limits: PM/PM<sub>10</sub>: 40 lb/hr; 0.16 lb/MMBtu  
 Opacity: 20%  
 Current Monitoring Requirements: Continuous Opacity Monitoring System (COMS)  
 Primary Power (kVA)

C. Control Technology Electrostatic Precipitator

II. Monitoring Approach

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
Measurement Approach	COMS in ESP exhaust (stack)	Primary Power (kVA) is monitored not less than 4 (every 15 minute) data points every hour
Indicator Range	An excursion is defined as the hourly block average opacity exceeds 20% except during a period of startup, shutdown, or cleaning of control equipment.	An excursion is defined as the hourly block average of the ESP primary power is out of the ranges below: <35
Performance Criteria		
Data Representativeness	Install the COMS at a representative location in the ESP exhaust per 40 CFR 60, Appendix B, Performance Specification 1 (PS-1)	Plant computer will take primary power data not less than four data points (every 15 minutes) every hour and keep the records.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated in 48 hours. Each data point will represent entire hour block.

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
QA/QC Practices and Criteria	Install and evaluate COMS per PS-1. The continuous opacity monitor will be automatically calibrated for zero and span adjustments daily.	The voltage and amperage gauges, which are for power (kVA) monitoring, will be calibrated, maintained, and operated according to the manufacturer specifications.
Monitoring Frequency	Monitor opacity of the ESP exhaust continuously (every 10 seconds)	Plant computer will monitor primary power not less than 4 data points (every 15 minutes) per hour.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	Plant computer will monitor and record primary power not less than 4 data points (every 15 minutes) every hour and keep the record for 5 years and available upon request.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.
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	Once hourly block average primary power (kVA) is out of range based on computer indication or one manual out of range point, an excursion is triggered.
Recordkeeping and Reporting (Verification of Operational Status)	Record 6-minute average and the hourly block average opacity  Excursions trigger an inspection, corrective action, and a reporting requirement at annual or semiannual reports.	Plant computer will take and record primary power data not less than four data points (every 15 minute) every hour.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.  Excursions trigger an inspection, corrective action, and a reporting requirement at annual or semiannual reports.

### III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required if an accumulation of excursions of either the opacity indicator or the power indicator exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period.

Authority for Requirement: 567 IAC 22.108(3)

## Compliance Assurance Monitoring Plan Electrostatic Precipitator (CE202) for PM/PM<sub>10</sub> Control

### I. Background

#### A. Emissions Unit

Description: Boiler 2, Spreader Stoker  
 Identification: EU301-302  
 Facility: IPL – Prairie Creek Generating Station

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

Regulation No: LCPH ATI 6838 / PTO 6561-R2  
 DNR PSD Permit 97-A-998-P5  
 Emission limits: PM/PM<sub>10</sub>: 40 lb/hr; 0.16 lb/MMBtu  
 Opacity: 20%  
 Current Monitoring Requirements: Continuous Opacity Monitoring System (COMS)  
 Primary Power (kVA)

#### C. Control Technology Electrostatic Precipitator

### II. Monitoring Approach

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
Measurement Approach	COMS in ESP exhaust (stack)	Primary Power (kVA) is monitored not less than 4 (every 15 minute) data points every hour
Indicator Range	An excursion is defined as the hourly block average opacity exceeds 20% except during a period of startup, shutdown, or cleaning of control equipment.	An excursion is defined as the hourly block average of the ESP primary power is out of the ranges below: <35
Performance Criteria		
Data Representativeness	Install the COMS at a representative location in the ESP exhaust per 40 CFR 60, Appendix B, Performance Specification 1 (PS-1)	Plant computer will take primary power data not less than four data points (every 15 minutes) every hour and keep the records.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated in 48 hours. Each data point will represent entire hour block.
QA/QC Practices and Criteria	Install and evaluate COMS per PS-1. The continuous opacity monitor will be automatically calibrated for zero and span adjustments daily.	The voltage and amperage gauges, which are for power (kVA) monitoring, will be calibrated, maintained, and operated according to the manufacturer specifications.
Monitoring Frequency	Monitor opacity of the ESP exhaust continuously (every 10 seconds)	Plant computer will monitor primary power not less than 4 data points (every 15 minutes) per hour.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	<p>Plant computer will monitor and record primary power not less than 4 data points (every 15 minutes) every hour and keep the record for 5 years and available upon request.</p> <p>In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.</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	Once hourly block average primary power (kVA) is out of range based on computer indication or one manual out of range point, an excursion is triggered.
Recordkeeping and Reporting (Verification of Operational Status)	<p>Record 6-minute average and the hourly block average opacity</p> <p>Excursions trigger an inspection, corrective action, and a reporting requirement at annual or semiannual reports.</p>	<p>Plant computer will take and record primary power data not less than four data points (every 15 minute) every hour.</p> <p>In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.</p> <p>Excursions trigger an inspection, corrective action, and a reporting requirement at annual or semiannual reports.</p>

### III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required if an accumulation of excursions of either the opacity indicator or the power indicator exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period.

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 003**

**Unit 3 Table 1**

EP	EU	EU Description	Fuel	Rated Capacity
3	302-303	Boiler 3, Dry Bottom Pulverized Coal Unit	Coal	611 MMBtu/hr
			Fuel Oil	4.4 1000 gal/hr
			Natural Gas	0.6 MMCF/hr

**Unit 3 Table 2**

EP	EU	CE ID	CE Description	CEMS
3	302-303	302	Dry Electrostatic Precipitator	ME301 – Opacity ME302 – SO <sub>2</sub> ME303 - NO <sub>x</sub> ME304 – PM ME305 – CO ME306 – CO <sub>2</sub> ME307 – Flow
		302A	Overfire Air	
		303	Activated Carbon Injection, Calcium Bromide Injection, Liquid Flue Gas Conditioning System	

**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.*

**Best Available Control Technology (BACT) Emission Limits**

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Pollutant	lb/hr <sup>1</sup>	tons/yr <sup>2</sup>	Other Limits
Carbon Monoxide (CO)	152.75 <sup>3</sup>	669	0.25 lb/MMBTU <sup>4</sup>

<sup>1</sup> The emission limit is expressed as the average of three (3) runs.

<sup>2</sup> The emission limit is based on a twelve (12) month rolling total.

<sup>3</sup> Emission rate used in the dispersion model to demonstrate the impacts from Project Number 08-A-181-P was less than the PSD significant impact level and therefore, did not require a full NAAQS or increment analysis.

<sup>4</sup> Standard is a 30-day rolling average.

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

**Unit 3 Specific Consent Decree Emission Limits<sup>1</sup>**

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits were established by the Consent Decree [*United States of America and The State of Iowa, and The County of Linn, Iowa and Sierra Club v. Interstate Power and Light Company*, Civil Action No.: C15-0061; United States District Court for the Northern District of Iowa (September 2, 2015)] and shall not be exceeded:

Pollutant	30-day Rolling Average <sup>2,3</sup>	12-month Rolling Average <sup>4</sup>
Filterable Particulate Matter (PM) – Federal	0.030 lb/MMBTU <sup>5</sup>	NA
Sulfur Dioxide (SO <sub>2</sub> )	NA	0.700 lb/MMBTU <sup>6</sup>
Nitrogen Oxides (NO <sub>x</sub> )	NA	0.400 lb/MMBTU <sup>7</sup>

<sup>1</sup> Compliance with the emission limits listed in Consent Decree Emission Limits table shall be demonstrated through the use of Continuous Emission Monitoring Systems (CEMS). Please see Conditions "Continuous Monitoring Systems" and "System-wide Consent Decree Requirements" of this permit for the monitoring procedures to be used for each individual pollutant.

<sup>2</sup> As defined by Consent Decree Paragraph 6, the 30-day rolling average emission rate shall be determined by calculating an arithmetic average of all hourly emission rates in lb/MMBTU for the current Unit Operating Day and all hourly emission rates in lb/MMBTU for the previous 29 Unit Operating Days. A new 30-day rolling average emission rate shall be calculated for each new Unit Operating

Day. Each 30-day rolling average emission rate shall include all emissions that occur during all periods within any Unit Operating Day, including emissions from Startup, Shutdown, and Malfunction (SSM).

- <sup>3</sup> As defined by Consent Decree Paragraph 75, a Unit Operating Day is any day on which the boiler fires a fossil fuel.
- <sup>4</sup> As defined by Consent Decree Paragraph 5, the 12-month rolling average emission rate shall be determined by calculating an average of all hourly emission rates in lb/MMBTU for the current month and all hourly emission rates in lb/MMBTU from the previous twelve (12) Unit Operating Months. A new 12-month rolling average emission rate shall be calculated for each new complete month in accordance with the provisions of the Consent Decree. Each 12-month rolling average emission rate shall include all emissions that occur during all periods of operating, including SSM. For purposes of calculating a 12-month rolling average emission rate, a Unit Operating Month means any month during which the boiler fires fossil fuel.
- <sup>5</sup> As required by Consent Decree Paragraph 146, the emission limit is in effect until Unit 3 (EU 302-303) is either Retired or Refueled within their meanings in the Consent Decree which are:
  - "Retire": As defined in Consent Decree Paragraph 62, means to permanently shut down a unit such that it cannot physically or legally burn a fossil fuel and to comply with applicable state and federal requirements for permanently ceasing operation of the unit as a fossil fuel-fired electric generating unit, including removing the unit from Iowa's air emission inventory and amending all applicable permits so as to reflect the permanent shutdown status of the unit.
  - "Refuel": As defined in Consent Decree Paragraph 59, means that a unit is "Refueled to Natural Gas" which according to Consent Decree Paragraph 60 means the modification of a unit such that the modified unit generates electricity solely through the combustion of natural gas.
- <sup>6</sup> As required by Consent Decree Paragraph 123, the emission limit is in effect until Unit 3 (EU 302-303) is either Retired or Refueled within their meanings in the Consent Decree.
- <sup>7</sup> As required by Consent Decree Paragraph 99, the emission limit is in effect until Unit 3 (EU 302-303) is either Retired or Refueled within their meanings in the Consent Decree.

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

### Consent Decree Annual Tonnage Limits for Prairie Creek

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The Consent Decree established combined total annual tonnage limitations for Boiler 1 (EU 301-301), Boiler 2 (EU 301-302), Unit 3 (EU 302-303), and Unit 4 (EU 303-304). The following limits shall not be exceeded:

Pollutant	Calendar Year	tons/yr <sup>1</sup>	Consent Decree Paragraph
Sulfur Dioxide (SO <sub>2</sub> )	2016-2018	5,500	Paragraph 125
	2019-2020	3,500	
	2021-2025	3,000	
	2026-∞ <sup>2</sup>	100	
Nitrogen Oxides (NO <sub>x</sub> )	2015-2018	3,250	Paragraph 101
	2019-2025	2,650	
	2026-∞ <sup>3</sup>	1,500	

<sup>1</sup> The emissions limit shall not be exceeded during each calendar year (January 1 – December 31).

<sup>2</sup> The emissions limit applies calendar year 2026 and continuing each calendar year thereafter.

<sup>3</sup> The emissions limit applies calendar year 2026 and continuing each calendar year thereafter.

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

### Other Emission Limits

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Pollutant	lb/hr <sup>1</sup>	tons/yr <sup>2</sup>	Other Limits	Reference/Basis
Total Particulate Matter (PM) – State	NA	NA	0.16 lb/MMBTU <sup>3</sup>	Requested Limit
Opacity	NA	NA	20% <sup>4,5</sup>	LCO Sec. 10-60(a)
			40% <sup>4,5</sup>	567 IAC 23.3(2)"d"
Sulfur Dioxide (SO <sub>2</sub> )	495.9 <sup>6</sup>	NA	NA	Administrative Consent Order No. 97-AQ-20

<sup>1</sup> The emission limit is expressed as the average of three (3) runs.

<sup>2</sup> The emission limit is based on a twelve (12) month rolling total.

- <sup>3</sup> Standard is expressed as the average of three (3) stack test runs.
- <sup>4</sup> The emission limit is based on a six (6) minute average.
- <sup>5</sup> An exceedance of the indicator opacity of 20% will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).
- <sup>6</sup> Standard is a 24-hr rolling average and the limit was established to resolve the issue of the facility's contribution to SO<sub>2</sub> exceedances of the 24-hr SO<sub>2</sub> NAAQS in January, February, and March 1996 as outlined in Administrative Consent Order No. 97-AQ-20.

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

### **Cross-State Air Pollution Rule (CSAPR) (a.k.a., Transport Rule (TR))**

Pollutant: Nitrogen Oxides (NO<sub>x</sub>) Annual, Nitrogen Oxides (NO<sub>x</sub>) Ozone Season, Sulfur Dioxide (SO<sub>2</sub>) Group 1

Emission Limits: Nitrogen Oxides and Sulfur Dioxide Allowances

Authority for Requirement: 40 CFR Part 97 (See appendix F for requirements)

### **Operational Limits & Requirements**

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

### **Federal Standards**

A. National Emission Standards for Hazardous Air Pollutants (NESHAP):

The following subparts apply to this emission unit (EU302-303):

This emission unit is subject to the following federal regulation: *National Emission Standards for Hazardous Air Pollutants from Coal and Oil-fired Electric Utility Steam Generating Units (EGU-MATS)* [40 CFR Part 63, Subpart UUUUU].

B. Acid Rain:

The facility (plant number 57-01-042) is considered an affected source under 40 CFR 72, 73, 75, 76, 77, and 78 definitions as emission units at this source are subject to the acid rain emission reduction requirements or the acid rain emission limitations, as adopted by the Department by reference (See 567 IAC 22.120 – 567 IAC 22.148). This emission unit is subject to the SO<sub>2</sub> allowance allocation, NO<sub>x</sub> emission limitations, and monitoring provisions of the federal acid rain program. See "Appendix A. System-wide Consent Decree Requirements for IPL Facilities in Iowa" for IPL's use and surrender of SO<sub>2</sub> and NO<sub>x</sub> allowances requirements pursuant to the Consent Decree.

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

### **Operating Requirements with Associated Monitoring and Recordkeeping**

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

- A. Unit 3 (EU302-303) shall be allowed to combust coal, fuel oil, natural gas, and methane.
- B. The sulfur content of fuel oil shall not exceed 0.5 percent by weight. The owner or operator shall retain receipts of each fuel oil shipment which indicate the sulfur content.
- C. The control equipment, (CE302), associated with Unit 3 (EU302-303) shall be inspected and maintained according to the manufacturer's specifications or best engineering practice. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of control equipment.
- D. In order to demonstrate compliance with Administrative Consent Order No. 97-AQ-20, the owner or operator shall maintain hourly and 24-hour rolling average records in lb/hr of SO<sub>2</sub> emissions. These records shall include the data required under 40 CFR Part 75 for Continuous Emissions Monitoring.
- E. As required by Consent Decree Paragraph 99, the owner or operator shall continuously operate the Low NO<sub>x</sub> Combustion System (CE 302A) until such time Unit 3 (EU 302-303) is either Retired or Refueled (as defined in the Consent Decree).

- F. As required by Consent Decree Paragraph 89, the owner or operator shall either "Retire" or "Refuel" Unit 3 (EU 302-303) by December 31, 2025. These terms are defined in the Consent Decree as:
- (1) Retire: Per paragraph 62 of the Consent Decree means to permanently shut down a unit such that the unit cannot physically or legally burn fossil fuel and to comply with applicable state and federal requirements for permanently ceasing operation of the unit as a fossil-fuel fired electric generating unit, including removing the unit from Iowa's air emissions inventory, and amending all applicable permits so as to reflect the permanent shutdown status of each unit.
  - (2) Refuel: Per Paragraph 59 of the Consent Decree means that a unit is "*Refueled to Natural Gas*" which according to Consent Decree Paragraph 60 means the modification of a unit such that the modified unit generates electricity solely through the combustion of natural gas.
- G. As required by Consent Decree Paragraphs 137 and 138, the owner or operator shall:
- (1) Continuously operate each PM control device to maximize emission reductions at all times when the unit is in operation. Notwithstanding the foregoing sentence, the owner or operator is not required to continuously operate an electrostatic precipitator (ESP) on any unit if a baghouse is installed and operating to replace the PM control device function of the ESP on that unit.
  - (2) Except as required during correlation testing under 40 CFR Part 60, Appendix B, PS11 and QA/QC requirements under Appendix F, Procedure 2, the owner or operator shall, at a minimum, ensure that to the extent reasonably practicable:
    - (a) Where the control device is an ESP, each section of each ESP is fully energized, and where the control device is a baghouse, each compartment, except for any compartment specifically designated and designed as a spare compartment, of each baghouse is operational;
    - (b) Any failed ESP section or baghouse compartment is repaired at the next planned outage (or unplanned outage of sufficient length);
    - (c) Where applicable, the automatic control systems on each ESP are operated to maximize PM collection efficiency;
    - (d) Each opening in the casings, ductwork, and expansion joints for each ESP and each baghouse is inspected and repaired during the next planned unit outage (or unplanned outage of sufficient length) to minimize air leakage;
    - (e) Where applicable, the power levels delivered to each ESP are maintained consistent with manufacturer's specifications, the operational design of the unit and good engineering practices;
    - (f) Where applicable, the plate-cleaning and discharge-electrode-cleaning systems for each ESP are optimized by varying the cycle time, cycle frequency, rapper-vibrator intensity, and number of strikes per cleaning event; and
    - (g) For each unit with one (1) or more baghouses, a bag leak detection program is developed and implemented to ensure that leaking bags are promptly replaced.
- H. As required by Consent Decree Paragraph 146, the owner or operator shall "continuously operate" the ESP (CE 302) until Boiler #3 (EU 302-303) is either "Retired" or "Refueled" as defined by the Consent Decree. Per Paragraph 15 of the Consent Decree, the term "continuously operate" means the ESP shall be operated at all times when Boiler #3 (EU 302-303) is in operation consistent with the technological limitations, manufacturer's specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions [as defined in 40 CFR §60.11(d)]. Upon termination of the Consent Decree, the owner or operator shall submit a report in coordination with its Title V reporting schedule that includes the following information regarding the ESP (CE 302):
- (1) All information necessary to determine compliance during the reporting period with:
    - (a) The obligation to optimize PM emissions controls.
- I. Upon termination of the Consent Decree, the owner or operator shall submit periodic reports as required by Title V to demonstrate compliance with all Consent Decree requirements contained within Condition 1b. (Consent Decree Emission Limits). At a minimum, the information in the reports shall include all information necessary to determine compliance during the reporting period with:
- (a) The 12-month rolling average emission rate for SO<sub>2</sub>;
  - (b) The 30-day rolling average emission rate for PM; and
  - (c) The 12-month rolling average emission rate for NO<sub>x</sub>.

## Continuous Monitoring Systems (CMS)

The following continuous monitoring requirements apply to this emission point (EP003) and its associated emission unit (EU302-303) and control equipment (CE302, 302A, and CE303).

A. The following monitoring systems are required:

(1) *Opacity:*

Compliance with the opacity limit of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous opacity monitoring system (COMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a COMS and record the output of the system, for measuring the opacity of emissions discharged to the atmosphere.

(2) *CO:*

Compliance with the carbon monoxide (CO) emission limits of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous emission monitoring system (CEMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring CO emissions discharged to the atmosphere and record the output of the system.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 4A (PS4A) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.

(3) *SO<sub>2</sub>:*

Compliance with the sulfur dioxide (SO<sub>2</sub>) emission limits of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous emission monitoring system (CEMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring SO<sub>2</sub> emissions discharged to the atmosphere and record the output of the system.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.

This monitor shall also be used to demonstrate compliance with the non-Consent Decree emission standards in this permit.

(4) *NO<sub>x</sub>:*

Compliance with the nitrogen oxide (NO<sub>x</sub>) emission limits of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous emission monitoring system (CEMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring NO<sub>x</sub> emissions discharged to the atmosphere and record the output of the system.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.

(5) *O<sub>2</sub> or CO<sub>2</sub>:*

The owner or operator shall install, calibrate, maintain, and operate a CEMS and record the output of the system, for measuring the oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) content of the flue gasses at each location where SO<sub>2</sub> or NO<sub>x</sub> emissions are monitored.

(6) *Flowmeter:*

The owner or operator shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6 of 40 CFR 60,

Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere or

Alternatively, data from a continuous flow monitoring system certified according to the requirements of 40 CFR 75.20(c) and 40 CFR 75, Appendix A, and continuing to meet the applicable quality control and quality assurance requirements of 40 CFR 75.21 and 40 CFR 75, Appendix B, may be used.

(7) *Particulate Matter:*

As required by Consent Decree Paragraph 150, the owner or operator shall install, correlate, maintain, and operate a PM CEMS on the stack (EP 003). The following requirements shall apply:

- (a) As required by Consent Decree Paragraph 150, each PM CEMS shall:
  - (i) Comprise a continuous particle mass monitoring measuring filterable particulate matter concentration (directly or indirectly) on an hourly average basis and a diluent monitor used to convert the concentration to units expressed in lb/MMBTU.
  - (ii) Be appropriate for the anticipated stack conditions and capable of measuring filterable PM concentrations on an hourly average basis and the owner or operator shall maintain an electronic database that stores the hourly average emission values (in lb/MMBTU) of all PM CEMS data for at least five (5) years.
  - (iii) Operate at all times the unit it serves is operating except for periods of monitor malfunction, maintenance, or repair.
- (b) As required by Consent Decree Paragraph 153, the owner or operator shall:
  - (i) Use criteria set forth in 40 CFR 60, Appendix B, Performance Specification 11 (PS11) and 40 CFR 60, Appendix F, Procedure 2. The specifications of 40 CFR 60, Appendix F (QA/QC) shall apply.
  - (ii) Conduct relative correlation audits no less frequently than once every three (3) calendar years or twelve (12) operating quarters, whichever comes first, or earlier if the characteristics of the PM or gas change such that the PM CEMS measurement technology is no longer valid.
- (c) As required by Consent Decree Paragraph 153, the owner or operator may use the correlation method specified in 40 CFR §63.10010(i) [at the temperature specified in 40 CFR Part 60, Appendix A-3] for purposes of correlating the PM CEMS under the Consent Decree. Diluent capping (i.e., 5% CO<sub>2</sub>) will be applied to the PM rate data for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.
- (d) As required by Consent Decree Paragraph 152, the owner or operator shall follow the Quality Assurance/Quality Control (QA/QC) protocol approved by EPA for each PM CEMS.
- (e) As required by Consent Decree Paragraph 154, the owner or operator shall:
  - (i) Ensure compliance with the PM CEMS installation and correlation plans submitted to and approved by EPA in accordance with Consent Decree Paragraphs 151 and 152.
  - (ii) Ensure performance specification tests on the PM CEMS are conducted.
  - (iii) Operate the PM CEMS in accordance with the approved plan and QA/QC protocol.
- (f) As required by Consent Decree Paragraph 148(c), the owner or operator shall conduct condensable PM testing each time a relative correlation audit is performed for the PM CEMS and stack sampling for filterable PM shall be performed pursuant to PS11. When PM stack tests are required, the owner or operator shall:
  - (i) Conduct the PM stack test using EPA Method 5 (filterable portion only) or any alternate method approved by EPA under the terms of the Consent Decree.
  - (ii) Conduct the condensable PM stack test using the reference methods and procedures set for in 40 CFR 51, Appendix M, Method 202.
  - (iii) Ensure:
    - Each stack test consists of three (3) separate runs performed under representative operating conditions not including SSM.
    - The sampling time for each run shall be at least sixty (60) minutes and the volume of each run shall be at least 0.85 dry standard cubic meters (30 dry standard cubic feet).
    - The PM emission rate from the stack test results is calculated in accordance with 40 CFR §60.8(f).

- The results of each PM stack test is submitted to the appropriate regulatory agency (i.e. the Department or Linn County).
- B. The CEMS required in Condition 6.A. for SO<sub>2</sub>, NO<sub>x</sub>, CO, and either O<sub>2</sub> or CO<sub>2</sub> shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.
- C. As required by Consent Decree Paragraph 127, the following requirements apply to the SO<sub>2</sub> CEMS for the Consent Decree emission standards in this permit:
- (1) The owner or operator shall use SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75 for all thirty (30) day rolling average emission rates and all twelve (12) month rolling average emission rates.
  - (2) The SO<sub>2</sub> emissions data is not required to be bias adjusted and the missing data substituting procedures of 40 CFR Part 75 shall not apply.
  - (3) Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the SO<sub>2</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.
- D. As required by Consent Decree Paragraph 103, the following requirements apply to the NO<sub>x</sub> CEMS for the Consent Decree emission standards in this permit:
- (1) The owner or operator shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75 for all thirty (30) day rolling average emission rates and all twelve (12) month rolling average emission rates.
  - (2) The NO<sub>x</sub> emissions data is not required to be bias adjusted and the missing data substituting procedures of 40 CFR Part 75 shall not apply.
  - (3) Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the NO<sub>x</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.
- E. The following data requirements shall apply to all CEMS for non-Consent Decree emission standards in this permit:
- (3) The CEMS required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
  - (4) The 1-hour average SO<sub>2</sub> and CO emission rates measured by the CEMS required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
- F. If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

### **Other Conditions**

Continuous emission monitoring and data collection equipment capable of recording total site hourly and twenty-four hour rolling average SO<sub>2</sub> emission information shall be installed and operational.

Authority for Requirement: Administrative Consent Order No. 97-AQ-20

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
3	201	V	149.25	450	200,000	DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**System-wide Consent Decree Requirements for IPL Facilities in Iowa**

Refer to Appendix A, System-wide Consent Decree Requirements for IPL Facilities in Iowa.

Authority for Requirement: Iowa DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2

**Monitoring Requirements**

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

**Stack Testing**

Refer to Appendix D, Stack Testing, for the applicable requirements.

**Continuous Emissions Monitoring**

Pollutant:	Opacity	Filterable PM - Federal
Continuous Emissions Monitor ID:	ME301	ME304
Operational Specifications:	40 CFR 75	40 CFR Part 60
Ongoing System Calibration/Quality Assurance:	40 CFR 75	40 CFR Part 60
Reporting & Recordkeeping:	40 CFR 75	40 CFR Part 60
Authority for Requirement:	567 IAC 25.1(1) 567 IAC 25.2 DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2	DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2

Pollutant:	SO <sub>2</sub>	NO <sub>x</sub>
Continuous Emissions Monitor ID:	ME302	ME303
Operational Specifications:	40 CFR 75	40 CFR 75
Ongoing System Calibration/Quality Assurance:	40 CFR 75	40 CFR 75
Reporting & Recordkeeping:	40 CFR 75	40 CFR 75
Authority for Requirement:	567 IAC 25.2 DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2	567 IAC 25.2 DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2

Pollutant:	CO
Continuous Emissions Monitor ID:	ME305
Operational Specifications:	40 CFR 60
Ongoing System Calibration/Quality Assurance:	40 CFR 60
Reporting & Recordkeeping:	40 CFR 60
Authority for Requirement:	DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2

Other Parameter:	CO <sub>2</sub>	Flow
Continuous Emissions Monitor ID:	ME306	ME307
Operational Specifications:	40 CFR 75	40 CFR 75
Ongoing System Calibration/Quality Assurance:	40 CFR 75	40 CFR 75
Reporting & Recordkeeping:	40 CFR 75	40 CFR 75
Authority for Requirement:	567 IAC 25.2 DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2	567 IAC 25.2 DNR PSD Permit 08-A-181-P2 LCPH ATI 6551 / PTO 6512-R2

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   
 Authority for Requirement: 567 IAC 22.108(3)

### Compliance Assurance Monitoring Plan Electrostatic Precipitator (CE302) for PM/PM<sub>10</sub> Control

#### I. Background

##### A. Emissions Unit

Description: Boiler 3, Dry Bottom Pulverized Coal Unit  
 Identification: EU302-303  
 Facility: IPL – Prairie Creek Generating Station

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

Regulation No: LCPH ATI 6551 / PTO 6512-R1  
 DNR PSD Permit 08-A-181-P1  
 Emission limits: PM: 0.16 lb/MMBtu  
 Opacity: 20%  
 Current Monitoring Requirements: Continuous Opacity Monitoring System (COMS)  
 Primary Power (kVA)

##### C. Control Technology Electrostatic Precipitator

#### II. Monitoring Approach

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
Measurement Approach	COMS in ESP exhaust (stack)	Primary Power (kVA) is monitored not less than 4 (every 15 minute) data points every hour

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
Indicator Range	An excursion is defined as the hourly block average opacity exceeds 20% except during a period of startup, shutdown, or cleaning of control equipment.	An excursion is defined as the hourly block average of the ESP primary power is out of the ranges below: <35
Performance Criteria		
Data Representativeness	Install the COMS at a representative location in the ESP exhaust per 40 CFR 60, Appendix B, Performance Specification 1 (PS-1)	Plant computer will take primary power data not less than four data points (every 15 minutes) every hour and keep the records.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated in 48 hours. Each data point will represent entire hour block.
QA/QC Practices and Criteria	Install and evaluate COMS per PS-1. The continuous opacity monitor will be automatically calibrated for zero and span adjustments daily.	The voltage and amperage gauges, which are for power (kVA) monitoring, will be calibrated, maintained, and operated according to the manufacturer specifications.
Monitoring Frequency	Monitor opacity of the ESP exhaust continuously (every 10 seconds)	Plant computer will monitor primary power not less than 4 data points (every 15 minutes) per hour.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.
Data Collection Procedures	Set up the data acquisition system (DAS) to retain all 6-minute average and hourly average opacity data.	Plant computer will monitor and record primary power not less than 4 data points (every 15 minutes) every hour and keep the record for 5 years and available upon request.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated within 48 hours. Each data point will represent entire hour block.
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	Once hourly block average primary power (kVA) is out of range based on computer indication or one manual out of range point, an excursion is triggered.
Recordkeeping and Reporting (Verification of Operational Status)	Record 6-minute average and the hourly block average opacity  Excursions trigger an inspection, corrective action, and a reporting requirement at annual or semiannual reports.	Plant computer will take and record primary power data not less than four data points (every 15 minute) every hour.  In case of computer and/or software malfunction, manual readings of primary voltage and amperage readings will be taken once per hour and hourly primary power (kVA) will be calculated in 48 hours. Each data point will represent entire hour block.

Indicator	Opacity of ESP exhaust (stack)	Primary Power (kVA)
		Excursions trigger an inspection, corrective action, and a reporting requirement at annual or semiannual reports.

III. Quality Improvement Plan (QIP)

A Quality Improvement Plan (QIP) will be required if an accumulation of excursions of either the opacity indicator or the power indicator exceeds 5 percent of the boiler's normal operating time for a 6-month reporting period.

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 15**

**Unit 4 Table 1**

EP	EU	EU Description	Fuel	Rated Capacity
15	303-304	Unit 4	Natural Gas	1370 MMBtu/hr

**Unit 4 Table 2**

EP	EU	CE ID	CE Description	CEMS
15	303-304	401	Low NO <sub>x</sub> Burners	ME403 - NO <sub>x</sub> ME405 – CO <sub>2</sub> ME406 – Flow

**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.*

**Consent Decree Annual Tonnage Limits for Prairie Creek**

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The Consent Decree [*United States of America and The State of Iowa, and The County of Linn, Iowa and Sierra Club v. Interstate Power and Light Company*, Civil Action No.: C15-0061; United States District Court for the Northern District of Iowa (September 2, 2015)] established combined total annual tonnage limitations for Boiler 1 (EU 301-301), Boiler 2 (EU 301-302), Unit 3 (EU 302-303), and Unit 4 (EU 303-304). The following limits shall not be exceeded:

Pollutant	Calendar Year	tons/yr <sup>1</sup>	Consent Decree Paragraph
Sulfur Dioxide (SO <sub>2</sub> )	2016-2018	5,500	Paragraph 125
	2019-2020	3,500	
	2021-2025	3,000	
	2026-∞ <sup>2</sup>	100	
Nitrogen Oxides (NO <sub>x</sub> )	2015-2018	3,250	Paragraph 101
	2019-2025	2,650	
	2026-∞ <sup>3</sup>	1,500	

<sup>1</sup> The tonnage limitation shall not be exceeded during each calendar year (January 1 – December 31).

<sup>2</sup> The tonnage limitation applies calendar year 2026 and continuing each calendar year thereafter.

<sup>3</sup> The tonnage limitation applies calendar year 2026 and continuing each calendar year thereafter.

Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2

**Emission Limits**

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Pollutant	lb/hr <sup>1</sup>	tons/yr <sup>2</sup>	Other Limits	Reference/Basis
Total Particulate Matter (PM) – State	NA	NA	0.16 lb/MMBTU <sup>1</sup>	LCCO Sec. 10-61(a)(3) LCCO Sec. 10-61(b)(2)
Opacity	NA	NA	20% <sup>3,4</sup>	LCCO Sec. 10-60 (a)
Sulfur Dioxide (SO <sub>2</sub> )	1289.3 <sup>5</sup>	NA	NA	Administrative Consent Order No. 97-AQ-20

<sup>1</sup> The emission limit is expressed as the average of three (3) runs.

<sup>2</sup> The emission limit is based on a twelve (12) month rolling total.

<sup>3</sup> The emission limit is based on a six (6) minute average.

<sup>4</sup> The observation of **visible emissions** of air contaminants as defined in LCCO 10.2 greater than 20% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the visible emissions. If visible emissions exceedances continue after the corrections, Linn County may require additional proof to demonstrate compliance (e.g., stack testing).

<sup>5</sup> Standard is a 24-hr rolling average and the limit was established to resolve the issue of the facility's contribution to SO<sub>2</sub> exceedances of the 24-hr SO<sub>2</sub> NAAQS in January, February, and March 1996 as outlined in Administrative Consent Order No. 97-AQ-20.

Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2

### **Cross-State Air Pollution Rule (CSAPR) (a.k.a., Transport Rule (TR))**

Pollutant: Nitrogen Oxides (NO<sub>x</sub>) Annual, Nitrogen Oxides (NO<sub>x</sub>) Ozone Season, Sulfur Dioxide (SO<sub>2</sub>) Group 1

Emission Limits: Nitrogen Oxides and Sulfur Dioxide Allowances

Authority for Requirement: 40 CFR Part 97 (See appendix F for requirements)

### **Operational Limits & Requirements**

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

### **Federal Standards**

#### **A. Acid Rain:**

The facility (plant number 57-01-042) is considered an affected source under 40 CFR 72, 73, 75, 76, 77, and 78 definitions as emission units at this source are subject to the acid rain emission reduction requirements or the acid rain emission limitations, as adopted by the Iowa Department of Natural Resources by reference (See 567 IAC 22.120 – 567 IAC 22.148). This emission unit is subject to the SO<sub>2</sub> allowance allocation, NO<sub>x</sub> emission limitations, and monitoring provisions of the federal acid rain program. See "Appendix A. System-wide Consent Decree Requirements for IPL Facilities in Iowa" for IPL's use and surrender of SO<sub>2</sub> and NO<sub>x</sub> allowances requirements pursuant to the Consent Decree. Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2

### **Operating Requirements with Associated Monitoring and Recordkeeping**

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

- A. As required by Consent Decree [*United States of America and The State of Iowa, and The County of Linn, Iowa and Sierra Club v. Interstate Power and Light Company*, Civil Action No.: C15-0061; United States District Court for the Northern District of Iowa (September 2, 2015)] Paragraph 87, the owner or operator was required to either "Retire" or "Refuel" Unit 4 (EU303-304) by June 1, 2018. These terms are defined in the Consent Decree as:
  - (1) Retire: As defined in Paragraph 62 of the Consent Decree, means to permanently shut down a unit such that it cannot physically or legally burn a fossil fuel and to comply with applicable state and federal requirements for permanently ceasing operation of the unit as a fossil fuel-fired electric generating unit, including removing the unit from Iowa's air emission inventory and amending all applicable permits so as to reflect the permanent shutdown status of the unit.
  - (2) Refuel: As defined in Paragraph 59 of the Consent Decree, means that a unit is "*Refueled to Natural Gas*" which according to Consent Decree Paragraph 60 means the modification of a unit such that the modified unit generates electricity solely through the combustion of natural gas.

Therefore, the owner or operator shall:

- (a) Combust only natural gas in Unit 4 (EU 303-304) and
  - (b) Continuously operate the Low NO<sub>x</sub> Combustion System (Low NO<sub>x</sub> Burners – CE 401). Per Paragraph 15 of the Consent Decree, the term "continuously operate" means the Low NO<sub>x</sub> Combustion System (CE 401) shall be operated at all times when Unit 4 (EU 303-304) is in operation consistent with the technological limitations, manufacturer's specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions [as defined in 40 CFR 60.11(d)].
- B. Per Administrative Consent Order No. 97-AQ-20, the owner or operator shall calculate SO<sub>2</sub> emissions using stack test data, AP-42 emission factors, mass balance calculations based on fuel specific (natural gas and/or pipeline natural gas) sulfur content, or the procedures outlined in 40 CFR Part 75 in order to demonstrate compliance with the twenty-four hour rolling average SO<sub>2</sub> emission limit.

- C. Upon termination of the Consent Decree, the owner or operator shall submit periodic reports as required by Title V to demonstrate compliance with all Consent Decree requirements contained within Condition 1a. (Consent Decree Emission Limits). At a minimum, the information in the reports shall include all information necessary to determine compliance during the reporting period with:
- (a) The 12-month rolling average emission rate for SO<sub>2</sub>;
  - (b) The 12-month rolling average emission rate for NO<sub>x</sub>.

Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2

### Continuous Monitoring Systems

The following continuous monitoring requirements apply to this emission point (EP015) and its associated emission unit (EU303-304) and control equipment (CE401, CE402, and CE403).

A. The following monitoring systems are required:

(1) *NO<sub>x</sub>*:

Compliance with the nitrogen oxide (NO<sub>x</sub>) emission limits of this permit shall be continuously demonstrated by the owner or operator through the use of a continuous emission monitoring system (CEMS). Therefore, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring NO<sub>x</sub> emissions discharged to the atmosphere and record the output of the system.

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a notice to the Department with the dates of the annual relative accuracy test audit.

(2) *O<sub>2</sub> or CO<sub>2</sub>*:

The owner or operator shall install, calibrate, maintain, and operate a CEMS and record the output of the system, for measuring the oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) content of the flue gasses at each location where SO<sub>2</sub> or NO<sub>x</sub> emissions are monitored.

(3) *Flowmeter*:

The owner or operator shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6 of 40 CFR 60, Appendix F, Procedure 1. In addition, the owner or operator shall record the output of the system, for measuring the volumetric flow of exhaust gases discharged to the atmosphere or

Alternatively, data from a continuous flow monitoring system certified according to the requirements of 40 CFR 75.20(c) and 40 CFR 75, Appendix A, and continuing to meet the applicable quality control and quality assurance requirements of 40 CFR 75.21 and 40 CFR 75, Appendix B, may be used.

B. The CEMS required in Condition 6.A. for NO<sub>x</sub>, and either O<sub>2</sub> or CO<sub>2</sub> shall be operated and the data recorded during all periods of operation including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments.

C. As required by Consent Decree Paragraph 103, the following requirements apply to the NO<sub>x</sub> CEMS for the Consent Decree emission standards in this permit:

- (1) The owner or operator shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75 for all thirty (30) day rolling average emission rates and all twelve (12) month rolling average emission rates.
- (2) The NO<sub>x</sub> emissions data is not required to be bias adjusted and the missing data substituting procedures of 40 CFR Part 75 shall not apply.
- (3) Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the NO<sub>x</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.

D. If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2

**Operating Conditions**

Continuous emission monitoring and data collection equipment capable of recording total site hourly and twenty-four hour rolling average SO<sub>2</sub> emission information shall be installed and operational.

Authority for Requirement: Administrative Consent Order No. 97-AQ-20

Maintain hourly and twenty-four hour rolling average SO<sub>2</sub> records for Prairie Creek Generating Station which will verify compliance with the twenty-four hour rolling average SO<sub>2</sub> emission limit. The records shall include the data required in the previous paragraph and in 40 CFR 75 for Continuous Emissions Monitoring.

Authority for Requirement: Administrative Consent Order No. 97-AQ-20

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
15	201	V	156	300	571,000	LCPH ATI 6552 / PTO 6513-R2

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**System-wide Consent Decree Requirements for IPL Facilities in Iowa**

Refer to Appendix A, System-wide Consent Decree Requirements for IPL Facilities in Iowa.

Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2

**Monitoring Requirements**

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

**Stack Testing**

Refer to Appendix D, Stack Testing, for the applicable requirements.

**Continuous Emissions Monitoring**

Pollutant / Other Parameter:	NO <sub>x</sub>	CO <sub>2</sub>
Continuous Emissions Monitor ID:	ME403	ME405
Operational Specifications:	40 CFR 75	40 CFR 75
Ongoing System Calibration/Quality Assurance:	40 CFR 75	40 CFR 75
Reporting & Recordkeeping:	40 CFR 75	40 CFR 75
Authority for Requirement:	567 IAC 25.2 LCPH ATI 6552 / PTO 6513-R2	567 IAC 25.2 LCPH ATI 6552 / PTO 6513-R2

Other Parameter:	Flow
Continuous Emissions Monitor ID:	ME406
Operational Specifications:	40 CFR 75
Ongoing System Calibration/Quality Assurance:	40 CFR 75
Reporting & Recordkeeping:	40 CFR 75
Authority for Requirement:	567 IAC 25.2 LCPH ATI 6552 / PTO 6513-R2

*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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 100**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
100	100-100B-D	Coal Belt Dust Handling Pick-ups for Bunkers 3 & 4	Coal	750 tons/hr	100	Baghouse
	503-100	Boiler 3 Coal Storage Bunker		37 tons/hr		
	504-100	Boiler 4 Coal Storage Bunker		83 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.*

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
100	Opacity	20%	LCPH ATI 6308 / PTO 6314 LCO Sec. 10-60(a) and LCO Sec. 10-62(b)(22) 567 IAC 23.1(2)"v" 40 CFR 60.254
	PM <sub>10</sub>	3.35 lb/hr	LCPH ATI 6308 / PTO 6314
	PM	0.1 gr/dscf	LCPH ATI 6308 / PTO 6314 LCO Sec. 10-62(a)(1) 567 IAC 23.3(2)"a"(2)

**Operational Limits & Requirements**

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

**Control Device**

A baghouse shall be installed to control particulate matter emissions. The control equipment shall be maintained properly and operated at all times the air pollution source is in operation. All appropriate probes, monitors and gauges needed to measure the parameters outlined in "Operating Condition Monitoring and Recordkeeping" shall be installed, maintained and operating during the operation of the emission unit and control device at all times.

Authority for Requirement: LCPH ATI 6308 / PTO 6314

**Federal Standards**

A. New Source Performance Standards (NSPS):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO)	Federal Reference (40 CFR)
100-100B-D	A	General Conditions	--	Sec. 10-62(b)	§60.1 – §60.19
503-100 504-100	Y	Standards of Performance for Coal Preparation Plants	--	Sec. 10-62(b)(22)	§60.250 - §60.258

Authority for Requirement: LCPH ATI 6308 / PTO 6314; 567 IAC 23.1(2)"v"; LCO Sec. 10-62(b)(22)  
40 CFR 60 Subpart Y

**Operating Limits**

- A. The baghouse on this unit shall be maintained according to the manufacturer's specifications and good operating practices.
- B. The pressure differential across the baghouse shall be maintained between 0.1" and 8" of water column.
- C. This facility shall meet all applicable requirements of 40 CFR 60 [NSPS Subpart A] to comply with LCO Sec. 10-62(b)(22).
- D. This facility shall meet the applicable standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles of 40 CFR §60.254 [NSPS Subpart Y] to comply with LCO Sec. 10-62(b)(22).
- E. This facility shall meet the performance tests and other compliance requirements of 40 CFR §60.255 [NSPS Subpart Y] to comply with LCO Sec. 10-62(b)(22).

Authority for Requirement: LCPH ATI 6308 / PTO 6314

**Operating Condition Monitoring and Recordkeeping**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Linn County Air Quality Division and other federal or state air pollution regulatory agencies and their authorized representatives. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. Monitor and record weekly pressure drop readings while operating.
- B. Monitor and record weekly no visible emissions readings while operating.
- C. Record all maintenance and repair completed on the control device.

Authority for Requirement: LCPH ATI 6308 / PTO 6314

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
100	140.7	V	24 x 36	Ambient	33,353	LCPH ATI 6308 / PTO 6314

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**Opacity Monitoring:**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

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

**Facility Maintained Operation & Maintenance Plan Required?**      Yes <sup>(1)</sup> No

<sup>(1)</sup> Refer to Appendix E, Facility O&M Plans, for the applicable requirements.

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 104**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
104	100-100E	Coal Belt Dust Handling Pick-ups for Bunkers 1 & 2	Coal	24 tons/hr	504	Baghouse
	501-100	Boiler 1 Coal Storage Bunker		12 tons/hr		
	502-100	Boiler 2 Coal Storage Bunker		12 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.*

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
104	Opacity	20%	LCPH ATI 6309 / PTO 6315 LCO Sec. 10-60(a) and LCO Sec. 10-62(b)(22) 567 IAC 23.1(2)"v" 40 CFR §60.254
	PM <sub>10</sub>	1.5 lb/hr	LCPH ATI 6309 / PTO 6315
	PM	0.1 gr/dscf	LCPH ATI 6309 / PTO 6315 LCO Sec. 10-62(a)(1) 567 IAC 23.3(2)"a"

**Operational Limits & Requirements**

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

**Control Device**

A baghouse shall be installed to control particulate matter emissions. The control equipment shall be maintained properly and operated at all times the air pollution source is in operation. All appropriate probes, monitors and gauges needed to measure the parameters outlined in "Operating Condition Monitoring and Recordkeeping" shall be installed, maintained and operating during the operation of the emission unit and control device at all times.

Authority for Requirement: LCPH ATI 6309 / PTO 6315

**Federal Standards**

A. New Source Performance Standards (NSPS):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO)	Federal Reference (40 CFR)
100	A	General Conditions	--	Sec. 10-62(b)	§60.1 – §60.19
	Y	Standards of Performance for Coal Preparation Plants	--	Sec. 10-62(b)(22)	§60.250 - §60.258

Authority for Requirement: LCPH ATI 6309 / PTO 6315; 567 IAC 23.1(2)"v"; LCO Sec. 10-62(b)(22)  
40 CFR 60 Subpart Y

**Operating Limits**

- A. The baghouse on this unit shall be maintained according to the manufacturer's specifications and good operating practices.
- B. The pressure differential across the baghouse shall be maintained between 0.5" and 7" of water column.
- C. This facility shall meet all applicable requirements of 40 CFR 60 [NSPS Subpart A] to comply with LCO Sec. 10-62(b)(22).
- D. This facility shall meet the applicable standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles of 40 CFR §60.254 [NSPS Subpart Y] to comply with LCO Sec. 10-62(b)(22).
- E. This facility shall meet the performance tests and other compliance requirements of 40 CFR §60.255 [NSPS Subpart Y] to comply with LCO Sec. 10-62(b)(22).

Authority for Requirement: LCPH ATI 6309 / PTO 6315

**Operating Condition Monitoring and Recordkeeping**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Linn County Air Quality Division and other federal or state air pollution regulatory agencies and their authorized representatives. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. Monitor and record weekly pressure drop readings while operating.
- B. Monitor and record weekly no visible emissions readings while operating.
- C. Record all maintenance and repair completed on the control device.

Authority for Requirement: LCPH ATI 6309 / PTO 6315

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
104	96	V	18	Ambient	6,000	LCPH ATI 6309 / PTO 6315

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**Opacity Monitoring:**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

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

**Facility Maintained Operation & Maintenance Plan Required?** Yes <sup>(1)</sup> No

<sup>(1)</sup> Refer to Appendix E, Facility O&M Plans, for the applicable requirements.

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 120**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
120	404-405	Boiler 3 Fly Ash Transfer	Ash	10 tons/hr	405	Baghouse
	405-406	Boiler 4 Fly Ash Transfer		10 tons/hr	406	Baghouse

**Applicable Requirements**

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

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

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
120	Opacity	20%	LCO Sec. 10-60(a)
	PM	0.1 gr/dscf	567 IAC 23.3(2)"a" LCO Sec. 10-62(a)(1)

**Monitoring Requirements**

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

**Opacity Monitoring:**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

**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: 121**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
121	522-521	Boilers 1 & 2 Fly Ash Transfer	Ash	8 tons/hr <sup>1</sup>	520	Baghouse
	523-521	Boilers 1, 2 & 3 Bottom Ash Transfer		8 tons/hr <sup>1</sup>	521	Cyclone
					522	Baghouse

<sup>1</sup> Only one emission unit can operate at a time.

**Applicable Requirements**

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

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

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
121	Opacity	20%	LCPH ATI 6906 / PTO 6843 LCO Sec. 10-60(a)
	PM	0.1 gr/dscf	LCPH ATI 6906 / PTO 6843 567 IAC 23.3(2)"a" LCO Sec. 10-62(a)(1)

**Operational Limits & Requirements**

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

**Operating Requirements with Associated Monitoring and Recordkeeping**

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

- A. The control equipment shall be maintained according to the manufacturer's specifications and good operating practices. The owner or operator shall maintain a record of maintenance completed on all control equipment.
- B. The owner or operator shall monitor and record 'no visible emissions' observations on a weekly basis. An exceedance of 'no visible emissions' will require the owner/operator to promptly investigate the emission unit, make corrections to operations or equipment associated with the exceedance, and record the corrective action taken.

Authority for Requirement: LCPH ATI 6906 / PTO 6843

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
121	12	H	8	120	1,474	LCPH ATI 6906 / PTO 6843

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**Opacity Monitoring:**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

**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: 122, 123**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
122	524-521	Boilers 1 & 2 Fly Ash Silo	Fly Ash	8 tons/hr	524	Bin Vent Filters
123	525-521	Boilers 1, 2 & 3 Bottom Ash Silo	Bottom Ash	8 tons/hr	525	Bin Vent Filters

**Applicable Requirements**

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

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

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
122 123	Opacity	20%	LCPH ATI 6907 / PTO 6644 LCPH ATI 6881 / PTO 6630 LCO Sec. 10-60(a)
	PM	0.1 gr/dscf	LCPH ATI 6907 / PTO 6644 LCPH ATI 6881 / PTO 6630 567 IAC 23.3(2)"a" LCO Sec. 10-62(a)(1)

**Operational Limits & Requirements**

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

**Operating Requirements with Associated Monitoring and Recordkeeping**

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

- A. The control equipment shall be maintained according to the manufacturer's specifications and good operating practices. The owner or operator shall maintain a record of maintenance completed on all control equipment.
- B. The owner or operator shall monitor and record 'no visible emissions' observations on a weekly basis. An exceedance of 'no visible emissions' will require the owner/operator to promptly investigate the emission unit, make corrections to operations or equipment associated with the exceedance, and record the corrective action taken.

Authority for Requirement: LCPH ATI 6907 / PTO 6644; LCPH ATI 6881 / PTO 6644

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
122	92	H	10 x 6	Ambient	675 <sup>1</sup>	LCPH ATI 6907 / PTO 6644
123	92	H	10 x 6	Ambient	340 <sup>1</sup>	LCPH ATI 6881 / PTO 6630

<sup>1</sup> Displacement

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**Opacity Monitoring**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

**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: 331

### Associated Equipment

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
331	331-331	#2 Emergency Generator	#2 Fuel Oil	74.3 gallons/hr 1000 kW	--	--

### Applicable Requirements

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

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

#### Emission Limits

EP	Pollutant	Emission Limit(s)	Authority for Requirement
331	Opacity	10%	LCPH ATI 5718 / PTO 5543 LCO Sec. 10-60(a)
	PM	0.59 lb/MMBtu	LCPH ATI 5718 / PTO 5543
	PM <sub>10</sub>	0.44 lb/hr	LCPH ATI 5718 / PTO 5543
	SO <sub>2</sub>	1.5 lb/MMBtu	LCPH ATI 5718 / PTO 5543 LCO Sec. 10-65(a)(1)(b)

#### NSPS Emission Limits

EP	Pollutant	Emission Limit(s)	Authority for Requirement
331	PM (Filterable Only)	0.20 g/kw-hr	LCPH ATI 5718 / PTO 5543 40 CFR §60.4205(b)
	NMHC + NO <sub>x</sub>	6.4 g/kw-hr	
	CO	3.5 g/kw-hr	

#### Operational Limits & Requirements

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

#### Operating Limits

- A. The owner or operator shall meet the applicable General Provisions requirements of 40 CFR §60 (Subpart A) as indicated in 40 CFR §60.4218 to comply with LCO Sec. 10-62(b).
- B. The owner or operator shall meet the Emission Standards for Owners and Operators requirements of 40 CFR § 60.4205 and §60.4206 (NSPS Subpart IIII) to comply with LCO Sec. 10-62(b)(77).
- C. The owner or operator shall comply with the Fuel Requirements for Owners and Operators of 40 CFR §60.4207 (NSPS Subpart IIII) to comply with LCO Sec. 10-62(b)(77).
- D. The emergency stationary internal combustion engine (ICE) shall operate no more than 500 hours per 12-month rolling period.
- E. Per 40 CFR §60.4211, owners and operators of emergency stationary ICE meeting standards under §60.4205, but not §60.4204, any operation other than emergency operation and maintenance and testing is prohibited. Maintenance testing of the emergency stationary ICE is limited to a maximum of 100 hours per rolling 12-month period.
- F. The emergency stationary ICE shall only be fired by #1 or #2 fuel oil.
- G. The sulfur content of any diesel fuel used in the emission unit shall not exceed 0.5% by weight per LCO Sec. 10-65(a)(1)(c).

Authority for Requirement: LCPH ATI 5718 / PTO 5543

**Operating Condition Monitoring and Recordkeeping**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Linn County Air Quality Division and other federal or state air pollution regulatory agencies and their authorized representatives. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. Record the sulfur content of each fuel shipment used in this engine in percent by weight.
- B. Record the number of hours the emergency stationary internal combustion engine (ICE) is operated each month and the reason the emission unit was operated. Calculate and record 12-month rolling totals.
- C. The owner or operator shall complete all recordkeeping and monitoring as required by NSPS Subpart III as indicated below:
  - 1. The owner or operator of the emergency stationary ICE shall follow the monitoring requirements of 40 CFR §60.4209.
  - 2. The owner or operator of the emergency stationary ICE shall follow the compliance requirements of 40 CFR §60.4211.
  - 3. The owner or operator of the emergency stationary ICE shall follow the notification, reporting, and recordkeeping requirements of 40 CFR §60.4214(b).

Authority for Requirement: LCPH ATI 5718 / PTO 5543

**Federal Standards**

A. New Source Performance Standards (NSPS):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
331-331	A	General Conditions	--	Sec. 10-62(b)	§60.1 – §60.19
	III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	New Emergency Engine	Sec. 10-62(b)(77)	§60.4200 - §60.4219

Authority for Requirement: LCPH ATI 5718 / PTO 5543; 40 CFR 60 Subpart III

B. National Emission Standards for Hazardous Air Pollutants (NESHAP):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
331-331	ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	New Emergency Engine @ Major Source	Sec. 10-62(d)(104)	§63.6580 - §63.6675

Authority for Requirement: LCPH ATI 5718 / PTO 5543; 40 CFR Part 63 Subpart ZZZZ

**Emission Point Characteristics**

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
331	38	V	20	965	3,100	LCPH ATI 5718 / PTO 5543

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 500**

**Boiler 5 Table 1**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
500	500	Boiler 5	Natural Gas	278 MMBtu/hr	500	Low NO <sub>x</sub> Burner

**Boiler 5 Table 2**

EP	EU	CEMS
500	500	ME500 - NO <sub>x</sub> ME502 - O <sub>2</sub>

**Applicable Requirements**

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

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

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
500	Opacity	20%	LCO Sec. 10-60(a)
		0%	LCPH ATI 3696 / PTO 3957 DNR PSD Permit 97-A-999-S1
	PM/PM <sub>10</sub>	0.01 lb/MMBtu; 2.78 lb/hr; 5.0 tpy	LCPH ATI 3696 / PTO 3957 DNR PSD Permit 97-A-999-S1
	SO <sub>2</sub>	0.0006 lb/MMBtu; 0.17 lb/hr; 0.3 tpy	LCPH ATI 3696 / PTO 3957 DNR PSD Permit 97-A-999-S1
		500 ppm <sub>v</sub>	567 IAC 23.3(3)"e" LCO Sec. 10-65(a)(2)
	NO <sub>x</sub>	0.1 lb/MMBtu; 27.8 lb/hr; 50 tpy	LCPH ATI 3696 / PTO 3957 DNR PSD Permit 97-A-999-S1
CO	0.035 lb/MMBtu; 9.73 lb/hr; 17.5 tpy	LCPH ATI 3696 / PTO 3957 DNR PSD Permit 97-A-999-S1	

**Operational Limits & Requirements**

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

**Control Device**

A Low-NO<sub>x</sub> burner shall be installed to control NO<sub>x</sub> emissions. The control equipment shall be maintained properly and operated at all times the air pollution source is in operation. All appropriate probes, monitors and gauges needed to measure the parameters outlined in "Operating Condition Monitoring and Recordkeeping" shall be installed, maintained and operating during the operation of the emission unit and control device at all times.

**Federal Standards**

A. New Source Performance Standards (NSPS):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
500	A	General Conditions	--	10-62(b)	§60.1 – §60.19
	Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Natural Gas	10-62(b)(55)	§60.40b – §60.49b

Authority for Requirement: DNR PSD Permit 97-A-999-S1; LCPH ATI 3696 / PTO 3957; 567 IAC 23.1(2)"ccc"; LCO Sec. 10-62(b)(55); 40 CFR 60 Subpart Db

- B. National Emission Standards for Hazardous Air Pollutants (NESHAP):  
The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
500	A	General Conditions	--	10-62(d)(1)	§63.1 – §63.15

This emission unit is subject to the following federal regulation: *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters* [40 CFR Part 63, Subpart DDDDD].

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

### Operating Limits

- A. This boiler shall be fired by natural gas only.  
B. The amount of natural gas fired in this boiler shall not exceed 1000 x 10<sup>6</sup> ft<sup>3</sup> per rolling 12 month period.  
Authority for Requirement: DNR PSD Permit 97-A-999-S1; LCPH ATI 3696 / PTO 3957

### Operating Condition Monitoring and Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Linn County Air Quality Division and other federal or state air pollution regulatory agencies and their authorized representatives. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. The amount of natural gas fired in this boiler, in cubic feet. Calculate and record daily amounts and monthly and rolling 12 month totals.  
B. The design heat input capacity of this boiler.  
C. The NO<sub>x</sub> emissions as recorded by the CEM as required in 40 CFR §60.48b(b).  
D. Recordkeeping requirements of 40 CFR 60.49b(g) which include:  
i. calendar date  
ii. average hourly NO<sub>x</sub> emission rate  
iii. 30-Day average NO<sub>x</sub> emission rate  
iv. days NO<sub>x</sub> emission rate exceed limit  
v. record of missing data and explanation  
vi. documentation of reasons for excluding data, indication of when concentration exceeded span value  
vii. description of monitoring system  
viii. results of drift tests and quality assurance assessments

Authority for Requirement: DNR PSD Permit 97-A-999-S1; LCPH ATI 3696 / PTO 3957

### Emission Point Characteristics

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
500	106.5	V	78	470	79,640	DNR PSD Permit 97-A-999-S1 LCPH ATI 3696 / PTO 3957

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

**Stack Testing**

Refer to Appendix D, Stack Testing, for the applicable requirements.

**Continuous Emissions Monitoring**

Pollutant / Other Parameter:	NO <sub>x</sub>	O <sub>2</sub>
Continuous Emissions Monitor ID:	ME500	ME501
Operational Specifications:	40 CFR 60, Subparts A & Db	40 CFR 60, Subparts A & Db
Ongoing System Calibration/Quality Assurance:	40 CFR 60, Subparts A & Db	40 CFR 60, Subparts A & Db
Reporting & Recordkeeping:	40 CFR 60, Subparts A & Db	40 CFR 60, Subparts A & Db
Authority for Requirement:	DNR PSD Permit 97-A-999-S1 LCPH ATI 3696 / PTO 3957 567 IAC 23.1(2)"ccc" LCO 10.9(2)"55"	LCPH ATI 6379 / PTO 6421 567 IAC 23.1(2)"ccc" LCO 10.9(2)"55"

The owner of this equipment or his authorized agent shall provide written notice to the Director and the Linn County local program office, 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 and the Linn County local program office in the form of a comprehensive report within 30 days of the completion of the testing. 567 IAC 25.1(7)

**Opacity Monitoring:**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

Agency Approved Operation & Maintenance Plan Required? Yes  No

Facility Maintained Operation & Maintenance Plan Required? Yes  No

Compliance Assurance Monitoring (CAM) Plan Required? Yes  No

**Emission Point ID Number: 600**

**Boiler 6 Table 1**

EP	EU	EU Description	Fuel	Rated Capacity	CE ID	CE Description
600	600	Boiler 6	Natural Gas	99.9 MMBtu/hr	600	Low NOx Burner w/ FGR

**Boiler 6 Table 2**

EP	EU	CEMS
600	600	ME600 - NO <sub>x</sub> ME601 - O <sub>2</sub>

**Applicable Requirements**

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

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

**Emission Limits.**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
600	Opacity	20%	LCPH ATI 6379 / PTO 6421 LCO Sec. 10-60(a)
	PM	0.352 lb/MMBtu	LCPH ATI 6379 / PTO 6421 LCO Sec. 10-61(b)(2)
	PM/PM <sub>10</sub>	2.00 lb/hr	LCPH ATI 6379 / PTO 6421
	SO <sub>2</sub>	500 ppm <sub>v</sub>	LCPH ATI 6379 / PTO 6421 567 IAC 23.3(3)"e" LCO Sec. 10-65(a)(2)
		0.2 lb/hr	LCPH ATI 6379 / PTO 6421
	NO <sub>x</sub>	9.99 lb/hr	LCPH ATI 6379 / PTO 6421
		0.2 lb/MMBtu	LCPH ATI 6379 / PTO 6421 40 CFR §60.42b(k)(2)
CO	19.98 lb/hr	LCPH ATI 6379 / PTO 6421	

**Operational Limits & Requirements**

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

**Federal Standards**

A. New Source Performance Standards (NSPS):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
600	A	General Conditions	--	10-62(b)	§60.1 – §60.19
	Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Natural Gas	10-62(b)(55)	§60.40b – §60.49b

Authority for Requirement: LCPH ATI 6379 / PTO 6421; 567 IAC 23.1(2)"ccc"; LCO Sec. 10-62(b)(55); 40 CFR 60 Subpart Db

B. National Emission Standards for Hazardous Air Pollutants (NESHAP):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
600	A	General Conditions	--	10-62(d)(1)	§63.1 – §63.15

This emission unit is subject to the following federal regulation: *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters* [40 CFR Part 63, Subpart DDDDD].

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

**Operating Limits**

- A. This facility shall meet the monitoring requirements of 40 CFR 60 §§ 1-19 [NSPS Subpart A] to comply with LCO Sec. 10-62(b).
- B. This facility shall meet the standards of 40 CFR §60.42b through 40 CFR §60.44b [NSPS Subpart Db] to comply with LCO Sec. 10-62(b)(55).
- C. This boiler shall be limited to pipeline quality natural gas fuel only.
- D. This facility shall meet the testing and emission monitoring procedures of 40 CFR §60.45b through 40 CFR §60.48b [NSPS Subpart Db] to comply with LCO Sec. 10-62(b)(55).
- E. The total throughput of natural gas for this unit shall be limited to a rolling 12-month total of 745.84 MMCF.

Authority for Requirement: LCPH ATI 6379 / PTO 6421

**Operating Condition Monitoring and Recordkeeping**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Linn County Air Quality Division and other federal or state air pollution regulatory agencies and their authorized representatives. Records shall be legible and maintained in an orderly manner. These records shall show the following:

- A. Recordkeeping for NSPS Subpart Db shall be done in accordance with 40 CFR §60.7.
- B. Monitoring for NSPS Subpart Db shall be done in accordance with 40 CFR §60.47b and §60.48b.
- C. Initial notification and recordkeeping shall be performed in accordance with 40 CFR §60.7.
- D. The owner or operator shall monitor and record the monthly and rolling 12-month total amount of natural gas combusted in this unit.
- E. Maintain fuel supplier certifications of the sulfur content of all fuels burned in accordance with 40 CFR §60.49b(r).

Authority for Requirement: LCPH ATI 6379 / PTO 6421

**Reporting Requirements**

The following information shall be submitted to this department by the 30<sup>th</sup> of each month for the previous quarter (January 30, April 30, July 30 and October 30).

- A. In accordance with 40 CFR §60.49b(i) a quarterly report containing the information recorded under 40 CFR §60.49b(g) shall be submitted.
- B. In accordance with 40 CFR §60.45b(k) and §60.48b(j)(2), the owner or operator must provide a report containing fuel records of the sulfur content of the fuels burned, as described under §60.49b(r), which shall be submitted on a quarterly basis.

Authority for Requirement: LCPH ATI 6379 / PTO 6421

## Continuous Emissions Monitoring

Emission monitoring for nitrogen oxides shall be performed in accordance with 40 CFR §60.48b. Accordingly, the facility being subject to a NO<sub>x</sub> standard under 40 CFR §60.44b, shall demonstrate compliance in accordance with either subparagraph A or B:

- A. Install, calibrate, maintain, and operate CEMS for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and shall record the output of the system; or
- B. If the owner or operator has installed a NO<sub>x</sub> emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

The CEMS shall be installed, evaluated, and operated, and data recorded in accordance with 40 CFR §60.48b(c)-(f).

The system shall be designed to meet 40 CFR 60, Appendix B, Performance Specification 2 (PS2). The specifications of 40 CFR 60, Appendix F, (Quality Assurance Procedures) shall apply.

In accordance with 40 CFR §60.48b(g) the owner or operator of an affected facility that has a heat input capacity of 250 million Btu/hour or less, and which has an annual capacity factor for natural gas having a nitrogen content of greater than 10 percent (0.10) shall comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of 40 CFR §60.48b.

In accordance with 40 CFR §60.48b(j), units that burn only gaseous fuels with potential sulfur dioxide emission rates of 0.32 lb/MMBtu heat input or less are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

Authority for Requirement: LCPH ATI 6379 / PTO 6421

## Emission Point Characteristics

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

EP	Stack Height (feet, above ground)	Discharge Style	Stack Opening (inches, dia.)	Temp (°F)	Flowrate (acfm)	Authority for Requirement
600	80	V	42	333	27,967	LCPH ATI 6379 / PTO 6421

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

## Monitoring Requirements

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

## **Stack Testing**

Refer to Appendix D, Stack Testing, for the applicable requirements.

**Continuous Emissions Monitoring**

Pollutant / Other Parameter:	NO <sub>x</sub>	O <sub>2</sub>
Continuous Emissions Monitor ID:	ME600	ME601
Operational Specifications:	40 CFR 60, Subparts A & Db	40 CFR 60, Subparts A & Db
Ongoing System Calibration/Quality Assurance:	40 CFR 60, Subparts A & Db	40 CFR 60, Subparts A & Db
Reporting & Recordkeeping:	40 CFR 60, Subparts A & Db	40 CFR 60, Subparts A & Db
Authority for Requirement:	LCPH ATI 6379 / PTO 6421 567 IAC 23.1(2)"ccc" LCO 10.9(2)"55"	LCPH ATI 6379 / PTO 6421 567 IAC 23.1(2)"ccc" LCO 10.9(2)"55"

*The owner of this equipment or his authorized agent shall provide written notice to the Director and the Linn County local program office, 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 and the Linn County local program office in the form of a comprehensive report within 30 days of the completion of the testing. 567 IAC 25.1(7)*

**Opacity Monitoring**

Refer to Appendix D, Opacity Monitoring, for the complete requirement and summary of all emission points at the facility subject.

Authority for Requirement: 567 IAC 22.108(14)

**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: 601**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
601	601	AC Silo	Activated Carbon	2,970 ft <sup>3</sup>	601	Bin Vent Filter

**Applicable Requirements**

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

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

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
601	Opacity	20%	LCPH ATI 6553 / PTO 6514 LCO Sec. 10-60(a)
	PM	0.1 gr/dscf	LCPH ATI 6553 / PTO 6514 LCO Sec. 10-62(a)(1) 567 IAC 23.3(2)"a"
	PM/PM <sub>10</sub>	0.1 lb/hr	LCPH ATI 6553 / PTO 6514

**Operational Limits & Requirements**

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

**Control Device**

A bin vent filter shall be installed to control particulate matter emissions. The control equipment shall be maintained properly and operated at all times the air pollution source is in operation. All appropriate probes, monitors and gauges needed to measure the parameters outlined in "Operating Condition Monitoring and Recordkeeping" shall be installed, maintained and operating during the operation of the emission unit and control device at all times.

Authority for Requirement: LCPH ATI 6553 / PTO 6514

**Operating Limits**

*Operating limits for this emission unit shall be:*

A. Operate and maintain the control equipment according to the manufacturer's specifications.

Authority for Requirement: LCPH ATI 6553 / PTO 6514

**Operating Condition Monitoring and Recordkeeping**

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the Linn County Air Quality Division and other federal or state air pollution regulatory agencies and their authorized representatives. Records shall be legible and maintained in an orderly manner. These records shall show the following:

A. The owner or operator shall record all maintenance performed on the control equipment.

Authority for Requirement: LCPH ATI 6553 / PTO 6514

**Emission Point Characteristics**

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

<b>EP</b>	<b>Stack Height (feet, above ground)</b>	<b>Discharge Style</b>	<b>Stack Opening (inches, dia.)</b>	<b>Temp (°F)</b>	<b>Flowrate (acfm)</b>	<b>Authority for Requirement</b>
601	48	H	8 x 10	70	1,100	LCPH ATI 6553 / PTO 6514

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within thirty (30) days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: 110, 401, 402, 403**

**Associated Equipment**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
110	110-110	Reclaim Hopper	Coal	750 tons/hr	--	--
401	401-401	Coal Unloading		600 tons/hr	401	Surfactant Based Dust Suppression
402	402-402	Coal Unloading House		750 tons/hr	402	Surfactant Based Dust Suppression
403	403-403	Coal Load Out		600 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.*

**Emission Limits**

EP	Pollutant	Emission Limit(s)	Authority for Requirement
110 401 402 403	Opacity	20%	LCO Sec. 10-60(a) & LCO Sec. 10-62(b)(22) 567 IAC 23.1(2)"v" 40 CFR §60.254

Pollutant: Fugitive Dust

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 particulate matter in quantities sufficient to create a nuisance. 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.

Authority for Requirement: 567 IAC 23.3(2)"c"; LCO Sec. 10-66

**Operational Limits & Requirements**

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

**Federal Standards**

A. New Source Performance Standards (NSPS):

The following subparts apply to the emission unit(s) in this permit:

EU ID	Subpart	Title	Type	Local Reference (LCO Sec.)	Federal Reference (40 CFR)
110 401	A	General Conditions	--	Sec. 10-62(b)	§60.1 – §60.19
402 403	Y	Standards of Performance for Coal Preparation Plants	--	Sec. 10-62(b)(22)	§60.250 - §60.258

Authority for Requirement: 567 IAC 23.1(2)"v"; LCO Sec. 10-62(b)(22); 40 CFR 60 Subpart Y

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the periodic 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: 120a, 121a, 400, 501**

**Associated Equipment.**

EP	EU	EU Description	Raw Material	Rated Capacity	CE ID	CE Description
120a	406-407	Ash Loadout	Ash	60 tons/hr	--	--
121a	521-521	Ash Loadout for Units 1 & 2	Ash	120 tons/hr	--	--
400	102-100	Coal Stacker	Coal	750 tons/hr	--	--
	400-400	Coal Pile Storage	Coal	8 acres	--	--
501	501-501	Ecoston Production	Fly Ash	60 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

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 particulate matter in quantities sufficient to create a nuisance. 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.

Authority for Requirement: 567 IAC 23.3(2)"c"; LCO Sec. 10-66

**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 and Linn County Code of Ordinance (LCO) Chapter 10 – Environment, Article III, Sec. 10-57.

### G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. *567 IAC 22.108(15)"c"*

### G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source's right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, Wallace State Office Building, 502 E 9th St., Des Moines, IA 50319-0034, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permitting & Standards Branch, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

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

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

### G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and Linn County Public Health Air Quality Division. *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 Linn County Public Health Air Quality Division. 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 emissions inventory shall be submitted annually by March 31 with forms specified by the department documenting actual emissions for the previous calendar year.
4. The fee shall be submitted annually by July 1 with forms specified by the department.
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" and LCO Sec. 10-75

#### **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" and LCO Sec. 10-71 and 10-72

#### **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) and LCO Sec. 10-67(b)

#### **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) and LCO Sec. 10-69(1)*

**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) 725-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in *567 IAC 131.2(2)*. *567 IAC Chapter 131-State Only*

**G14. Excess Emissions and Excess Emissions Reporting Requirements**

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation

constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

## 2. Excess Emissions Reporting

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

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

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

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4) and LCO Sec. 10-67*

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

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. *567 IAC 22.108(16)*

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

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

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

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4) This notification must be made to Linn County Air Quality Division, in lieu of the Department, upon adoption of the NSPS or NESHAP into Chapter 10.*

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

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

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));
- e. The changes comply with all applicable requirements.
- f. For each such change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
  - i. A brief description of the change within the permitted facility,
  - ii. The date on which the change will occur,
  - iii. Any change in emission as a result of that change,
  - iv. The pollutants emitted subject to the emissions trade
  - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
  - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
  - vii. Any permit term or condition no longer applicable as a result of the change.

*567 IAC 22.110(1)*

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

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

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

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

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

1. Administrative Amendment.

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

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

## 2. Minor Title V Permit Modification.

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

- i. Do not violate any applicable requirement;
- ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit;
- iii. Do not require or change a case by case determination of an emission limitation or other standard, or an increment analysis;
- iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act;
- v. Are not modifications under any provision of Title I of the Act; and
- vi. Are not required to be processed as significant modification under rule 567 - 22.113(455B).

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

- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- ii. The permittee's suggested draft permit;
- iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
- iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

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

## 3. Significant Title V Permit Modification.

Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, as those requirements that apply to Title V issuance and renewal.

The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.111-567 IAC 22.113*

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

Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. *567 IAC 22.1(1) and LCO Sec. 10-58*

### **G20. Asbestos**

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

### **G21. Open Burning**

The permittee is prohibited from conducting open burning, except as provided in LCO Sec. 10-63.

### **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 or greenhouse gas generating substances to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

### **G24. Permit Reopenings**

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

- a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
- b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.

- c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*
3. A permit shall be reopened and revised under any of the following circumstances:
    - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
    - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
    - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
    - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
    - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
  4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*
  5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

**G25. Permit Shield**

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

**G26. Severability**

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8) and LCO Sec. 1-7*

**G27. Property Rights**

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

**G28. Transferability**

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

**G29. Disclaimer**

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

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

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable

requirements of 567 – Chapter 23 or a permit condition. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department's request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

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

Stack Test Review Coordinator  
Iowa DNR, Air Quality Bureau  
Wallace State Office Building  
502 E 9<sup>th</sup> St.  
Des Moines, IA 50319-0034  
(515) 725-9526

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

*567 IAC 25.1(7)"a", 567 IAC 25.1(9) and LCO Sec. 10-70*

### **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:

Iowa Compliance Officer  
Air Branch  
Enforcement and Compliance Assurance Division  
U.S. EPA Region 7  
Air Permits and Compliance Branch  
11201 Renner Blvd.  
Lenexa, KS 66219  
(913) 551-7020

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

Chief, Air Quality Bureau  
Iowa Department of Natural Resources  
Wallace State Office Building  
502 E 9<sup>th</sup> St.  
Des Moines, IA 50319-0034  
(515) 725-8200

Reports or notifications to the Linn County local program shall be directed to the supervisor at the Linn County local program. The current address and phone number is:

**Linn County Public Health**  
Air Quality Branch  
1240 26<sup>th</sup> Avenue Ct SW  
Cedar Rapids, IA 52404  
(319) 892-6000



## V. APPENDIX A – System-wide Consent Decree Requirements for IPL Facilities in Iowa

Any requirements contained in this permit that are required by and refer to "Consent Decree" [*United States of America and The State of Iowa, and The County of Linn, Iowa and Sierra Club v. Interstate Power and Light Company*, Civil Action No.: C15-0061; United States District Court for the Northern District of Iowa (September 2, 2015)] have been included in this permit solely to comply with the Consent Decree.

If and when the Consent Decree is terminated, the substantive requirements originating in and required by the Consent Decree and included in this permit, shall remain in full force and effect. As required by Consent Decree Paragraph 225, the requirements and limitations enumerated in the Consent Decree are permanently included in this federally enforceable permit and shall remain applicable requirements as that term is defined in 40 CFR §70.2.

The requirements found in permit Conditions "System-wide Consent Decree Requirements for IPL Facilities in Iowa" A. – E. were established upon the Interstate Power and Light (IPL) "system" in Iowa per the Consent Decree. "System" as used in this permit is defined as the Burlington, Dubuque, Lansing, M.L. Kapp, Ottumwa, Prairie Creek, Sixth Street, and Sutherland Generating Stations. The individual Generating Stations are defined by the Generating Station location and its units as listed in the following table:

<p><b>Burlington Generating Station</b> Des Moines County</p> <ul style="list-style-type: none"> <li>Unit 1 (212 MW, coal-fired)</li> </ul>	<p><b>Ottumwa Generating Station</b> Wapello County</p> <ul style="list-style-type: none"> <li>Unit 1 (726 MW, coal-fired)</li> </ul>
<p><b>Dubuque Generating Station</b> Dubuque County</p> <ul style="list-style-type: none"> <li>Unit 1 (38 MW, fossil-fuel fired)</li> <li>Unit 5 (29 MW, fossil-fuel fired)</li> <li>Unit 6 (15 MW, fossil-fuel fired)</li> </ul>	<p><b>Sutherland Generating Station<sup>1</sup></b> Marshall County</p> <ul style="list-style-type: none"> <li>Unit 1 (38 MW, fossil-fuel fired)</li> <li>Unit 2 (38 MW, fossil-fuel fired)</li> <li>Unit 3 (82 MW, fossil-fuel fired)</li> </ul>
<p><b>Prairie Creek Generating Station</b> Linn County</p> <ul style="list-style-type: none"> <li>Boiler 1 (heat input of 245 MMBTU/hr, coal-fired)</li> <li>Boiler 2 (heat input of 304 MMBTU/hr, coal-fired)</li> <li>Unit 3 (50 MW, coal-fired)</li> <li>Unit 4 (149 MW, coal-fired)</li> </ul>	<p><b>Sixth Street Generating Station<sup>2</sup></b> Linn County</p> <ul style="list-style-type: none"> <li>Unit 1 (10 MW, coal-fired)</li> <li>Unit 2 (18 MW, coal-fired)</li> <li>Unit 3 (17 MW, coal-fired)</li> <li>Unit 4 (17 MW, coal-fired)</li> <li>Unit 5 (32 MW, coal-fired)</li> </ul>
<p><b>Lansing Generating Station<sup>3</sup></b> Allamakee County</p> <ul style="list-style-type: none"> <li>Unit 1 (15 MW, coal-fired)</li> <li>Unit 2 (12 MW, coal-fired)</li> <li>Unit 3 (38 MW, coal-fired)</li> <li>Unit 4 (275 MW, coal-fired)</li> </ul>	<p><b>Milton L. Kapp (M.L. Kapp) Generating<sup>4</sup> Station</b> Clinton County</p> <ul style="list-style-type: none"> <li>Unit 1 (19 MW, coal-fired)</li> <li>Unit 2 (219 MW, coal-fired)</li> </ul>

<sup>1</sup> Sutherland Unit 2 no longer operates and has been removed from the Title V operating permit.

<sup>2</sup> Sixth Street Generating Station no longer operates and its Title V permit has been rescinded.

<sup>3</sup> Lansing Units 1, 2, and 3 no longer operate and the construction permit for each unit has been rescinded.

<sup>4</sup> M.L. Kapp Unit 1 no longer operates and it has been removed from the Title V operating permit.

### A. System-wide Emission Limits

- (1) As required by Consent Decree Paragraph 102, the IPL "system" in Iowa shall not exceed the following annual tonnage limits for NO<sub>x</sub>:

Calendar Year	System-wide Annual NO <sub>x</sub> Limit (tons/yr)
2015, 2016, and 2017	11,500
2018 and 2019	10,500

Calendar Year	System-wide Annual NO <sub>x</sub> Limit (tons/yr)
2020	7,500
2021	7,250
2022 and continuing each calendar year thereafter	6,800

- (2) As required by Consent Decree Paragraph 126, the IPL "system" in Iowa shall not exceed the following annual tonnage limits for SO<sub>2</sub>:

Calendar Year	System-wide Annual SO <sub>2</sub> Limit (tons/yr)
2015	39,000
2016	23,500
2017 and 2018	14,100
2019 and 2020	12,000
2021	11,000
2022, 2023, 2024, and 2025	6,000
2026 and continuing each calendar year thereafter	3,250

#### B. Consent Decree Monitoring

- (1) As required by Consent Decree Paragraphs 103 and 104, the owner or operator shall demonstrate compliance with the Consent Decree NO<sub>x</sub> limits using the following procedures:
- (a) For system-wide annual tonnage limits and the Prairie Creek annual tonnage limits:
    - (i) For all listed units except for Prairie Creek Generating Station Boilers 1 and 2: As required by Consent Decree Paragraph 104, the owner or operator shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75.
    - (ii) For Prairie Creek Generating Station Boilers 1 and 2: As required by Consent Decree Paragraph 114, the owner or operator shall calculate calendar-year NO<sub>x</sub> mass emissions for inclusion in the system-wide annual tonnage limit [Condition 14.A.(1)] and the Prairie Creek annual tonnage limit by multiplying the NO<sub>x</sub> rate, as determined from the last performed reference method test, by the respective heat input for each unit for that calendar year. The heat input shall be calculated by multiplying the amount of each fuel combusted by its respective gross heating value and summed for all fuels combusted in each boiler.
- (2) Per Consent Decree Paragraphs 127 and 128, the owner or operator shall demonstrate compliance with the Consent Decree SO<sub>2</sub> limits using the following procedures:
- (a) For system-wide annual tonnage limits the owner or operator shall use SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. Once a unit is refueled the SO<sub>2</sub> emissions shall be calculated using a stack test emission factor or by using methods set forth in US EPA's AP-42 (*Compilation of Air Pollutant Emission Factors*) or by SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75.

#### C. Allowances

- (1) NO<sub>x</sub> Allowances:
- (a) As required by Consent Decree Paragraph 43, "*NO<sub>x</sub> Allowance*" is defined as an authorization to emit a specific amount of NO<sub>x</sub> that is allocated or issued under an emission trading or marketable permit program of any kind established under the Clean Air Act (CAA) or applicable State Implementation Plan; provided, however, that with respect to any such program that first applies to emissions occurring after December 31, 2011, a "NO<sub>x</sub> Allowance" shall include an allowance created and allocated under such program only for control periods starting on or after September 2, 2019 [the fourth anniversary of the date of entry of the Consent Decree].

- (b) As required by Consent Decree Paragraph 111, the owner or operator shall surrender or transfer to a non-profit third party selected by the owner or operator for surrender, all NO<sub>x</sub> allowances required to be surrendered pursuant to Consent Decree Paragraph 107 by June 30 of the immediately following calendar year. If any NO<sub>x</sub> allowances required to be surrendered are transferred directly to a non-profit third-party, the owner or operator shall include a description of such transfer in the next report submitted to EPA pursuant to Section XII (Periodic Reporting) of the Consent Decree. The report shall:
    - (i) Identify the non-profit recipient(s) of the NO<sub>x</sub> allowances and list the serial numbers of the transferred NO<sub>x</sub> allowances.
    - (ii) Include a certification by the third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the NO<sub>x</sub> allowances and will not use any of the NO<sub>x</sub> allowances to meet any obligation imposed by any environmental law.
    - (iii) No later than the third periodic report due after the transfer of any NO<sub>x</sub> allowances, the owner or operator shall include a statement that the third-party recipient(s) surrendered the NO<sub>x</sub> allowances for permanent surrender to EPA in accordance with the provisions of Paragraph 112 of the Consent Decree within one (1) year after the owner or operator transferred the NO<sub>x</sub> allowances to them. The owner or operator shall not have complied with the NO<sub>x</sub> allowance surrender requirements of Consent Decree Paragraph 111 until all third-party recipient(s) have actually surrendered the transferred NO<sub>x</sub> allowances to EPA.
  - (c) As required by Consent Decree Paragraph 112, for all allowances required to be surrendered, the owner or operator shall ensure that a NO<sub>x</sub> allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such NO<sub>x</sub> allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such NO<sub>x</sub> allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System or similar system provided by EPA. As part of submitting these transfer requests, the owner or operator shall ensure that the transfer of its NO<sub>x</sub> allowances are irrevocably authorized and that the source and location of the NO<sub>x</sub> allowances being surrendered are identified by name of account and any applicable serial or other identification numbers or station names.
  - (d) As required by Consent Decree Paragraph 105, the owner or operator shall not use NO<sub>x</sub> allowances to comply with any requirement of the Consent Decree, including claiming compliance with any emission limitation required by the Consent Decree by using, tendering, or otherwise applying NO<sub>x</sub> allowances to offset any excess emissions.
  - (e) As required by Consent Decree Paragraph 106, except as provided in Consent Decree Paragraphs 107 and 108, the owner or operator shall not sell, bank, trade, or transfer its interest in any NO<sub>x</sub> allowances allocated to units in the System.
  - (f) As required by Consent Decree Paragraph 107, for each calendar year, the owner or operator shall surrender all NO<sub>x</sub> allowances allocated to the units in the System for that calendar year that the owner or operator does not need to meet federal and/or state CAA regulatory requirements for System units.
  - (g) As required by Consent Decree Paragraph 108, the owner or operator is allowed to purchase or otherwise obtain NO<sub>x</sub> allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law.
  - (h) As required by Consent Decree Paragraph 109, the owner or operator's use and surrender of NO<sub>x</sub> Allowances are permanent and are not subject to any termination provision of the Consent Decree.
- (2) NO<sub>x</sub> Super-Compliant Allowances
- (a) As required by Consent Decree Paragraph 110, notwithstanding Consent Decree Paragraphs 106 and 107, in each calendar year the owner or operator may sell, bank, use, trade, or transfer NO<sub>x</sub> allowances allocated to the units in the System that are made available in that calendar year solely as a result of:
    - (i) The installation and operation of any NO<sub>x</sub> air pollution control equipment that is not otherwise required under the Consent Decree and is not otherwise required by law;
    - (ii) The use of a selective catalytic reduction (SCR) prior to the date established in the Consent Decree; or

(iii) Achievement and maintenance of an emission rate below an applicable 30-day rolling average emission rate or 12-month rolling average emission rate for NO<sub>x</sub>; provided the owner or operator is also in compliance for the calendar year with all emission limitations for NO<sub>x</sub> set forth in the Consent Decree. The owner or operator shall timely report the generation of such Super-Compliant Allowances in accordance with Section XII (Periodic Reporting) of the Consent Decree.

(3) SO<sub>2</sub> Allowances:

- (a) As required by Consent Decree Paragraph 66, "*SO<sub>2</sub> Allowance*" is defined as an authorization to emit a specified amount of SO<sub>2</sub> that is allocated or issued under an emission trading or marketable permit program of any kind established under the CAA or applicable State Implementation Plan; provided, however, that with respect to any such program that first applies to emissions occurring after December 31, 2011, a "SO<sub>2</sub> Allowance" shall include an allowance created and allocated under such program only for control periods starting on or after September 2, 2019 [the fourth anniversary of the date of entry of the Consent Decree].
- (b) As required by Consent Decree Paragraph 135, the owner or operator shall surrender or transfer to a non-profit third party selected by the owner or operator for surrender, all SO<sub>2</sub> allowances required to be surrendered pursuant to Consent Decree Paragraph 131 by June 30 of the immediately following calendar year. If any SO<sub>2</sub> allowances required to be surrendered are transferred directly to a non-profit third-party, the owner or operator shall include a description of such transfer in the next report submitted to EPA pursuant to Section XII (Periodic Reporting) of the Consent Decree. The report shall:
- (i) Identify the non-profit recipient(s) of the SO<sub>2</sub> allowances and list the serial numbers of the transferred SO<sub>2</sub> allowances.
  - (ii) Include a certification by the third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the SO<sub>2</sub> allowances and will not use any of the SO<sub>2</sub> allowances to meet any obligation imposed by any environmental law.
  - (iii) No later than the third periodic report due after the transfer of any SO<sub>2</sub> allowances, the owner or operator shall include a statement that the third-party recipient(s) surrendered the SO<sub>2</sub> allowances for permanent surrender to EPA in accordance with the provisions of Paragraph 136 of the Consent Decree within one (1) year after the owner or operator transferred the SO<sub>2</sub> allowances to them. The owner or operator shall not have complied with the SO<sub>2</sub> allowance surrender requirements of Consent Decree Paragraph 135 until all third-party recipient(s) have actually surrendered the transferred SO<sub>2</sub> allowances to EPA.
- (c) As required by Consent Decree Paragraph 136, for all allowances required to be surrendered, the owner or operator shall ensure that a SO<sub>2</sub> allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such SO<sub>2</sub> allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such SO<sub>2</sub> allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System or similar system provided by EPA. As part of submitting these transfer requests, the owner or operator shall ensure that the transfer of its SO<sub>2</sub> allowances are irrevocably authorized and that the source and location of the SO<sub>2</sub> allowances being surrendered are identified by name of account and any applicable serial or other identification numbers or station names.
- (d) As required by Consent Decree Paragraph 129, the owner or operator shall not use SO<sub>2</sub> allowances to comply with any requirement of the Consent Decree, including claiming compliance with any emission limitation required by the Consent Decree by using, tendering, or otherwise applying SO<sub>2</sub> allowances to offset any excess emissions.
- (e) As required by Consent Decree Paragraph 130, except as provided in Consent Decree Paragraphs 131 and 132, the owner or operator shall not sell, bank, trade, or transfer its interest in any SO<sub>2</sub> allowances allocated to units in the System.
- (f) As required by Consent Decree Paragraph 131, for each calendar year, the owner or operator shall surrender all SO<sub>2</sub> allowances allocated to the units in the System for that calendar year that the owner or operator does not need to meet federal and/or state CAA regulatory requirements for System units.

- (g) As required by Consent Decree Paragraph 132, the owner or operator is allowed to purchase or otherwise obtain SO<sub>2</sub> allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law.
  - (h) As required by Consent Decree Paragraph 133, the owner or operator's use and surrender of SO<sub>2</sub> Allowances are permanent and are not subject to any termination provision of the Consent Decree.
- (4) SO<sub>2</sub> Super-Compliant Allowances
- (a) As required by Consent Decree Paragraph 134, notwithstanding Consent Decree Paragraphs 130 and 131, in each calendar year the owner or operator may sell, bank, use, trade, or transfer SO<sub>2</sub> allowances allocated to the units in the System that are made available in that calendar year solely as a result of:
    - (i) The installation and operation of any SO<sub>2</sub> air pollution control equipment that is not otherwise required under the Consent Decree and is not otherwise required by law;
    - (ii) The use of a dry flue gas desulfurization (DFGD) prior to the date established in the Consent Decree; or
    - (iii) Achievement and maintenance of an emission rate below an applicable 30-day rolling average emission rate or 12-month rolling average emission rate for SO<sub>2</sub>;
 provided the owner or operator is also in compliance for the calendar year with all emission limitations for SO<sub>2</sub> set forth in the Consent Decree. The owner or operator shall timely report the generation of such Super-Compliant Allowances in accordance with Section XII (Periodic Reporting) of the Consent Decree.

#### D. Repowering Requirements

- (1) As defined in Paragraph 61 of the Consent Decree, "Repower" or "Repowered" means the removal and replacement of the Unit components such that the replaced unit generates electricity solely through the combustion of natural gas through the use of a combined cycle combustion turbine technology. Nothing herein shall prevent the reuse of any equipment at any existing unit or new emissions unit, provided that the owner or operator applies for, and obtains, all required permits, including, if applicable, a Prevention of Significant Deterioration (PSD) or Nonattainment New Source Review (NSR) permit.
- (2) As defined in Paragraph 62 of the Consent Decree, "Retire," "Retired," or "Retirement" means to permanently shut down a unit such that the unit cannot physically or legally burn fossil fuel, and to comply with applicable state and federal requirements for permanently ceasing operation of the unit as a fossil fuel-fired electric generating unit, including removing the unit from Iowa's air emissions inventory, and amending all applicable permits so as to reflect the permanent shutdown status of such unit. The owner or operator can choose to not retire and to continue to operate such a unit only if is "Refueled" or "Repowered" within the meaning of the Consent Decree, and the owner or operator obtains any and all required CAA permits for the "Refueled" or "Repowered" unit, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa state implementation plan (SIP) provisions implementing CAA Subchapter I.
- (3) The owner or operator has ceased operations at Lansing Unit 1, Lansing Unit 2, Lansing Unit 3, M.L. Kapp Unit 1, Sutherland Unit 2, Sixth Street Unit 1, Sixth Street Unit 2, Sixth Street Unit 3, Sixth Street Unit 4, and Sixth Street Unit 5. In accordance with Paragraph 78 of the Consent Decree, the permanent "Retirement" of these units became an enforceable obligation such that the owner or operator may only operate if:
  - (i) It is "Repowered" per Condition 14.D.(1) and
  - (ii) The owner or operator obtains any and all required CAA permit(s) for the repowered unit including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa State Implementation Plan (SIP) provisions implementing CAA Subpart I.

E. Post Consent Decree Reporting

As required by 567 IAC 25.1(6), the owner or operator shall provide quarterly reports to the Department no later than thirty (30) calendar days following the end of the calendar quarter on forms provided by the Department for each CEMS. All periods of recorded emissions in excess of applicable standards, the results of all calibrations and zero checks and performance evaluations or source upsets and any apparent reasons for these malfunctions and upsets shall be included in the report. In addition, the owner or operator shall include in the quarterly report all periods of monitor malfunction, maintenance, and/or repair procedures performed.

Upon the termination of the Consent Decree, the owner or operator shall submit periodic reports as required by Title V to demonstrate compliance with all Consent Decree requirements contained within Conditions 1 (Emission Limits), 5 (Operating Requirements with Associated Monitoring and Recordkeeping), and 14 (System-wide Consent Decree Requirements for IPL Facilities in Iowa) of this permit. At a minimum, the information in the reports shall include:

- (1) All information necessary to determine compliance during the reporting period with:
  - (a) All applicable Prairie Creek annual tonnage limitations;
  - (b) All applicable system-wide annual tonnage limitations;
  - (c) The obligation to monitor SO<sub>2</sub>, NO<sub>x</sub>, and PM emissions; and
  - (d) The obligation to surrender NO<sub>x</sub> and SO<sub>2</sub> allowances.
- (2) Emission reporting and allowance accounting information necessary to determine super-compliant NO<sub>x</sub> and SO<sub>2</sub> allowances that the owner or operator claims to have generated in accordance with Consent Decree Paragraphs 110 and 134 through control of emissions beyond the requirements of the Consent Decree.

## **V. APPENDIX B – Applicable Federal Standards**

**[40 CFR part 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units](#)**

**[40 CFR part 60 Subpart Y - Standards of Performance for Coal Preparation Plants](#)**

**[40 CFR part 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Engines](#)**

A listing of all the promulgated NSPS rules, EPA Region 7 staff contact information (for questions pertaining to the rule), compliance assistance links and a link to each NSPS can be found at the link below:

<http://www.epa.gov/caa-permitting/new-source-performance-standards-region-7>

**[40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines](#)**

**[40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters](#)**

**[40 CFR 63 Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants from Coal and Oil-fired Electric Utility Steam Generating Units \(EGU-MATS\)](#)**

A listing of all the promulgated MACT rules, EPA Region 7 staff contact information (for questions pertaining to the rule), compliance assistance links and a link to each NSPS can be found at the link below:

<http://www.epa.gov/caa-permitting/maximum-achievable-control-technology-standards-region-7>

## V. APPENDIX C – Opacity Monitoring Summary

### Opacity Monitoring:

The facility shall check the opacity weekly during a period when the emission unit listed in Opacity Monitoring Table 1 is operating with product and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required.

If an opacity > 20% is observed from emission unit(s) listed in Opacity Monitoring Table 1, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

**Opacity Monitoring Table 1.**

EP	EU
100	503-100
	504-100
	100-100B, C & D
104	501-100
	502-100
	100-100E
120	404-405
	405-406
121	522-521
	523-521
122	524-521
123	525-521
500	500
600	600

Authority for Requirement: 567 IAC 22.108(14)

## V. APPENDIX D – Stack Testing Summary

EP	EU Description	Pollutant	Compliance Methodology	Completion Deadline	Test Method
001	Boilers 1 & 2	Filterable PM – Federal	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 5
		Opacity	COMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 9
		SO <sub>2</sub>	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 6C
		NO <sub>x</sub>	Stack Test	Every 4 Operating Quarters <sup>3</sup>	40 CFR 60, Appendix A, Method 7E
		CO	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 10
003	Unit 3	Filterable PM – Federal	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 5
		Opacity	COMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 9
		SO <sub>2</sub>	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 6C
		NO <sub>x</sub>	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 7E
		CO	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 10
015	Unit 4	NO <sub>x</sub>	CEMS <sup>1,2</sup>	Continuous	40 CFR 60, Appendix A, Method 7E
500	Boiler 5	NO <sub>x</sub>	CEMS <sup>1</sup>	Continuous	40 CFR 60, Appendix A, Method 7E
600	Boiler 6	NO <sub>x</sub>	CEMS <sup>1</sup>	Continuous	40 CFR 60, Appendix A, Method 7E

<sup>1</sup> CEMS = Continuous Emission Monitoring System and COMS = Continuous Opacity Monitoring System.

<sup>2</sup> See "Compliance Monitoring Systems (CMS)" conditions for all CEMS and COMS requirements.

<sup>3</sup> As required by Consent Decree Paragraphs 113 and 114, the owner or operator shall conduct a stack test on each boiler every four (4) operating quarters. An "operating quarter" is any calendar quarter during which a boiler operates one hundred sixty-eight (168) hours or more. If testing is unable to be completed in the fourth operating quarter, due to unforeseen circumstances, it shall be completed within seven hundred twenty (720) unit operating hours once the boiler returns to service. Each stack test shall meet the following criteria:

- EPA Method 7 or alternative method approved by EPA or the Department,
- Three (3) separate runs performed under representative operating conditions, not including periods of startup, shutdown, or malfunction (SSM), and
- The results of each test shall be submitted to EPA region VII, the Department, and Linn County within sixty (60) days of the completion of each test.

Authority for Requirement: 567 IAC 22.108(3) (EP's 001, 003, 015, 500 and 600)

Authority for Requirement: DNR PSD Permit 97-A-998-P5; LCPH ATI 6838 / PTO 6561-R2 (EP 001)

Authority for Requirement: DNR PSD Permit 08-A-181-P2; LCPH ATI 6551 / PTO 6512-R2 (EP003)

Authority for Requirement: LCPH ATI 6552 / PTO 6513-R2 (EP 015)

Authority for Requirement: DNR PSD Permit 97-A-999-S1; LCPH ATI 3696 / PTO 3957 (EP 500)

Authority for Requirement: LCPH ATI 6379 / PTO 6421 (EP 600)

## V. APPENDIX E – Facility O&M Plans Summary

The following emission units are subject to a facility O&M plan:

EP	EU ID	Description
100	503-100	Boiler 3 Coal Storage Bunker
	504-100	Boiler 4 Coal Storage Bunker
	100-100B	Coal Belt Dust Handling Pick-ups for Bunkers 3 & 4
	100-100C	Coal Belt Dust Handling Pick-ups for Bunkers 3 & 4
	100-100D	Coal Belt Dust Handling Pick-ups for Bunkers 3 & 4
104	501-100	#1 Coal Storage Bunker
	502-100	#2 Coal Storage Bunker
	100-100E	Dust Pick-ups for Bunkers 1 & 2

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **V. APPENDIX F - Acid Rain Phase II Permit**



AIR QUALITY BUREAU  
Wallace State Office Bldg.  
502 E 9<sup>th</sup> St.  
Des Moines, IA 50319-0034

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## Phase II Acid Rain Permit

Issued to: Prairie Creek  
Operated by: Interstate Power and Light (Alliant Energy Co.)  
ORIS code: 1073  
Effective: February 20, 2019 through February 19, 2024

**For the Director of the Department of Natural Resources**

Lori Hanson, Supervisor of Operating Permits Section

2/20/19

Date

### Acid Rain Permit comprises the following:

- 1) Statement of Basis.
- 2) SO<sub>2</sub> allowances allocated under this permit and NO<sub>x</sub> 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) SO<sub>2</sub> Allowance Allocations and NO<sub>x</sub> Requirements for each affected unit

		2019	2020	2021	2022	2023	2024
<b>Unit 3</b>	SO <sub>2</sub> allowances, under Table 2 of 40 CFR part 73.	727*	727*	727*	727*	727*	727*
	NO <sub>x</sub> limit	<p>Pursuant to 40 CFR part 76, The Iowa Department of Natural Resources approves a standard emission limitation compliance plan for Unit 9. The NO<sub>x</sub> compliance plan is effective beginning February 20, 2019 through February 19, 2024. Under the NO<sub>x</sub> compliance plan, this unit's annual average NO<sub>x</sub> 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<sub>x</sub> compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO<sub>x</sub> compliance plan and the requirements covering excess emissions.</p>					

		2019	2020	2021	2022	2023	2024
<b>Unit 4</b>	SO <sub>2</sub> allowances, under Table 2 of 40 CFR part 73.	3440*	3440*	3440*	3440*	3440*	3440*
	NO <sub>x</sub> limit	<p>Pursuant to 40 CFR part 76, The Iowa Department of Natural Resources approves a standard emission limitation compliance plan for Unit 9. The NO<sub>x</sub> compliance plan is effective beginning February 20, 2019 through February 19, 2024. Under the NO<sub>x</sub> compliance plan, this unit's annual average NO<sub>x</sub> 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>In addition to the described NO<sub>x</sub> compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO<sub>x</sub> 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 May 12, 2005). 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 SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR 72.84).

**3) Comments, Notes and Justifications:**

Renewal of the Phase II SO<sub>2</sub> and NO<sub>x</sub> permit.

**4) Permit Application:** Attached.



**Permit Requirements****STEP 3**

Read the standard 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 source or unit, as appropriate, 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 source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; 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).

<b>IPL-Prairie Creek Generating Station</b>
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**Sulfur Dioxide Requirements, Cont'd.****STEP 3, Cont'd.**

(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.

**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 source 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 source 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;

**Recordkeeping and Reporting Requirements, Cont'd.****STEP 3, Cont'd.**

- (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.
- (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.
- (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

**Effect on Other Authorities, Cont'd.**

**STEP 3, Cont'd.**

to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source 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.

**Certification**

**STEP 4**  
Read the certification statement, sign, and date.

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 <b>Jeffrey C Hanson</b>	
Signature 	Date <b>11/20/15</b>



# Instructions for the Acid Rain Program Permit Application

*The Acid Rain Program requires the designated representative to submit an Acid Rain permit application for each source with an affected unit. A complete Certificate of Representation must be received by EPA before the permit application is submitted to the title V permitting authority. A complete Acid Rain permit application, once submitted, is binding on the owners and operators of the affected source and is enforceable in the absence of a permit until the title V permitting authority either issues a permit to the source or disapproves the application.*

Please type or print. If assistance is needed, contact the title V permitting authority.

**STEP 1** A Plant Code is a 4 or 5 digit number assigned by the Department of Energy=s (DOE) Energy Information Administration (EIA) to facilities that generate electricity. For older facilities, "Plant Code" is synonymous with "ORISPL" and "Facility" codes. If the facility generates electricity but no Plant Code has been assigned, or if there is uncertainty regarding what the Plant Code is, send an email to the EIA. The email address is EIA-860@eia.gov.

**STEP 2** In column "a," identify each unit at the facility by providing the appropriate unit identification number, consistent with the identifiers used in the Certificate of Representation and with submissions made to DOE and/or EIA. Do not list duct burners. For new units without identification numbers, owners and operators must assign identifiers consistent with EIA and DOE requirements. Each Acid Rain Program submission that includes the unit identification number(s) (e.g., Acid Rain permit applications, monitoring plans, quarterly reports, etc.) should reference those unit identification numbers in exactly the same way that they are referenced on the Certificate of Representation.

## Submission Deadlines

For new units, an initial Acid Rain permit application must be submitted to the title V permitting authority 24 months before the date the unit commences operation. Acid Rain permit renewal applications must be submitted at least 6 months in advance of the expiration of the acid rain portion of a title V permit, or such longer time as provided for under the title V permitting authority=s operating permits regulation.

## Submission Instructions

Submit this form to the appropriate title V permitting authority. If you have questions regarding this form, contact your local, State, or EPA Regional Acid Rain contact, or call EPA's Acid Rain Hotline at (202) 343-9620.

## Paperwork Burden Estimate

The public reporting and record keeping burden for this collection of information is estimated to average 8 hours per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. **Do not send the completed form to this address.**



# Acid Rain NO<sub>x</sub> Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9

This submission is:  New  Revised

**STEP 1**  
Indicate plant name, State, and Plant code from the current Certificate of Representation covering the facility.

Plant Name	State	Plant Code
<b>Prairie Creek Generating Station</b>	<b>IA</b>	<b>1073</b>

**STEP 2**  
Identify each affected Group 1 and Group 2 boiler using the unit IDs from the current Certificate of Representation covering the facility. Also indicate the boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom, and select the compliance option for each unit by making an 'X' in the appropriate row and column.

	ID# <b>3</b>	ID# <b>4</b>	ID#	ID#	ID#	ID#
	Type <b>DBW</b>	Type <b>DBW</b>	Type	Type	Type	Type
(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for <u>Phase I</u> dry bottom wall-fired boilers)		<b>X</b>				
(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for <u>Phase I</u> tangentially fired boilers)						
(c) Standard annual average emission limitation of 0.46 lb/mmBtu (for <u>Phase II</u> dry bottom wall-fired boilers)	<b>X</b>					
(d) Standard annual average emission limitation of 0.40 lb/mmBtu (for <u>Phase II</u> tangentially fired boilers)						
(e) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)						
(f) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)						
(g) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)						
(h) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)						

STEP 2, cont'd

Plant Name (From Step 1) <b>Prairie Creek Generating Station</b>
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	ID# <b>3</b>	ID# <b>4</b>	ID#	ID#	ID#	ID#
	Type <b>DBW</b>	Type <b>DBW</b>	Type	Type	Type	Type
(i) NO <sub>x</sub> Averaging Plan (include NO <sub>x</sub> Averaging form)						
(j) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)						
(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO <sub>x</sub> Averaging (check the NO <sub>x</sub> Averaging Plan box and include NO <sub>x</sub> Averaging Form )						
(l) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17(a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)						

STEP 3: Identify the first calendar year in which this plan will apply.

January 1, 2016
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STEP 4: Read the special provisions and certification, enter the name of the designated representative, sign and date.

**Special Provisions**

General. This source is subject to the standard requirements in 40 CFR 72.9. These requirements are listed in this source's Acid Rain Permit.

**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 <b>Jeffrey C. Hanson</b>	
Signature 	Date <b>1/5/16</b>

## **V. APPENDIX G - CSAPR Conditions**

## Transport Rule (TR) Trading Program Title V Requirements

### Description of TR Monitoring Provisions

The TR subject unit(s), and the unit-specific monitoring provisions at this source, are identified in the following table(s). These unit(s) are subject to the requirements for the TR NO<sub>x</sub> Annual Trading Program, TR NO<sub>x</sub> Ozone Season Trading Program and TR SO<sub>2</sub> Group 1 Trading Program.

Unit ID: 3 (ORIS Code: 1073) Interstate Power and Light (Alliant Energy Co.) - Prairie Creek					
Parameter	Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR part 75, subpart B (for SO <sub>2</sub> monitoring) and 40 CFR part 75, subpart H (for NO <sub>x</sub> monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E
SO <sub>2</sub>	X		-----		
NO <sub>x</sub>	X	-----			
Heat input	X		-----		

Unit ID: 4 (ORIS Code: 1073) Interstate Power and Light (Alliant Energy Co.) - Prairie Creek					
Parameter	Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR part 75, subpart B (for SO <sub>2</sub> monitoring) and 40 CFR part 75, subpart H (for NO <sub>x</sub> monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E
SO <sub>2</sub>		X	-----		
NO <sub>x</sub>	X	-----			

Heat input	X		-----		

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (TR NO<sub>x</sub> Annual Trading Program), 97.530 through 97.535 (TR NO<sub>x</sub> Ozone Season Trading Program), and 97.630 through 97.635 (TR SO<sub>2</sub> Group 1 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable TR trading programs.
2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA’s website at <http://www.epa.gov/airmarkets/emissions/monitoringplans.html>.
3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR part 75, subpart E and 40 CFR 75.66 and 97.435 (TR NO<sub>x</sub> Annual Trading Program), 97.535 (TR NO<sub>x</sub> Ozone Season Trading Program) and/or 97.635 (TR SO<sub>2</sub> Group 1 Trading Program). The Administrator’s response approving or disapproving any petition for an alternative monitoring system is available on the EPA’s website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.
4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 (TR NO<sub>x</sub> Annual Trading Program), 97.530 through 97.534 (TR NO<sub>x</sub> Ozone Season Trading Program) and/or 97.630 through 97.634 (TR SO<sub>2</sub> Group 1 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 (TR NO<sub>x</sub> Annual Trading Program), 97.535 (TR NO<sub>x</sub> Ozone Season Trading Program) and/or 97.635 (TR SO<sub>2</sub> Group 1 Trading Program). The Administrator’s response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA’s website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.
5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (TR NO<sub>x</sub> Annual Trading Program), 97.530 through 97.534 (TR NO<sub>x</sub> Ozone Season Trading Program) and 97.630 through 97.634 (TR SO<sub>2</sub> Group 1 Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit’s monitoring system description.

**TR NO<sub>x</sub> Annual Trading Program requirements (40 CFR 97.406)**

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification

procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

- (2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of TR NO<sub>x</sub> Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NO<sub>x</sub> Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NO<sub>x</sub> emissions requirements.**

- (1) TR NO<sub>x</sub> Annual emissions limitation.

- (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall hold, in the source's compliance account, TR NO<sub>x</sub> Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all TR NO<sub>x</sub> Annual units at the source.
- (ii). If total NO<sub>x</sub> emissions during a control period in a given year from the TR NO<sub>x</sub> Annual units at a TR NO<sub>x</sub> Annual source are in excess of the TR NO<sub>x</sub> Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:
  - (A). The owners and operators of the source and each TR NO<sub>x</sub> Annual unit at the source shall hold the TR NO<sub>x</sub> Annual allowances required for deduction under 40 CFR 97.424(d); and
  - (B). The owners and operators of the source and each TR NO<sub>x</sub> Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.

- (2) TR NO<sub>x</sub> Annual assurance provisions.

- (i). If total NO<sub>x</sub> emissions during a control period in a given year from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NO<sub>x</sub> Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated

- representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the TR NO<sub>x</sub> Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  - (iii). Total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the State during a control period in a given year exceed the state assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the state NO<sub>x</sub> Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).
  - (iv). It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the state during a control period exceeds the common designated representative's assurance level.
  - (v). To the extent the owners and operators fail to hold TR NO<sub>x</sub> Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
    - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
    - (B). Each TR NO<sub>x</sub> Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- (3) Compliance periods.
- (i). A TR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.
  - (ii). A TR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.
- (4) Vintage of allowances held for compliance.
- (i). A TR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NO<sub>x</sub> Annual allowance that was allocated for such control period or a control period in a prior year.
  - (ii). A TR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NO<sub>x</sub> Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (5) Allowance Management System requirements. Each TR NO<sub>x</sub> Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.

- (6) Limited authorization. A TR NO<sub>x</sub> Annual allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:
- (i). Such authorization shall only be used in accordance with the TR NO<sub>x</sub> Annual Trading Program; and
  - (ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (7) Property right. A TR NO<sub>x</sub> Annual allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NO<sub>x</sub> Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.
- (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

- (1) Unless otherwise provided, the owners and operators of each TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - (i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each TR NO<sub>x</sub> Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.
  - (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.
  - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NO<sub>x</sub> Annual Trading Program.
- (2) The designated representative of a TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall make all submissions required under the TR NO<sub>x</sub> Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

- (1) Any provision of the TR NO<sub>x</sub> Annual Trading Program that applies to a TR NO<sub>x</sub> Annual source or the designated representative of a TR NO<sub>x</sub> Annual source shall also apply to the owners and operators of such source and of the TR NO<sub>x</sub> Annual units at the source.
- (2) Any provision of the TR NO<sub>x</sub> Annual Trading Program that applies to a TR NO<sub>x</sub> Annual unit or the designated representative of a TR NO<sub>x</sub> Annual unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NO<sub>x</sub> Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NO<sub>x</sub> Annual source or TR NO<sub>x</sub> Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**TR NO<sub>x</sub> Ozone Season Trading Program Requirements (40 CFR 97.506)**

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR NO<sub>x</sub> Ozone Season allowances under 40 CFR 97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR NO<sub>x</sub> Ozone Season emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) NO<sub>x</sub> emissions requirements.**

- (1) TR NO<sub>x</sub> Ozone Season emissions limitation.
  - (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall hold, in the source's compliance account, TR NO<sub>x</sub> Ozone Season allowances available for deduction for such control period under 40 CFR 97.524(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all TR NO<sub>x</sub> Ozone Season units at the source.

- (ii). If total NO<sub>x</sub> emissions during a control period in a given year from the TR NO<sub>x</sub> Ozone Season units at a TR NO<sub>x</sub> Ozone Season source are in excess of the TR NO<sub>x</sub> Ozone Season emissions limitation set forth in paragraph (c)(1)(i) above, then:
  - (A). The owners and operators of the source and each TR NO<sub>x</sub> Ozone Season unit at the source shall hold the TR NO<sub>x</sub> Ozone Season allowances required for deduction under 40 CFR 97.524(d); and
  - (B). The owners and operators of the source and each TR NO<sub>x</sub> Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBBB and the Clean Air Act.
- (2) TR NO<sub>x</sub> Ozone Season assurance provisions.
  - (i). If total NO<sub>x</sub> emissions during a control period in a given year from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NO<sub>x</sub> Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.525(b), of multiplying—
    - (A). The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and
    - (B). The amount by which total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state for such control period exceed the state assurance level.
  - (ii). The owners and operators shall hold the TR NO<sub>x</sub> Ozone Season allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  - (iii). Total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the State NO<sub>x</sub> Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).
  - (iv). It shall not be a violation of 40 CFR part 97, subpart BBBBBB or of the Clean Air Act if total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the TR NO<sub>x</sub>

Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.

- (v). To the extent the owners and operators fail to hold TR NO<sub>x</sub> Ozone Season allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
  - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
  - (B). Each TR NO<sub>x</sub> Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBB and the Clean Air Act.

(3) Compliance periods.

- (i). A TR NO<sub>x</sub> Ozone Season unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.
- (ii). A TR NO<sub>x</sub> Ozone Season unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.

(4) Vintage of allowances held for compliance.

- (i). A TR NO<sub>x</sub> Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NO<sub>x</sub> Ozone Season allowance that was allocated for such control period or a control period in a prior year.
- (ii). A TR NO<sub>x</sub> Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NO<sub>x</sub> Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements. Each TR NO<sub>x</sub> Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.

(6) Limited authorization. A TR NO<sub>x</sub> Ozone Season allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:

- (i). Such authorization shall only be used in accordance with the TR NO<sub>x</sub> Ozone Season Trading Program; and
- (ii). Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right. A TR NO<sub>x</sub> Ozone Season allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NO<sub>x</sub> Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.
- (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a

continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

- (1) Unless otherwise provided, the owners and operators of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - (i). The certificate of representation under 40 CFR 97.516 for the designated representative for the source and each TR NO<sub>x</sub> Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.
  - (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart BBBBB.
  - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NO<sub>x</sub> Ozone Season Trading Program.
- (2) The designated representative of a TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall make all submissions required under the TR NO<sub>x</sub> Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

- (1) Any provision of the TR NO<sub>x</sub> Ozone Season Trading Program that applies to a TR NO<sub>x</sub> Ozone Season source or the designated representative of a TR NO<sub>x</sub> Ozone Season source shall also apply to the owners and operators of such source and of the TR NO<sub>x</sub> Ozone Season units at the source.
- (2) Any provision of the TR NO<sub>x</sub> Ozone Season Trading Program that applies to a TR NO<sub>x</sub> Ozone Season unit or the designated representative of a TR NO<sub>x</sub> Ozone Season unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NO<sub>x</sub> Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NO<sub>x</sub> Ozone Season source or TR NO<sub>x</sub> Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

**TR SO<sub>2</sub> Group 1 Trading Program requirements (40 CFR 97.606)**

**(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

**(b) Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of TR SO<sub>2</sub> Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

**(c) SO<sub>2</sub> emissions requirements.**

- (1) TR SO<sub>2</sub> Group 1 emissions limitation.
  - (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all TR SO<sub>2</sub> Group 1 units at the source.
  - (ii). If total SO<sub>2</sub> emissions during a control period in a given year from the TR SO<sub>2</sub> Group 1 units at a TR SO<sub>2</sub> Group 1 source are in excess of the TR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
    - (A). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold the TR SO<sub>2</sub> Group 1 allowances required for deduction under 40 CFR 97.624(d); and
    - (B). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.
- (2) TR SO<sub>2</sub> Group 1 assurance provisions.
  - (i). If total SO<sub>2</sub> emissions during a control period in a given year from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state

and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—

- (A). The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and
  - (B). The amount by which total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the TR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  - (iii). Total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).
  - (iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.
  - (v). To the extent the owners and operators fail to hold TR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
    - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
    - (B). Each TR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.
- (3) Compliance periods.
- (i). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
  - (ii). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.

- (4) Vintage of allowances held for compliance.
  - (i). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.
  - (ii). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (5) Allowance Management System requirements. Each TR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.
- (6) Limited authorization. A TR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:
  - (i). Such authorization shall only be used in accordance with the TR SO<sub>2</sub> Group 1 Trading Program; and
  - (ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (7) Property right. A TR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO<sub>2</sub> Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.
- (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

- (1) Unless otherwise provided, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - (i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each TR SO<sub>2</sub> Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.

- (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.
  - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO<sub>2</sub> Group 1 Trading Program.
- (2) The designated representative of a TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall make all submissions required under the TR SO<sub>2</sub> Group 1 Trading Program, except as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

- (1) Any provision of the TR SO<sub>2</sub> Group 1 Trading Program that applies to a TR SO<sub>2</sub> Group 1 source or the designated representative of a TR SO<sub>2</sub> Group 1 source shall also apply to the owners and operators of such source and of the TR SO<sub>2</sub> Group 1 units at the source.
- (2) Any provision of the TR SO<sub>2</sub> Group 1 Trading Program that applies to a TR SO<sub>2</sub> Group 1 unit or the designated representative of a TR SO<sub>2</sub> Group 1 unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR SO<sub>2</sub> Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO<sub>2</sub> Group 1 source or TR SO<sub>2</sub> Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

## **V. APPENDIX H - DNR Administrative Consent Order 97-AQ-20**

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE ORDER

IN THE MATTER OF:	ADMINISTRATIVE CONSENT ORDER
IES UTILITIES, INC.	NO. 97-AQ-20

TO: IES Utilities, Inc.  
c/o Daniel Siegfried, Legal Department  
200 First Street S.E.  
P.O. Box 351  
Cedar Rapids, Iowa 52406-0351

I. SUMMARY

This consent order is entered into between IES Utilities Inc. (IES) and the Iowa Department of Natural Resources (DNR) for the purpose of resolving the issue of IES's contribution of sulfur dioxide (SO<sub>2</sub>) to three exceedances of the National Ambient Air Quality Standard (NAAQS) in January, February and March 1996.

II. STATEMENT OF FACTS

1. DNR has determined that three exceedances of the SO<sub>2</sub> National Ambient Air Quality 24-hour standard have occurred in Cedar Rapids, Iowa. On January 28, 1996, a SO<sub>2</sub> monitor located at the Scottish Rite Temple at 616 A Avenue N.E. in Cedar Rapids indicated a reading of 0.15 parts per million (ppm); on February 28, 1996, the same monitor rendered a reading of 0.20 ppm; and on March 2, 1996, the same monitor rendered a reading of 0.27 ppm. The level of the 24-hour standard is 0.14 ppm, not to be exceeded more than once per calendar year.

2. IES is an Iowa Corporation with its principal place of business at 200 First Street S.E. in Cedar Rapids, Iowa. IES is an investor-owned public gas and electric utility. Modeling has established that IES's Sixth Street Generating Station, a major stationary source, is a significant contributor to the SO<sub>2</sub> levels monitored. The monitor is located near IES's Sixth Street Generating Station (Sixth Street).

3. Sixth Street, located at 509 6<sup>th</sup> Street N.E., and Prairie Creek Generating Station, located at 3300 C Street S.W., are coal, gas and resifil fired generating stations located in Cedar Rapids, Iowa, providing electrical and steam service to customers in the Cedar Rapids area. Resifil, currently burned at Sixth Street, is a combustible fuel derived from the furfural manufacturing process.

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER  
ISSUED TO: IES Utilities Inc.

4. In May 1995, the United States Environmental Protection Agency, (EPA) published its Sulfur Dioxide Network Design Review for Cedar Rapids, Iowa, (Design Review), indicating that certain areas of Cedar Rapids might be nonattainment for SO<sub>2</sub> and recommending the addition and relocation of monitors in and around Cedar Rapids.

5. Upon review of EPA's Design Review, IES began to analyze various options to further minimize any contribution of SO<sub>2</sub> emissions from its two Cedar Rapids generating facilities, Sixth Street and Prairie Creek. IES also met with DNR and the Linn County Health Department (LCHD), and other facilities in the Cedar Rapids area, for the purpose of reviewing EPA's Design Review and strategizing on resolution of the issues raised.

6. IES has considered several options in an attempt to avoid the need for the Cedar Rapids area to be designated as nonattainment for SO<sub>2</sub>. The option to close the Sixth Street facility was rejected by IES for the following reasons: "This has been determined not to be a viable option at this time. Thermal energy costs comprise a significant portion of the production costs of major grain processing companies in the downtown Cedar Rapids area. A sudden increase in energy pricing could have significant impact and employment consequences for our major steam customers. IES believes that we must keep Sixth Street station operational to provide these customers with economic thermal energy (steam) in the short term while we search for a long term economic and environmentally balanced energy to fill these customers' needs."

7. IES also has considered the option of initiating an SO<sub>2</sub> emissions minimization plan. IES asserts that this option would allow Sixth Street to continue to provide electricity, service to its steam customers, and reduce SO<sub>2</sub> emissions. Computer modeling performed by IES concluded that SO<sub>2</sub> emissions at a rate of 667 lbs./hour or less on a 24-hour rolling average basis from Sixth Street would not result in an exceedance of the NAAQS for SO<sub>2</sub>. IES asserts that by changing fuel choices to those which have lower sulfur content, SO<sub>2</sub> emissions could be reduced while maintaining the economic viability of the facility. A test burn of a new fuel blend was conducted between November 25 and December 23, 1996, which confirmed that SO<sub>2</sub> emissions did not result in any exceedance of the SO<sub>2</sub> NAAQS and could be managed below the site limit of 667 lbs./hour on a 24-hour rolling average basis. Updated modeling, a copy of which has been provided to DNR by IES, demonstrates attainment for the area using this plan.

8. This Administrative Consent Order is entered into between DNR and IES for the purpose of resolving IES's contribution to the SO<sub>2</sub> National Ambient Air Quality Violations monitored in Cedar Rapids, Iowa.

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER  
ISSUED TO: IES Utilities Inc.

III. CONCLUSIONS OF LAW

1. This order is issued pursuant to the provisions of Iowa Code sections 455B.134(9) and 455B.138(1), which authorize the Director to issue any administrative orders necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II, and the rules promulgated and permits issued pursuant thereto, and to prevent, abate, and control air pollution.

2. The emission units located at IES in Cedar Rapids, Iowa, are "air contaminant sources" as defined by Iowa Code section 455B.131(2) and "stationary sources" as defined by 567 Iowa Administrative Code (I.A.C.) 20.2.

3. According to 567 I.A.C. 28.1, the ambient air quality standards for the State of Iowa shall be the National Primary and Secondary Ambient Air Quality Standards (NAAQS) located at 40 C.F.R. Part 50, as amended through July 1, 1987.

4. The primary 24-hour ambient air quality standard for SO<sub>2</sub> is 0.14 parts per million, according to the provisions of 40 CFR Part 50. The 24-hour maximum allowable concentration should not be exceeded more than once per calendar year. The concentrations monitored in this case constitute a violation of this standard.

5. An exceedance of the NAAQS for SO<sub>2</sub> constitutes "air pollution" as defined by Iowa Code section 455B.131(3).

6. In accordance with the provisions of Iowa Code section 455B.134(9), the Director shall issue orders consistent with the rules to cause the abatement or control of air pollution.

7. According to the provisions of 567 I.A.C. 22.1(1) and 567 I.A.C. 22.1(3), the owner or operator of a stationary source shall obtain a permit to install or alter equipment or control equipment. Any modifications occurring as a result of this consent order shall require a construction permit or shall meet the requirements of a construction permit exemption contained in the provisions of 567 I.A.C. 22.1(2).

IV. ORDER

THEREFORE, DNR orders and IES Utilities Inc. agrees to do the following:

With regard to the Sixth Street Generating Station:

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER  
ISSUED TO: IES Utilities Inc.

1. Effective on the date this order is signed by both parties, IES agrees to limit the site emissions from the Sixth Street Generating Station boiler stacks to a maximum emission rate of 84 grams/sec (667 lbs./hour) SO<sub>2</sub> on a twenty-four hour rolling average basis. The value of 84 grams/sec (667 lbs./hour) SO<sub>2</sub> reflects the modeling requirements for demonstrating and maintaining the SO<sub>2</sub> NAAQS.

2. By no later than December 1, 1997, IES shall have in place at the Sixth Street Generating Station monitoring and data collection equipment capable of recording total site hourly and twenty-four hour rolling average SO<sub>2</sub> emission information.

3. By no later than December 1, 1997, IES shall begin maintaining hourly and twenty-four hour rolling average records for its Sixth Street Generating Station which will verify compliance with the twenty-four hour rolling average SO<sub>2</sub> emission limit. These records shall include the data required pursuant to paragraph 2 above and 40 CFR Part 75 for Continuous Emissions Monitoring.

With regard to the Prairie Creek Generating Station:

1. IES shall install a combined stack for Units one (1) and two (2) to a height of three hundred and twenty-seven (327) feet above ground level. IES shall extend the existing boiler stack for Unit three (3) to a height of 200 feet above ground level. Unit four (4) shall utilize its existing stack with no changes. By no later than April 15, 1998, IES shall submit to DNR or LCHD, as appropriate, applications for any required air quality construction permits. The construction shall be completed within 24 months of issuance of the necessary permits.

2. By no later than July 1, 1998, IES shall limit the unit emissions from its Prairie Creek Generating Station Unit three (3) to a maximum emission rate of 62 g/s (495.9 lbs./hr) SO<sub>2</sub>, and from its Unit four (4) boiler stack to a maximum emission rate of 162 g/sec (1289.3 lbs./hour) SO<sub>2</sub> on a twenty-four hour rolling average basis.

3. By no later than December 1, 1997, IES shall have in place on Units three (3) and four (4) at Prairie Creek Generating Station monitoring and data collection equipment capable of recording total unit hourly and twenty-four hour rolling average SO<sub>2</sub> emission information.

4. By no later than December 1, 1997, IES shall begin maintaining hourly and twenty-four hour rolling average records for its Units three (3) and four (4) at the Prairie Creek Generating Station. These records shall include the data required under Paragraph 3 and 40 CFR Part 75 for Continuous Emissions Monitoring.

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER  
ISSUED TO: IES Utilities Inc.

5. By no later than July 1, 1998, IES shall limit the sulfur content of the fuels burned in Units one (1) and two (2) so as to limit the emissions from Units 1 and 2 to 5.0 lbs. SO<sub>2</sub> /MMBtu of heat input. For Units one (1) and two (2), IES shall maintain documentation of station fuel burns via its monthly filed Federal Energy Regulatory Commission (FERC) Form 423. Also for Units one (1) and (2), IES shall collect and maintain Coal Supplier analysis report documentation, including collection and preparation of samples to follow latest applicable standards published by the American Society for Testing and Materials (ASTM).

V. WAIVER OF APPEAL RIGHTS

This order is entered into knowingly and with the consent of IES Utilities Inc. For that reason, IES Utilities Inc. waives its right to appeal this order or any part thereof.

VI. NONCOMPLIANCE

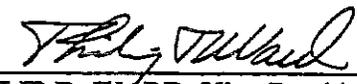
Failure to comply with this order may result in the imposition of administrative penalties or referral to the Attorney General's office to obtain injunctive relief and civil penalties pursuant to the provisions of Iowa Code section 455B.146. IES reserves the right to contest, on all bases available in law or equity, any such actions for penalties or damages.

Any questions regarding this consent order should be directed to:

Anne Preziosi  
Iowa Department of Natural Resources  
Henry A. Wallace Building  
900 East Grand Avenue  
Des Moines, Iowa 50319-0034

  
LARRY J. WILSON, DIRECTOR  
IOWA DEPARTMENT OF NATURAL RESOURCES

Dated this 20<sup>th</sup> day of  
November, 1997.

  
PHILIP D. WARD, Vice-President and  
General Manager, GENCO  
for IES UTILITIES INC.

Dated this 19<sup>th</sup> day of  
NOVEMBER, 1997.

**IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER**

**IN THE MATTER OF:**

**INTERSTATE POWER AND LIGHT  
COMPANY  
CEDAR RAPIDS, IOWA**

**AMENDMENT TO  
ADMINISTRATIVE  
CONSENT ORDER**

**NO. 97-AQ-20**

To: Interstate Power and Light Company  
Alliant Energy Corporate Services, Inc.  
Michael Li, Senior Environmental Specialist  
Alliant Tower  
200 First Street S.E.  
Cedar Rapids, Iowa 52401

**I. SUMMARY**

The purpose of this Amendment to Administrative Consent Order No. 97-AQ-20 is to remove requirements relating to the retired Sixth Street Generating Station and to revise the requirements for Prairie Creek Generating Station Unit 4. Administrative Consent Order No. 97-AQ-20 was entered into between DNR and IES Utilities, Inc., on November 20, 1997. Since 1997, IES Utilities, Inc., has become a part of Interstate Power and Light Company (IPL), a subsidiary of Alliant Energy Corporation (Alliant Energy).

Any questions regarding this Amendment should be directed to:

**Relating to legal requirements:**

Anne Preziosi, Attorney for the DNR  
Iowa Department of Natural Resources  
7900 Hickman Road, Suite 1  
Urbandale, Iowa 50322  
Phone: 515-725-9551

**II. JURISDICTION**

This Amendment is issued pursuant to the provisions of Iowa Code sections 455B.134(9) and 455B.138(1), which authorize the Director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II (air quality), and the rules promulgated or permits issued pursuant to that division.

**IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER  
ISSUED TO: Interstate Power and Light Company**

**III. STATEMENT OF FACTS**

The Statement of Facts contained in Administrative Consent Order No. 97-AQ-20 is revised to add the following paragraphs:

9. Sixth Street Generating Station has been dismantled, and the DNR Air Quality Construction Permit Nos. 02-A-403-P, 02-A-404-P, 02-A-405-P, and 02-A-406-P for that facility were rescinded by DNR on February 4, 2011. Title V Permit No. 98-TV-022R1-M002 was rescinded on March 8, 2011.

10. Prairie Creek Generating Station Unit 4 has been modified to burn only natural gas as fuel. IPL plans to begin operation of modified Unit 4 on or after November 4, 2017. Linn County Public Health Air Quality Division Permit to Operate No. 6513-R1 was issued to IPL for Unit 4 on January 18, 2017. Condition 14(B)2(b) of Permit to Operate No. 6513-R1 allows the operation of Unit 4 without a Continuous Emissions Monitor (CEMS) once Unit 4 uses natural gas as fuel. Condition 14(B)2(b) states:

For system-wide annual tonnage limits the owner or operator shall use SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. **Once a unit is refueled the SO<sub>2</sub> emissions shall be calculated using a stack test emission factor or by using methods set forth in US EPA's AP-42 (*Compilation of Air Pollutant Emission Factors*).** (emphasis added)

IPL shall calculate SO<sub>2</sub> emissions using stack test data, AP-42 emission factors, mass balance calculations based on fuel specific (natural gas and/or pipeline natural gas) sulfur content, or the procedures outlined in 40 CFR Part 75, with respect to Prairie Creek Generating Station Unit 4.

**V. ORDER**

The portion of the Ordering Clause affecting the Sixth Street Generating Station and contained in Administrative Consent Order No. 97-AQ-20 is removed from the Ordering Clause in its entirety.

The portion of the Ordering Clause affecting the Prairie Creek Generating Station and contained in Administrative Consent Order No. 97-AQ-20 is revised to add the following paragraph:

**IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER  
ISSUED TO: Interstate Power and Light Company**

6. Beginning on November 4, 2017, Prairie Creek Generating Station Unit 4 shall use only natural gas as fuel, and shall not use any other form of fuel, including but not limited to coal. Also beginning on November 4, 2017, IPL shall no longer be required, for Prairie Creek Generating Station Unit 4, to have in place monitoring and data collection equipment capable of recording total unit hourly and twenty-four hour rolling average SO<sub>2</sub> emission information. IPL shall calculate SO<sub>2</sub> emissions using stack test data, AP-42 emission factors, mass balance calculations based on fuel specific (natural gas and/or pipeline natural gas) sulfur content, or the procedures outlined in 40 CFR Part 75, with respect to Prairie Creek Generating Station Unit 4.

**VI. AFFECT OF AMENDMENT ON ORIGINAL ORDER**

All provisions of Administrative Consent Order No. 97-AQ-20 shall remain in full force and effect unless specifically changed by this Amendment.

**VII. WAIVER OF APPEAL RIGHTS**

This Administrative Consent Order Amendment is entered into knowingly and with the consent of IPL. For that reason, IPL waives its right to appeal this order or any part thereof.

  
\_\_\_\_\_  
Chuck Gipp, Director  
Iowa Department of Natural Resources  
*Bruce Tractman for Chuck Gipp*

Dated this 6 day of  
November, 2017.

*Terry Kouba*  
\_\_\_\_\_  
Terry Kouba, VP Operations – Iowa  
Interstate Power and Light Company

Dated this 2nd day of  
November, 2017.

DNR Field Office 1; Anne Preziosi

**V. APPENDIX I - Consent Decree United States of America and The State of Iowa, and The County of Linn, Iowa and Sierra Club v. Interstate Power and Light Company, Civil Action No.: C15-0061; United States District Court for the Northern District of Iowa (September 2, 2015)]**



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APPENDIX A -- ENVIRONMENTAL MITIGATION PROJECTS

WHEREAS, Plaintiff, the United States of America (“United States”), on behalf of the United States Environmental Protection Agency (“EPA”), is concurrently filing a Complaint and this Consent Decree, for injunctive relief and civil penalties pursuant to Sections 113(b) and 167 of the Act 42 U.S.C. §§ 7413(b) and 7477, alleging that Interstate Power and Light Company (“Defendant”), violated the Prevention of Significant Deterioration (“PSD”) provisions of Part C of Subchapter I of the Act, 42 U.S.C. §§ 7470-7492, the requirements of Title V of the Act, 42 U.S.C. §§ 7661-7661f, and the federally enforceable Iowa State Implementation Plan (“Iowa SIP”);

WHEREAS, in the Complaint, the United States alleges, *inter alia*, that Defendant made major modifications to major emitting facilities, and failed to obtain the necessary permits and install and operate the controls necessary under the Act to reduce sulfur dioxide (“SO<sub>2</sub>”), oxides of nitrogen (“NO<sub>x</sub>”), and/or particulate matter (“PM”), at certain electricity generating stations located in Iowa, and that such emissions damage human health and the environment;

WHEREAS, EPA provided Defendant and the State of Iowa with actual notice pertaining to Defendant’s alleged violations, in accordance with Sections 113(a)(1) and (b) of the Act, 42 U.S.C. § 7413(a)(1) and (b);

WHEREAS, Defendant stipulates that it does not contest the adequacy of the notice provided;

WHEREAS, Plaintiffs the State of Iowa, the County of Linn, and the Sierra Club have filed Complaints or Complaints in Intervention, joining the claims alleged by the United States and asserting their own claims;

WHEREAS, in their Complaints, the United States, the State of Iowa, the County of Linn, and the Sierra Club (collectively, “Plaintiffs”) allege claims upon which relief can be granted against the Defendant under Sections 113, 167, and 304 of the Act, 42 U.S.C. §§ 7413, 7477, and 7604;

WHEREAS, the Plaintiffs and Defendant (collectively, the “Parties”) have agreed that settlement of these actions is in the best interests of the Parties and in the public interest, and that entry of this Consent Decree without further litigation is the most appropriate means of resolving these matters;

WHEREAS, the Parties anticipate that the installation and operation of pollution control equipment and practices pursuant to this Consent Decree, and the Retirement, Refueling, or Repowering of certain facilities required by this Consent Decree, will achieve significant reductions of SO<sub>2</sub>, NO<sub>x</sub>, and PM emissions and improve air quality;

WHEREAS, the Parties have agreed, and this Court by entering this Consent Decree finds, that this Consent Decree has been negotiated in good faith and at arm’s length and that this Consent Decree is fair, reasonable, in the public interest, and consistent with the goals of the Act;

WHEREAS, the Defendant has cooperated in the resolution of these matters;

WHEREAS, the Defendant denies the violations alleged in the Complaints; maintains that it has been and remains in compliance with the Act and is not liable for civil penalties or injunctive relief; and states that it is agreeing to the obligations imposed by this Consent Decree solely to avoid the costs and uncertainties of litigation and to improve the environment; and nothing herein shall constitute an admission of liability; and

WHEREAS, the Parties have consented to entry of this Consent Decree without trial of any issues;

NOW, THEREFORE, without any admission of fact or law, it is hereby ORDERED, ADJUDGED, AND DECREED as follows:

**I. JURISDICTION AND VENUE**

1. This Court has jurisdiction over this action, the subject matter herein, and the Parties consenting hereto, pursuant to 28 U.S.C. §§ 1331, 1345, 1355, and 1367, and pursuant to Sections 113, 167, and 304 of the Act, 42 U.S.C. §§ 7413, 7477, and 7604. Venue is proper in the Northern District of Iowa pursuant to Sections 113(b) and 304(c) of the Act, 42 U.S.C. §§ 7413(b) and 7604(c), and 28 U.S.C. §§ 1391(b) and (c). Solely for the purposes of this Consent Decree and the underlying Complaints, and for no other purpose, the Defendant waives all objections and defenses that it may have to the Court's jurisdiction over this action, to the sufficiency of any pre-suit notices required by Section 113 or 304 of the Act, to the Court's jurisdiction over the Defendant, and to venue in this district. The Defendant consents to and shall not challenge entry of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree. Except as expressly provided for herein, this Consent Decree shall not create any rights in or obligations of any party other than the Parties to this Consent Decree. Except as provided in Section XXVI (Public Comment/Agency Review) of this Consent Decree, the Parties consent to entry of this Consent Decree without further notice. Notwithstanding the foregoing, should this Consent Decree not be entered by this Court, then the waivers and consents set forth in this Section I (Jurisdiction and Venue) shall be null and void and of no effect.

## **II. APPLICABILITY**

2. Upon entry, the provisions of this Consent Decree shall apply to and be binding upon the United States, the State of Iowa, Linn County, and upon the Sierra Club and the Defendant and their respective successors and assigns or other entities or persons otherwise bound by law.

3. Defendant shall provide a copy of this Consent Decree to all vendors, suppliers, consultants, contractors, agents, and other entities retained to perform any of the work required by this Consent Decree. Notwithstanding any retention of contractors, subcontractors, or agents to perform any work required under this Consent Decree, Defendant shall ensure that all work it is required to undertake is performed in accordance with the requirements of this Consent Decree. In any action to enforce this Consent Decree, except as expressly provided herein (*e.g.*, Section XV Force Majeure), Defendant shall not assert as a defense the failure of its officers, directors, employees, servants, agents, or contractors to take actions necessary to comply with this Consent Decree.

## **III. DEFINITIONS**

4. Every term expressly defined by this Section shall have the meaning given that term herein. Every other term used in this Consent Decree that is also a term used under the Act or in a regulation implementing the Act, including regulations approved as part of the Iowa SIP, shall mean in this Consent Decree what such term means under the Act or those regulations.

5. A “12-Month Rolling Average Emission Rate” shall be determined by calculating an arithmetic average of all hourly emission rates in lb/mmBTU for the current month and all hourly emission rates in lb/mmBTU for the previous 11 Unit Operating Months. A new 12-

Month Rolling Average Emission Rate shall be calculated for each new complete month in accordance with the provisions of this Consent Decree. Each 12-Month Rolling Average Emission Rate shall include all emissions of the applicable pollutant that occur during all periods of operation, including startup, shutdown, and Malfunction. For purposes of calculating a “12-Month Rolling Average Emission Rate,” a “Unit Operating Month” means any month during which a Unit fires Fossil Fuel.

6. A “30-Day Rolling Average Emission Rate” for a Unit shall be determined by calculating an arithmetic average of all hourly emission rates in lb/mmBTU for the current Unit Operating Day and all hourly emission rates in lb/mmBTU for the previous 29 Unit Operating Days. A new 30-Day Rolling Average Emission Rate shall be calculated for each new Unit Operating Day. Each 30-Day Rolling Average Emission Rate shall include all emissions of the applicable pollutant that occur during all periods within any Unit Operating Day, including emissions from startup, shutdown, and Malfunction.

7. A “24-Hour Rolling Average Emission Rate” for a Unit shall be determined by calculating an arithmetic average of the current Unit Operating Hour emission rate in lb/mm BTU and the previous 23 Unit Operating Hours. A new 24-Hour Rolling Average Emission Rate shall be calculated for each new Unit Operating Hour. Each 24-Hour Rolling Average Emission Rate for PM shall include all emissions that occur during all periods of operation, including startup, shutdown, and Malfunction.

8. “Baghouse” means a full stream (fabric filter or membrane) particulate emissions control device on the main boilers.

9. “Boiler Island” means a Unit’s (a) fuel combustion system (including bunker, coal pulverizers, crusher, stoker, and fuel burners); (b) combustion air system; (c) steam generating system (firebox, boiler tubes, and walls); and (d) draft system (excluding the stack), all as further described in “Interpretation of Reconstruction,” by John B. Rasnic U.S.EPA (November 25, 1986) and attachments thereto.

10. “Burlington” means solely for purposes of this Consent Decree, the Burlington Generating Station consisting of one coal-fired boiler designated as Unit 1 (212 MW), which is located in Des Moines County, Iowa.

11. “Capital Expenditures” means all capital expenditures, as defined by Generally Accepted Accounting Principles (“GAAP”), as those principles exist at the Date of Entry of this Consent Decree, excluding the cost of installing or upgrading pollution control devices.

12. “CEMS” or “Continuous Emission Monitoring System,” means, for obligations involving the monitoring of NO<sub>x</sub>, SO<sub>2</sub>, and PM emissions under this Consent Decree, the devices defined in 40 C.F.R. § 72.2 and installed and maintained as required by 40 C.F.R. Part 60 and 40 C.F.R. Part 75.

13. “Clean Air Act,” “CAA,” or “Act” means the federal Clean Air Act, 42 U.S.C. §§ 7401-7671q, and its implementing regulations.

14. “Consent Decree” means this Consent Decree and the Appendix hereto, which is incorporated into the Consent Decree.

15. “Continuously Operate” or “Continuous Operation” means that when a pollution control technology or combustion control is required to be continuously used at a Unit pursuant to this Consent Decree (including, but not limited to, SCR, DFGD, ESP, Baghouse, or Low NO<sub>x</sub>

Combustion System), it shall be operated at all times such Unit is in operation (except as otherwise provided by Section XV (Force Majeure)), consistent with the technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 C.F.R. § 60.11(d)) for such equipment and the Unit.

16. "Date of Entry" means the date this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

17. "Date of Lodging" means the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Northern District of Iowa.

18. "Day" means calendar day unless otherwise specified in this Consent Decree.

19. "Defendant" means Interstate Power and Light Company.

20. "Dry Flue Gas Desulfurization" or "Dry FGD" or "DFGD" means an add-on air pollution control system for the reduction of SO<sub>2</sub> located downstream of a boiler that sprays an alkaline sorbent slurry in one or more absorber vessels designed to provide intimate contact between an alkaline slurry and the flue gas stream to react with and remove SO<sub>2</sub> from the exhaust stream forming a dry powder material which is captured in a downstream particulate control device.

21. "Dubuque" means solely for purposes of this Consent Decree, the Dubuque Generating Station consisting of three Fossil-Fuel-fired boilers designated as Unit 1 (38 MW), Unit 5 (29 MW), and Unit 6 (15 MW), which is located in Dubuque County, Iowa.

22. “Electrostatic Precipitator” or “ESP” means a device for removing particulate matter from combustion gases by imparting an electric charge to the particles and then attracting them to a metal plate or screen of opposite charge before the combustion gases are exhausted to the atmosphere.

23. “Emission Rate” for a given pollutant means the number of pounds of that pollutant emitted per million British thermal units of heat input (lb/mmBTU), measured in accordance with this Consent Decree.

24. “Environmental Mitigation Projects” or “Projects” means the projects set forth in Section IX (Environmental Mitigation Projects) and Appendix A of this Consent Decree, and any other project undertaken for the purpose of fulfilling Defendant’s obligations under Section IX and Appendix A and approved for that purpose by EPA pursuant to Section XIII (Review and Approval of Submittals).

25. “EPA” means the United States Environmental Protection Agency.

26. “Fossil Fuel” means any hydrocarbon fuel, including but not limited to coal, metallurgical coke, petroleum coke, petroleum oil, natural gas, or any other fuel made or derived from the foregoing.

27. “Flue Gas Recirculation” or “FGR” means extracting a portion of the flue gas and returning it to the steam generating unit firebox. FGR reduces the oxygen concentration in the combustion air by using oxygen depleted flue gas as a portion of the combustion air and thereby reduces the combustion temperature, resulting in lower NO<sub>x</sub> emissions.

28. “Greenhouse Gases” means the air pollutant defined at 40 C.F.R. § 86.1818-12(a) as of the Date of Lodging of this Consent Decree as the aggregate group of six greenhouse gases:

carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. This definition continues to apply even if 40 C.F.R. § 86.1818-12(a) is subsequently revised, stayed, vacated, or otherwise modified.

29. “Iowa SIP” means the Iowa State Implementation Plan, and any amendments thereto, as approved by EPA pursuant to Section 110 of the Act, 42 U.S.C. § 7410.

30. “Improved Unit” for NO<sub>x</sub> means a System Unit equipped with an SCR or scheduled under this Consent Decree to be equipped with an SCR. Lansing Unit 4 and Ottumwa Unit 1 are Improved Units for NO<sub>x</sub>.

31. “Improved Unit” for SO<sub>2</sub> means a System Unit scheduled under this Consent Decree to be equipped with a DFGD. Lansing Unit 4 and Ottumwa Unit 1 are Improved Units for SO<sub>2</sub>. Units that are Refueled or Repowered are also Improved Units for SO<sub>2</sub>.

32. “Interstate” means Defendant, Interstate Power and Light Company, the operator and the owner or co-owner of the Burlington, Dubuque, Lansing, M.L. Kapp, Ottumwa, Prairie Creek, Sixth Street, and Sutherland Generating Stations.

33. “kW” means Kilowatt or one thousand watts.

34. “Lansing” means solely for purposes of this Consent Decree, the Lansing Generating Station consisting of four coal-fired boilers designated as Unit 1 (15 MW), Unit 2 (12 MW), Unit 3 (38 MW), and Unit 4 (275 MW), which is located in Allamakee County, Iowa. Lansing Unit 1, Lansing Unit 2, and Lansing Unit 3 no longer operate and the construction permits for Units 1, 2, and 3 have been revoked.

35. “lb/mmBTU” means pound per million British thermal units.

36. “Low NO<sub>x</sub> Combustion System” means burners and associated combustion air control equipment, including Overfire Air (if installed at the Unit), which control mixing characteristics of Fossil Fuel and oxygen, thus restraining the formation of NO<sub>x</sub> during combustion of fuel in the boiler.

37. “Malfunction” means a failure to operate in a normal or usual manner by any air pollution control equipment, process equipment, or a process, which is sudden, infrequent, and not reasonably preventable. Failures that are caused in part by poor maintenance or careless operation are not Malfunctions.

38. “M.L. Kapp” means solely for purposes of this Consent Decree, the Milton L. Kapp Generating Station consisting of two coal-fired boilers designated as Unit 1 (19 MW) and Unit 2 (219 MW), which is located in Clinton County, Iowa. M.L. Kapp Unit 1 no longer operates and has been removed from the Title V operating permit for M.L. Kapp.

39. “Natural Gas” means natural gas received directly or indirectly through a connection to an interstate pipeline.

40. “Neural Network” means an artificial intelligence technology that utilizes measured combustion and operational parameters, identifies optimal set points and in conjunction with the distributed control system implements sophisticated control strategies to optimize performance and reduce emissions.

41. “Netting” shall mean the process of determining whether a particular physical change or change in the method of operation of a major stationary source results in a “net emissions increase,” as that term is defined at 40 C.F.R. §§ 51.165(a)(1)(vi), 52.21(b)(3)(i), and in the Iowa SIP.

42. “NO<sub>x</sub>” means oxides of nitrogen.
43. “NO<sub>x</sub> Allowance” means an authorization to emit a specified amount of NO<sub>x</sub> that is allocated or issued under an emissions trading or marketable permit program of any kind established under the Clean Air Act or applicable State Implementation Plan; provided, however, that with respect to any such program that first applies to emissions occurring after December 31, 2011, a “NO<sub>x</sub> Allowance” shall include an allowance created and allocated under such program only for control periods starting on or after the fourth anniversary of the Date of Entry of this Consent Decree.
44. “Nonattainment NSR” means the new source review program within the meaning of Part D of Subchapter I of the Act, 42 U.S.C. §§ 7501-7515 and 40 C.F.R. Part 51, and corresponding provisions of the federally enforceable Iowa SIP.
45. “Operational Interest” means part or all of Defendant’s right to be the operator (as that term is used and interpreted under the Act) of any Unit.
46. “Ownership Interest” with respect to a Unit means part or all of Defendant’s legal or equitable ownership interest in any Unit.
47. “Other Unit” means any Unit within the System that is not an Improved Unit for the pollutant in question.
48. “Ottumwa” means solely for purposes of this Consent Decree, the Ottumwa Generating Station consisting of one coal-fired boiler designated as Unit 1 (726 MW), which is located in Wapello County, Iowa.
49. “Over-Fire Air” or “OFA” means an in-furnace staged combustion control to reduce NO<sub>x</sub> emissions.

50. “Parties” means the United States of America on behalf of EPA; the State of Iowa; Linn County, Iowa; the Sierra Club; and the Defendant. “Party” means one of the named “Parties.”

51. “PM” means total filterable particulate matter, measured in accordance with the provisions of this Consent Decree.

52. “PM CEMS” or “PM Continuous Emission Monitoring System” means, for obligations involving the monitoring of PM emissions under this Consent Decree, the equipment that samples, analyzes, measures, and provides, by readings taken at frequent intervals, an electronic and/or paper record of PM emissions.

53. “PM Control Device” means any device, including an ESP or Baghouse, which reduces emissions of PM. Where a Unit is equipped with both an ESP and a Baghouse, the Baghouse, and not the ESP, shall be considered the PM Control Device for that Unit.

54. “PM Emission Rate” means the number of pounds of PM emitted per million BTU of heat input (lb/mmBTU).

55. “Prairie Creek” means solely for purposes of this Consent Decree, the Prairie Creek Generating Station consisting of four coal-fired boilers designated as boiler 1 (heat input of 245 mmBTU/hr), boiler 2 (heat input of 304 mmBTU/hr), Unit 3 (50 MW), and Unit 4 (149 MW), which is located in Linn County, Iowa.

56. “Prairie Creek Annual Tonnage Limitation” for a pollutant means the sum of the tons of the pollutant emitted from all the Units at Prairie Creek including, without limitations, all tons of that pollutant emitted during periods of startup, shutdown, and Malfunction, in the designated year.

57. “Prevention of Significant Deterioration” or “PSD” means the new source review program within the meaning of Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470-7492 and 40 C.F.R. Part 52, and corresponding provisions of the federally enforceable Iowa SIP.

58. “Project Dollars” means expenditures and payments incurred or made in carrying out the Environmental Mitigation Projects identified in Section IX (Environmental Mitigation Projects) and Appendix A of this Consent Decree to the extent that such expenditures or payments both: (a) comply with the requirements set forth in Section IX and Appendix A of this Consent Decree, and (b) constitute Defendant’s direct payments for such projects, or Defendant’s external costs for contractors, vendors, and equipment.

59. “Refuel” or “Refueled” means that a Unit is Refueled to Natural Gas within the meaning of this Consent Decree.

60. “Refuel to Natural Gas” or “Refueled to Natural Gas” means, solely for purposes of this Consent Decree, the modification of a Unit such that the modified unit generates electricity solely through the combustion of Natural Gas. A Refueled unit must achieve and maintain the applicable Emission Rate specified in Section IV (Requirement to Retire, Refuel, or Repower Units). Nothing herein shall prevent the reuse of any equipment at any existing unit or new emissions unit, provided that Defendant applies for, and obtains, all required permits, including, if applicable, a PSD or Nonattainment NSR permit.

61. “Repower” or “Repowered” means, solely for purposes of this Consent Decree, the removal and replacement of the Unit components such that the replaced unit generates electricity solely through the combustion of Natural Gas through the use of a combined cycle combustion turbine technology. Nothing herein shall prevent the reuse of any equipment at any

existing unit or new emissions unit, provided that the Unit Owner(s) applies for, and obtains, all required permits, including, if applicable, a PSD or Nonattainment NSR permit.

62. “Retire,” “Retired,” or “Retirement” means to permanently shut down a Unit such that the Unit cannot physically or legally burn Fossil Fuel, and to comply with applicable state and federal requirements for permanently ceasing operation of the Unit as a Fossil Fuel-fired electric generating Unit, including removing the Unit from Iowa’s air emissions inventory, and amending all applicable permits so as to reflect the permanent shutdown status of such Unit. The Defendant can choose to not retire and to continue to operate such a Unit only if it is Refueled or Repowered within the meaning of this Consent Decree, and Defendant obtains any and all required CAA permit(s) for the Refueled or Repowered Unit, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

63. “SCR” or “Selective Catalytic Reduction” means a pollution control device for reducing NO<sub>x</sub> emissions through the use of selective catalytic reduction technology.

64. “Sixth Street” means solely for purposes of this Consent Decree, the Sixth Street Generating Station which consisted of five coal-fired boilers designated as Unit 1 (10 MW), Unit 2 (18 MW), Unit 3 (17 MW), Unit 4 (17 MW), and Unit 5 (32 MW), and which was located in Linn County, Iowa. Sixth Street no longer operates and its Title V permit has been rescinded.

65. “SO<sub>2</sub>” means sulfur dioxide.

66. “SO<sub>2</sub> Allowance” means an authorization to emit a specified amount of SO<sub>2</sub> that is allocated or issued under an emissions trading or marketable permit program of any kind established under the Clean Air Act or applicable State Implementation Plan; provided, however,

that with respect to any such program that first applies to emissions occurring after December 31, 2011, a “SO<sub>2</sub> Allowance” shall include an allowance created and allocated under such program only for control periods starting on or after the fourth anniversary of the Date of Entry of this Consent Decree.

67. “State” means the State of Iowa.

68. “Super-Compliant Allowance” means a NO<sub>x</sub> Allowance or SO<sub>2</sub> Allowance attributable to reductions beyond the requirements of this Consent Decree, as described in Paragraphs 110 and 134.

69. “Surrender” or “Surrender of Allowances” means, for purposes of SO<sub>2</sub> or NO<sub>x</sub> Allowances, permanently surrendering allowances from the accounts administered by EPA and the State of Iowa, if applicable, so that such allowances can never be used thereafter to meet any compliance requirements under the CAA, a state implementation plan, or this Consent Decree.

70. “Sutherland” means solely for purposes of this Consent Decree, the Sutherland Generating Station consisting of three Fossil-Fuel-fired boilers designated as Unit 1 (38 MW), Unit 2 (38 MW), and Unit 3 (82 MW), which is located in Marshall County, Iowa. Sutherland Unit 2 no longer operates and has been removed from the Title V operating permit for Sutherland.

71. “System” means collectively, and solely for purposes of this Consent Decree, the Burlington, Dubuque, Lansing, M.L. Kapp, Ottumwa, Prairie Creek, Sixth Street, and Sutherland Generating Stations.

72. “System-Wide Annual Tonnage Limitation” for a pollutant means the sum of the tons of the pollutant emitted from all the Units in Defendant’s System including, without

limitations, all tons of that pollutant emitted during periods of startup, shutdown, and Malfunction, in the designated year.

73. “Title V Permit” means the permit required of major sources pursuant to Subchapter V of the Act, 42 U.S.C. §§ 7661-7661e.

74. “Unit” means collectively, the coal pulverizer, stationary equipment that feeds coal to the boiler, the boiler that produces steam for the steam turbine, the steam turbine, the generator, the equipment necessary to operate the generator, steam turbine, and boiler, and all ancillary equipment, including pollution control equipment and systems necessary for production of electricity. An electric steam generating station may be comprised of one or more Units.

75. “Unit Operating Day” means any Day on which a Unit fires Fossil Fuel.

76. “Unit Operating Hour” means each clock hour during which any Fossil Fuel is combusted at any time in the Unit.

77. “Working Day” means a day other than a Saturday, Sunday, or Federal Holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the close of business on the next Working Day.

#### **IV. REQUIREMENT TO RETIRE, REFUEL, OR REPOWER UNITS**

78. Defendant has ceased operations at Lansing Unit 1, Lansing Unit 2, Lansing Unit 3, M.L. Kapp Unit 1, Sutherland Unit 2, Sixth Street Unit 1, Sixth Street Unit 2, Sixth Street Unit 3, Sixth Street Unit 4, and Sixth Street Unit 5. Upon entry of this Consent Decree, the permanent Retirement of these units shall also become an enforceable obligation under this Consent Decree, such that Defendant may operate such a Unit only if it is first Repowered within the meaning of

this Consent Decree, and Defendant obtains any and all required CAA permit(s) for the Repowered Unit, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

79. By no later than the Date of Entry of this Consent Decree, Defendant shall Refuel Dubuque Unit 1, Dubuque Unit 5, Dubuque Unit 6, Sutherland Unit 1, and Sutherland Unit 3. Defendant shall thereafter cease burning coal and shall only operate Dubuque Unit 1, Dubuque Unit 5, Dubuque Unit 6, Sutherland Unit 1, and Sutherland Unit 3 as Refueled Units.

80. By no later than June 1, 2019, Defendant shall either Retire or Repower Dubuque Unit 1. If Defendant Repowers Dubuque Unit 1, Defendant shall apply for, and obtain, all required CAA permits, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

81. By no later than June 1, 2019, Defendant shall either Retire or Repower Dubuque Unit 5. If Defendant Repowers Dubuque Unit 5, Defendant shall apply for, and obtain, all required CAA permits, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

82. By no later than June 1, 2019, Defendant shall either Retire or Repower Dubuque Unit 6. If Defendant Repowers Dubuque Unit 6, Defendant shall apply for, and obtain, all required CAA permits, including but not limited to an appropriate permit pursuant to CAA

Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

83. By no later than June 1, 2019, Defendant shall either Retire or Repower Sutherland Unit 1. If Defendant Repowers Sutherland Unit 1, Defendant shall apply for, and obtain, all required CAA permits, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

84. By no later than June 1, 2019, Defendant shall either Retire or Repower Sutherland Unit 3. If Defendant Repowers Sutherland Unit 3, Defendant shall apply for, and obtain, all required CAA permits, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

85. By no later than August 31, 2015, Defendant shall Retire or Refuel M.L. Kapp Unit 2. If Defendant Refuels M.L. Kapp Unit 2, Defendant shall thereafter Continuously Operate the Low NO<sub>x</sub> Combustion System at the Refueled Unit, and shall obtain any and all required CAA permit(s) for the Refueled Unit, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

86. By no later than December 31, 2021, Defendant shall Retire or Refuel Burlington Unit 1. If Defendant Refuels Burlington Unit 1, Defendant shall thereafter Continuously Operate the Low NO<sub>x</sub> Combustion System at the Refueled Unit, and shall obtain any and all required CAA permit(s) for the Refueled Unit, including but not limited to an appropriate permit pursuant

to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

87. By no later than June 1, 2018, Defendant shall Retire or Refuel Prairie Creek Unit 4. If Defendant Refuels Prairie Creek Unit 4, Defendant shall thereafter Continuously Operate the Low NO<sub>x</sub> Combustion System at the Refueled Unit, and shall obtain any and all required CAA permit(s) for the Refueled Unit, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I.

88. Beginning in calendar year 2021 and continuing until the boilers are Retired or Refueled pursuant to this Consent Decree, Defendant shall only operate Prairie Creek boilers 1 and/or 2 during times when the boilers are required to serve steam supply needs pursuant to steam supply contracts in effect as of December 31, 2013. Defendant may cogenerate electricity during such times, but the boilers and turbines will not be dispatched to meet electricity demand unless the boilers and turbines are also required to meet steam supply needs pursuant to a steam supply contract in effect as of December 31, 2013.

89. By no later than December 31, 2025, Defendant shall Retire or Refuel Prairie Creek boiler 1, Prairie Creek boiler 2, and Prairie Creek Unit 3. If Defendant Refuels Prairie Creek boiler 1, Prairie Creek boiler 2, and/or Prairie Creek Unit 3, Defendant shall obtain any and all required CAA permit(s) for such Refueled Unit, including but not limited to an appropriate permit pursuant to CAA Subchapter I, Parts C and D, and pursuant to the applicable Iowa SIP provisions implementing CAA Subchapter I. In the case of a Refueled Prairie Creek

Unit 3, Defendant shall also thereafter Continuously Operate the Low NO<sub>x</sub> Combustion System at Prairie Creek Unit 3.

**V. NO<sub>x</sub> EMISSION REDUCTIONS AND CONTROLS**

**A. Operation and Performance NO<sub>x</sub> Requirements at Lansing Unit 4**

90. Commencing no later than January 31, 2015 and continuing to December 30, 2015, Defendant shall Continuously Operate the existing SCR at Lansing Unit 4 so that the Unit achieves and maintains a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.090 lb/mmBTU.

91. Commencing no later than December 31, 2015, and continuing thereafter, Defendant shall Continuously Operate the existing SCR at Lansing Unit 4 so that the Unit achieves and maintains a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.080 lb/mmBTU.

**B. Installation, Operation, and Performance NO<sub>x</sub> Requirements at Ottumwa Unit 1**

92. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, Defendant shall Continuously Operate the Low NO<sub>x</sub> Combustion System at Ottumwa Unit 1 so that the Unit achieves and maintains (a) a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.210 lb/mmBTU, and (b) a 12-Month Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.160 lb/mmBTU.

93. Defendant shall install an SCR (or alternate equivalent NO<sub>x</sub> control technology approved pursuant to Paragraph 94) at Ottumwa Unit 1 on or before December 31, 2019. Commencing on December 31, 2019, and continuing thereafter, Defendant shall Continuously Operate the SCR (or alternate equivalent NO<sub>x</sub> control technology approved

pursuant to Paragraph 94). Commencing no later than 30 Operating Days after December 31, 2019, Defendant shall Continuously Operate the SCR (or alternate equivalent NO<sub>x</sub> control technology approved pursuant to Paragraph 94) so that Ottumwa Unit 1 achieves and maintains a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.080 lb/mmBTU.

94. With prior written request to the Plaintiffs and written approval from EPA (after consultation with the other Plaintiffs), Defendant may, in lieu of installing and operating SCR at Ottumwa Unit 1, install and operate an Alternate Equivalent NO<sub>x</sub> Control Technology that achieves at Ottumwa Unit 1 a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.080 lb/mmBTU. For purposes of this Paragraph, Alternate Equivalent NO<sub>x</sub> Control Technology shall mean a technology designed to achieve an equivalent NO<sub>x</sub> control efficiency as can be achieved by an SCR. If Defendant elects to request approval of an Alternate Equivalent NO<sub>x</sub> Control Technology under this Paragraph, Defendant shall provide the written request required by this Paragraph to Plaintiffs by no later than December 31, 2016. Plaintiffs will use best efforts to review any such request expeditiously to meet the requirements of this Consent Decree.

**C. Interim Operation and Performance NO<sub>x</sub> Requirements at Remaining Units That Must Be Retired or Refueled**

95. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Low NO<sub>x</sub> Combustion System, at M.L. Kapp Unit 2 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.150 lb/mmBTU.

96. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Low NO<sub>x</sub> Combustion System at Burlington Unit 1 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.180 lb/mmBTU.

97. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the boiler is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate Prairie Creek boiler 1 so that it achieves and maintains an Emission Rate for NO<sub>x</sub> of no greater than 0.600 lb/mmBTU based on a 3-hour average.

98. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the boiler is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate Prairie Creek boiler 2 so that it achieves and maintains an Emission Rate for NO<sub>x</sub> of no greater than 0.600 lb/mmBTU based on a 3-hour average.

99. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Low NO<sub>x</sub> Combustion System at Prairie Creek Unit 3 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.400 lb/mmBTU.

100. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement

to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Low NO<sub>x</sub> Combustion System at Prairie Creek Unit 4 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for NO<sub>x</sub> of no greater than 0.400 lb/mmBTU.

**D. Prairie Creek Annual Tonnage Limitations for NO<sub>x</sub>**

101. For each calendar year as specified below, Defendant shall not exceed the corresponding Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub> specified below:

<b>For the Calendar Year Specified Below</b>	<b>Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub></b>
Each calendar year from 2015 through 2018	3,250 tons per year
Each calendar year from 2019 through 2025	2,650 tons per year
2026 and continuing each calendar year thereafter	1,500 tons per year

**E. System-Wide Annual Tonnage Limitations for NO<sub>x</sub>**

102. For each calendar year as specified below, Defendant's System shall not exceed the corresponding System-Wide Annual Tonnage Limitation for NO<sub>x</sub> specified below:

<b>For the Calendar Year Specified Below</b>	<b>System-Wide Annual Tonnage Limitation for NO<sub>x</sub></b>
Each calendar year from 2015 through 2017	11,500 tons per year
Each calendar year from 2018 through 2019	10,500 tons per year
2020	7,500 tons per year
2021	7,250 tons per year
2022 and continuing each calendar year thereafter	6,800 tons per year

**F. Monitoring of NO<sub>x</sub> Emissions**

103. Except as provided for in Section V.J, in determining a 30-Day Rolling Average Emission Rate for NO<sub>x</sub> or a 12-Month Rolling Average Emission Rate for NO<sub>x</sub>, Defendant shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures of 40 C.F.R. Part 75, except that NO<sub>x</sub> emissions data need not be bias adjusted and the missing data

substitution procedures of 40 C.F.R. Part 75 shall not apply to such determinations. Diluent capping (*i.e.*, 5% CO<sub>2</sub>) will be applied to the NO<sub>x</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 C.F.R. Part 75, Appendix F, Section 3.3.4.1.

104. Except as provided for in Section V.J, for purposes of determining compliance with any System-Wide Annual Tonnage Limitation and Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub>, Defendant shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 C.F.R. Part 75.

**G. Use and Surrender of NO<sub>x</sub> Allowances**

105. Except as may be necessary to comply with Section XIV (Stipulated Penalties), Defendant shall not use NO<sub>x</sub> Allowances to comply with any requirement of this Consent Decree, including by claiming compliance with any emission limitation required by this Consent Decree by using, tendering, or otherwise applying NO<sub>x</sub> Allowances to offset any excess emissions.

106. Except as provided in this Consent Decree, and specifically in Paragraphs 107 and 108, beginning in calendar year 2015 and continuing each calendar year thereafter, Defendant shall not sell, bank, trade, or transfer its interest in any NO<sub>x</sub> Allowances allocated to Units in the System.

107. Beginning in calendar year 2015, and continuing each calendar year thereafter, Defendant shall Surrender all NO<sub>x</sub> Allowances allocated to the Units in the System for that calendar year that Defendant does not need to meet federal and/or state CAA regulatory requirements for the System Units.

108. Nothing in this Consent Decree shall prevent Defendant from purchasing or otherwise obtaining NO<sub>x</sub> Allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law.

109. The requirements of this Consent Decree pertaining to Defendant's use and Surrender of NO<sub>x</sub> Allowances are permanent and are not subject to any termination provision of this Consent Decree.

**H. Super-Compliant NO<sub>x</sub> Allowances**

110. Notwithstanding Paragraphs 106 and 107, in each calendar year beginning in 2015, and continuing thereafter, Defendant may sell, bank, use, trade, or transfer NO<sub>x</sub> Allowances allocated to the Units in the System that are made available in that calendar year solely as a result of:

- a. the installation and operation of any NO<sub>x</sub> air pollution control equipment that is not otherwise required under this Consent Decree, and is not otherwise required by law;
- b. the use of an SCR prior to the date established by this Consent Decree; or
- c. achievement and maintenance of an Emission Rate below an applicable 30-Day Rolling Average Emission Rate or 12-Month Rolling Average Emission Rate for NO<sub>x</sub>;

provided that Defendant is also in compliance for that calendar year with all emission limitations for NO<sub>x</sub> set forth in this Consent Decree. Defendant shall timely report the generation of such Super-Compliant Allowances in accordance with Section XII (Periodic Reporting) of this Consent Decree.

**I. Method for Surrender of NO<sub>x</sub> Allowances**

111. Defendant shall Surrender, or transfer to a non-profit third-party selected by Defendant for Surrender, all NO<sub>x</sub> Allowances required to be Surrendered pursuant to Paragraph 107 by June 30 of the immediately following calendar year. If any NO<sub>x</sub> Allowances required to be Surrendered under this Consent Decree are transferred directly to a non-profit third-party, Defendant shall include a description of such transfer in the next report submitted to EPA pursuant to Section XII (Periodic Reporting) of this Consent Decree. Such report shall: (a) identify the non-profit third-party recipient(s) of the NO<sub>x</sub> Allowances and list the serial numbers of the transferred NO<sub>x</sub> Allowances; and (b) include a certification by the third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the NO<sub>x</sub> Allowances and will not use any of the NO<sub>x</sub> Allowances to meet any obligation imposed by any environmental law. No later than the third periodic report due after the transfer of any NO<sub>x</sub> Allowances, Defendant shall include a statement that the third-party recipient(s) Surrendered the NO<sub>x</sub> Allowances for permanent Surrender to EPA in accordance with the provisions of Paragraph 112 within one year after the Defendant transferred the NO<sub>x</sub> Allowances to them. The Defendant shall not have complied with the NO<sub>x</sub> Allowance Surrender requirements of this Paragraph until all third-party recipient(s) have actually Surrendered the transferred NO<sub>x</sub> Allowances to EPA.

112. For all NO<sub>x</sub> Allowances required to be Surrendered, Defendant shall, with respect to the NO<sub>x</sub> Allowances that the Defendant is to Surrender, ensure that a NO<sub>x</sub> Allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such NO<sub>x</sub> Allowances to the EPA Enforcement Surrender

Account or to any other EPA account that EPA may direct in writing. Such NO<sub>x</sub> Allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System, or similar system provided by EPA. As part of submitting these transfer requests, Defendant shall ensure that the transfer of its NO<sub>x</sub> Allowances are irrevocably authorized and that the source and location of the NO<sub>x</sub> Allowances being Surrendered are identified by name of account and any applicable serial or other identification numbers or station names.

**J. Annual NO<sub>x</sub> Stack Tests for Prairie Creek Boilers 1 and 2**

113. Commencing in calendar year 2015, for Prairie Creek boilers 1 and 2 only, Defendant shall ensure that a stack test is conducted on each boiler every four operating quarters. An "operating quarter," for the purpose of this Paragraph, is any calendar quarter during which a boiler operates 168 hours or more. If testing is unable to be completed in the fourth operating quarter, due to unforeseen circumstances, it shall be completed within 720 Unit Operating Hours once the boiler returns to service.

114. To determine compliance with the NO<sub>x</sub> Emission Rates established in Paragraphs 97 and 98, the Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub> established in Paragraph 101, and the System-Wide Annual Tonnage Limitation for NO<sub>x</sub> established in Paragraph 102 of this Consent Decree, the Defendant shall ensure that EPA Method 7 or any alternate method approved by EPA under the terms of this Consent Decree, is employed during the stack testing required by Paragraph 113. Each stack test shall consist of three separate runs performed under representative operating conditions, not including periods of startup, shutdown, or Malfunction. The results of each NO<sub>x</sub> stack test shall be submitted to Plaintiffs by Defendant within 60 days of

completion of each test. For purpose of calculating calendar-year NO<sub>x</sub> mass emissions, for inclusion in the Annual Tonnage Limitations in Paragraphs 101 and 102, Defendant shall multiply the NO<sub>x</sub> rate, as determined from the last performed reference method test, by the respective heat input for each unit for that calendar year. Heat input shall be calculated by multiplying the amount of each fuel combusted by its respective gross heating value, and summed for all fuels combusted in each boiler.

## **VI. SO<sub>2</sub> EMISSION REDUCTIONS AND CONTROLS**

### **A. Installation, Operation, and Performance SO<sub>2</sub> Requirements at Lansing Unit 4 and Ottumwa Unit 1**

115. Defendant shall install and commence Continuous Operation of a DFGD at Ottumwa Unit 1 by no later than December 31, 2015.

116. Commencing no later than 30 Operating Days after December 31, 2015, and continuing thereafter, Defendant shall Continuously Operate a DFGD at Ottumwa Unit 1 so that the Unit achieves and maintains a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of no greater than 0.075 lb/mmBTU.

117. Defendant shall install and commence Continuous Operation of a DFGD at Lansing Unit 4 by no later than December 31, 2016.

118. Commencing no later than 30 Operating Days after December 31, 2016, and continuing thereafter, Defendant shall Continuously Operate a DFGD at Lansing Unit 4 so that the Unit achieves and maintains a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> of no greater than 0.075 lb/mmBTU.

**B. Interim Operation and Performance SO<sub>2</sub> Requirements at Remaining Units or Boilers That Must Be Retired or Refueled**

119. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate M.L. Kapp Unit 2 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for SO<sub>2</sub> of no greater than 0.750 lb/mmBTU.

120. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate Burlington Unit 1 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for SO<sub>2</sub> of no greater than 0.750 lb/mmBTU.

121. Commencing no later than January 1, 2016, and continuing until the boiler is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate Prairie Creek boiler 1 and Prairie Creek boiler 2 so that they achieve and maintain a combined Emission Rate for SO<sub>2</sub> of no greater than 0.900 lb/mmBTU, based on a 12-Month rolling average, including emissions during all periods of operation, including startup, shutdown, and Malfunction. Because Prairie Creek boiler 1 and Prairie Creek boiler 2 exhaust to a common stack, the Emission Rate calculation for the two boilers shall be measured and calculated for the two boilers together as if they were a single boiler (*e.g.*, the Emissions Rate calculation will be based on the total SO<sub>2</sub> emissions and heat input for the two boilers together measured at the stack). A violation of any such 12-Month rolling average Emission Rate shall be considered to be two violations, unless Defendant establishes that the violation is due solely to

the mal-performance of one of the two units. A dispute under this paragraph shall be subject to the Dispute Resolution provisions of Section XVI.

122. Commencing no later than January 1, 2016, Defendant may only burn in Prairie Creek boiler 1 and Prairie Creek boiler 2 Powder River Basin (“PRB”) or equivalent fuel containing  $\leq$  (less than or equal to) 1.00 lb/mmBTU SO<sub>2</sub>.

123. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate Prairie Creek Unit 3 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for SO<sub>2</sub> of no greater than 0.700 lb/mmBTU.

124. Commencing no later than 60 Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall operate Prairie Creek Unit 4 so that the Unit achieves and maintains a 12-Month Rolling Average Emission Rate for SO<sub>2</sub> of no greater than 0.700 lb/mmBTU.

**C. Prairie Creek Annual Tonnage Limitations for SO<sub>2</sub>**

125. For each calendar year as specified below, Defendant shall not exceed the corresponding Prairie Creek Annual Tonnage Limitation for SO<sub>2</sub> specified below:

<b>For the Calendar Year Specified Below</b>	<b>Prairie Creek Annual Tonnage Limitation for SO<sub>2</sub></b>
Each calendar year from 2016 through 2018	5,500 tons per year
Each calendar year from 2019 to 2020	3,500 tons per year
Each calendar year from 2021 through 2025	3,000 tons per year
2026 and continuing each calendar year thereafter	100 tons per year

**D. System-Wide Annual Tonnage Limitations for SO<sub>2</sub>**

126. For each calendar year as specified below, Defendant's System shall not exceed the corresponding System-Wide Annual Tonnage Limitation for SO<sub>2</sub> specified below:

<b>For the Calendar Year Specified Below</b>	<b>System-Wide SO<sub>2</sub> Cap</b>
2015	39,000 tons per year
2016	23,500 tons per year
Each calendar year from 2017 through 2018	14,100 tons per year
Each calendar year from 2019 through 2020	12,000 tons per year
2021	11,000 tons per year
Each calendar year from 2022 through 2025	6,000 tons per year
2026 and continuing each calendar year thereafter	3,250 tons per year

**E. Monitoring of SO<sub>2</sub> Emissions**

127. In determining a 30-Day Rolling Average Emission Rate for SO<sub>2</sub> or a 12-Month Rolling Average Emission Rate for SO<sub>2</sub>, Defendant shall use SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures of 40 C.F.R. Part 75, except that SO<sub>2</sub> emissions data need not be bias adjusted and the missing data substitution procedures of 40 C.F.R. Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO<sub>2</sub>) will be applied to the SO<sub>2</sub> Emission Rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 C.F.R. Part 75, Appendix F, Section 3.3.4.1.

128. For purposes of determining compliance with any System-Wide Annual Tonnage Limitation and Prairie Creek Annual Tonnage Limitation for SO<sub>2</sub>, Defendant shall use SO<sub>2</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 C.F.R. Part 75. Once a Unit is Refueled, SO<sub>2</sub> emissions shall be calculated using methods set forth in USEPA document AP-42 or by use of a stack test emission factor.

**F. Use and Surrender of SO<sub>2</sub> Allowances**

129. Except as may be necessary to comply with Section XIV (Stipulated Penalties), Defendant shall not use SO<sub>2</sub> Allowances to comply with any requirement of this Consent Decree, including by claiming compliance with any emission limitation required by this Consent Decree by using, tendering, or otherwise applying SO<sub>2</sub> Allowances to offset any excess emissions.

130. Except as provided in this Consent Decree, and specifically in Paragraphs 131 and 132, beginning in calendar year 2015 and continuing each calendar year thereafter, Defendant shall not sell, bank, trade, or transfer its interest in any SO<sub>2</sub> Allowances allocated to Units in the System.

131. Beginning in calendar year 2015, and continuing each calendar year thereafter, Defendant shall Surrender all SO<sub>2</sub> Allowances allocated to the Units in the System for that calendar year that are not needed to meet federal and/or state CAA regulatory requirements for the System Units.

132. Nothing in this Consent Decree shall prevent Defendant from purchasing or otherwise obtaining SO<sub>2</sub> Allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law.

133. The requirements of this Consent Decree pertaining to Defendant's use and Surrender of SO<sub>2</sub> Allowances are permanent and are not subject to any termination provision of this Consent Decree.

**G. Super-Compliant SO<sub>2</sub> Allowances**

134. Notwithstanding Paragraphs 130 and 131, in each calendar year beginning in 2013, and continuing thereafter, Defendant may sell, bank, use, trade, or transfer SO<sub>2</sub>

Allowances allocated to the Units in the System that are made available in that calendar year solely as a result of:

- a. the installation and operation of any SO<sub>2</sub> air pollution control equipment that is not otherwise required under this Consent Decree, and is not otherwise required by law;
- b. the use of DFGD prior to the date established by this Consent Decree; or
- c. achievement and maintenance of an Emission Rate below an applicable 30-Day Rolling Average Emission Rate or 12-Month Rolling Average Emission Rate for SO<sub>2</sub>;

provided that Defendant is also in compliance for that calendar year with all emission limitations for SO<sub>2</sub> set forth in this Consent Decree. Defendant shall timely report the generation of such Super-Compliant Allowances in accordance with Section XII (Periodic Reporting) of this Consent Decree.

**H. Method for Surrender of SO<sub>2</sub> Allowances.**

135. Defendant shall Surrender, or transfer to a non-profit third-party selected by Defendant for Surrender, all SO<sub>2</sub> Allowances required to be Surrendered pursuant to Paragraph 131 by June 30 of the immediately following calendar year. If any SO<sub>2</sub> Allowances required to be Surrendered under this Consent Decree are transferred directly to a non-profit third-party, Defendant shall include a description of such transfer in the next report submitted to EPA pursuant to Section XII (Periodic Reporting) of this Consent Decree. Such report shall: (a) identify the non-profit third-party recipient(s) of the SO<sub>2</sub> Allowances and list the serial numbers of the transferred SO<sub>2</sub> Allowances; and (b) include a certification by the third-party recipient(s)

stating that the recipient(s) will not sell, trade, or otherwise exchange any of the SO<sub>2</sub> Allowances and will not use any of the SO<sub>2</sub> Allowances to meet any obligation imposed by any environmental law. No later than the third periodic report due after the transfer of any SO<sub>2</sub> Allowances, Defendant shall include a statement that the third-party recipient(s) Surrendered the SO<sub>2</sub> Allowances for permanent Surrender to EPA in accordance with the provisions of Paragraph 136 within one year after the Defendant transferred the SO<sub>2</sub> Allowances to them. Defendant shall not have complied with the SO<sub>2</sub> Allowance Surrender requirements of this Paragraph until all third-party recipient(s) have actually Surrendered the transferred SO<sub>2</sub> Allowances to EPA.

136. For all SO<sub>2</sub> Allowances required to be Surrendered, Defendant shall, with respect to the SO<sub>2</sub> Allowances that the Defendant is to Surrender, ensure that an SO<sub>2</sub> Allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such SO<sub>2</sub> Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such SO<sub>2</sub> Allowance transfer requests may be made in an electronic manner, using the EPA's Clean Air Act Markets Division Business System, or similar system provided by EPA. As part of submitting these transfer requests, Defendant shall ensure that the transfer of its SO<sub>2</sub> Allowances are irrevocably authorized and that the source and location of the SO<sub>2</sub> Allowances being Surrendered are identified – by name of account and any applicable serial or other identification numbers and station names.

## **VII. PM EMISSION REDUCTIONS AND CONTROLS**

### **A. Optimization of ESPs and Baghouses**

137. By no later than 90 Days from the Date of Entry of this Consent Decree, and continuing thereafter, Defendant shall Continuously Operate each PM Control Device on each Unit or boiler in Defendant's System to maximize PM emission reductions at all times when the Unit or boiler is in operation. Notwithstanding the foregoing sentence in this Paragraph, Defendant is not required to Continuously Operate an ESP on any Unit or boiler if a Baghouse is installed and operating to replace the PM Control Device function of the ESP at that Unit or boiler. Except as required during correlation testing under 40 C.F.R. Part 60, Appendix B, Performance Specification 11, and Quality Assurance Requirements under Appendix F, Procedure 2, as required by this Consent Decree, Defendant shall, at a minimum, ensure that to the extent reasonably practicable: (a) where the PM Control Device is an ESP, each section of each ESP is fully energized, and where the PM Control Device is a Baghouse, each compartment, except for any compartment specifically designated and designed as a spare compartment, of each Baghouse remains operational; (b) any failed ESP section or Baghouse compartment is repaired at the next planned outage (or unplanned outage of sufficient length); (c) the automatic control systems on each ESP are operated to maximize PM collection efficiency, where applicable; (d) each opening in the casings, ductwork, and expansion joints for each ESP and each Baghouse is inspected and repaired during the next planned Unit or boiler outage (or unplanned outage of sufficient length) to minimize air leakage; (e) the power levels delivered to each ESP are maintained, where applicable, consistent with manufacturers' specifications, the operational design of the Unit or boiler, and good engineering practices; (f)

the plate-cleaning and discharge-electrode-cleaning systems for each ESP are optimized, where applicable, by varying the cycle time, cycle frequency, rapper-vibrator intensity, and number of strikes per cleaning event; and (g) for each Unit or boiler with one or more Baghouses, a bag leak detection program is developed and implemented to ensure that leaking bags are promptly replaced.

138. Once a Unit or boiler has been Refueled or Repowered, the provisions of this Section VII shall no longer be applicable to that Unit or boiler.

**B. Operation and Performance Requirements for PM Controls at Lansing Unit 4 and Ottumwa Unit 1**

139. Defendant shall install and commence Continuous Operation of a Baghouse at Ottumwa Unit 1 by no later than December 31, 2015.

140. Commencing no later than 30 Operating Days after December 31, 2015, and continuing thereafter, Defendant shall Continuously Operate a Baghouse at Ottumwa Unit 1 so that the Unit achieves and maintains a filterable PM Emission Rate of no greater than 0.015 lb/mmBTU based on a 24-Hour Rolling Average Emission Rate determined by PM CEMS.

141. Defendant shall install and commence Continuous Operation of a Baghouse at Lansing Unit 4 by no later than December 31, 2016.

142. Commencing no later than 30 Operating Days after December 31, 2016, and continuing thereafter, Defendant shall Continuously Operate a Baghouse at Lansing Unit 4 so that the Unit achieves and maintains a filterable PM Emission Rate of no greater than 0.015 lb/mmBTU based on a 24-Hour Rolling Average Emission Rate determined by PM CEMS.

143. Notwithstanding the PM Emission Rate requirements for Lansing Unit 4 and Ottumwa Unit 1, Defendant may operate such Units to achieve a filterable PM Emission Rate of

no greater than 0.030 lb/mmBTU during periods of level 3 (high range) correlation testing under PS-11, Section 8.6(4), provided that such correlation testing is conducted in accordance with the procedures approved by EPA as part of the correlation plan required by Paragraph 151.

**C. Interim Operation and Performance PM Requirements at Remaining Units That Must Be Retired or Refueled**

144. Commencing no later than 180 Operating Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Electrostatic Precipitator at Burlington Unit 1 so that the Unit achieves and maintains a filterable PM Emission Rate of no greater than 0.030 lb/mmBTU based on a 30-Day Rolling Average Emission Rate as determined by CEMS.

145. Commencing no later than 90 Operating Days after the Date of Entry of this Consent Decree, and continuing until the boiler is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Electrostatic Precipitator at Prairie Creek boiler 1 and Prairie Creek boiler 2 so that the boilers achieve and maintain a filterable PM Emission Rate of no greater than 0.030 lb/mmBTU based on a 30-Day Rolling Average Emission Rate as determined by CEMS. Because Prairie Creek boiler 1 and Prairie Creek boiler 2 exhaust to a common stack, the Emission Rate calculation for the two boilers shall be measured and calculated for the two boilers together as if they were a single boiler (*e.g.*, the Emissions Rate calculation will be based on the total filterable PM emissions and heat input for the two boilers together measured at the stack). A violation of any such 30-Day rolling average Emission Rate shall be considered to be two violations, unless Defendant establishes that the violation is due solely to the mal-performance of one of the two

units. A dispute under this paragraph shall be subject to the Dispute Resolution provisions of Section XVI.

146. Commencing no later than 90 Operating Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Electrostatic Precipitator at Prairie Creek Unit 3 so that the Unit achieves and maintains a filterable PM Emission Rate of no greater than 0.030 lb/mmBTU based on a 30-Day Rolling Average Emission Rate as determined by CEMS.

147. Commencing no later than 90 Operating Days after the Date of Entry of this Consent Decree, and continuing until the Unit is Retired or Refueled pursuant to Section IV (Requirement to Retire, Refuel, or Repower Units), Defendant shall Continuously Operate the Electrostatic Precipitator at Prairie Creek Unit 4 so that the Unit achieves and maintains a filterable PM Emission Rate of no greater than 0.030 lb/mmBTU based on a 30-Day Rolling Average Emission Rate as determined by CEMS.

**D. Annual PM Stack Tests**

148. Defendant shall be subject to the following stack test requirements:

(a) Commencing in calendar year 2015, and continuing annually thereafter for Prairie Creek boiler 1 and Prairie Creek boiler 2 until such time as the certified PM CEMS for these boilers are operational pursuant to Subsection VII.E. Defendant shall ensure that a stack test for PM is conducted on each boiler every four operating quarters pursuant to Paragraph 149, unless the Unit or boiler is Retired or Refueled by December 31 of the prior calendar year, at which point this requirement shall no longer apply.

(b) Commencing in calendar year 2015, and continuing annually thereafter for Burlington Unit 1, Prairie Creek Unit 3, Prairie Creek Unit 4, Lansing Unit 4 and Ottumwa Unit 1 until such time as the certified PM CEMS for these Units are operational pursuant to Subsection VII.E, Defendant shall ensure that a stack test for PM is conducted on each boiler at least once every four operating quarters pursuant to Paragraph 149.

(c) Commencing once the certified PM CEMS are operational pursuant to Subsection VII.E, condensable PM testing as set forth in Paragraph 149(b) shall be performed each time a relative correlation audit is performed for the PM-CEMS, and stack sampling for filterable PM shall be performed pursuant to PS-11.

(d) An “operating quarter,” for the purpose of this Paragraph, is any calendar quarter during which a boiler operates 168 hours or more. If testing is unable to be completed in the fourth operating quarter, due to unforeseen circumstances, it shall be completed within 720 Unit Operating Hours once the boiler returns to service.

149. When stack tests are required pursuant to Paragraph 148, Defendant shall (a) conduct the PM stack test using EPA Method 5 (filterable portion only), or any alternate method approved by EPA under the terms of this Consent Decree, and (b) conduct a PM stack test for condensable PM using the reference methods and procedures set forth at 40 C.F.R. Part 51, Appendix M, Method 202. Each stack test shall consist of three separate runs performed under representative operating conditions not including periods of startup, shutdown, or Malfunction. The sampling time for each run shall be at least 60 minutes and the volume of each run shall be at least 0.85 dry standard cubic meters (30 dry standard cubic feet). Defendant shall ensure that the PM Emission Rate from the stack test results is calculated in accordance with 40 C.F.R. §

60.8(f). The results of each PM stack test shall be submitted to Plaintiffs by the Defendant within 60 Days of completion of each test. Defendant shall submit such results to EPA via EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through EPA's Central Data Exchange (CDX) ([http://cdx.epa.gov/epa\\_home.asp](http://cdx.epa.gov/epa_home.asp)). Test data shall be submitted in a file format generated through the use of the EPA's Electronic Reporting Tool (ERT) (<http://www.epa.gov/ttn/chief/ert/index.html>) or in an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

**E. PM Continuous Emissions Monitoring Systems ("CEMS")**

150. By no later than December 31, 2015, Defendant shall ensure that PM CEMS are installed, correlated, maintained, and operating on Burlington Unit 1, Lansing Unit 4, Ottumwa Unit 1, Prairie Creek Unit 3, and Prairie Creek Unit 4. By no later than July 1, 2016, Defendant shall ensure that PM CEMS are installed, correlated, maintained, and operating on the combined stack of Prairie Creek boiler 1 and Prairie Creek boiler 2. The PM CEMS shall comprise a continuous particle mass monitor measuring filterable particulate matter concentration, directly or indirectly, on an hourly average basis and a diluent monitor used to convert the concentration to units expressed in lb/mmBTU. The PM CEMS installed at each Unit must be appropriate for the anticipated stack conditions and capable of measuring filterable PM concentrations on an hourly average basis. Defendant shall maintain, in an electronic database that maintains data for at least five years, the hourly average emission values of all PM CEMS in lb/mmBTU. Except for periods of monitor Malfunction, maintenance, or repair, Defendant shall operate the PM CEMS at all times when the Unit it serves is operating.

151. By no later than June 30, 2015 for Burlington Unit 1, Lansing Unit 4, Ottumwa Unit 1, Prairie Creek Unit 3, and Prairie Creek Unit 4, and the combined stack of Prairie Creek boiler 1 and Prairie Creek boiler 2, Defendant shall submit to EPA for review and approval pursuant to Section XIII (Review and Approval of Submittals) of this Consent Decree a plan for the installation and correlation of the PM CEMS.

152. By no later than September 30, 2015 for Burlington Unit 1, Lansing Unit 4, Ottumwa Unit 1, Prairie Creek Unit 3, and Prairie Creek Unit 4, and by December 31, 2015 for the combined stack of Prairie Creek boiler 1 and Prairie Creek boiler 2, Defendant shall submit to EPA for review and approval pursuant to Section XIII (Review and Approval of Submittals) of this Consent Decree a proposed Quality Assurance/Quality Control (“QA/QC”) protocol that shall be followed for the PM CEMS.

153. In developing both the plan for installation and correlation of the PM CEMS and the QA/QC protocol, Defendant shall use the criteria set forth in 40 C.F.R. Part 60, Appendix B, Performance Specification 11, and 40 C.F.R. Part 60, Appendix F, Procedure 2. With respect to relative correlation audits, Defendant must conduct such audits no less frequently than once every three calendar years or 12 operating quarters, whichever comes first, or earlier if the characteristics of the PM or gas change such that the PM CEMS measurement technology is no longer valid. For each Unit at which Defendant installs, certifies, operates, and maintains a PM CEMS, Defendant may use the correlation method specified in 40 C.F.R. § 63.10010(i) (at the temperature specified in 40 C.F.R. Part 60, Appendix A-3) for purposes of correlating the PM CEMS under this Consent Decree. Diluent capping (*i.e.*, 5% CO<sub>2</sub>) will be applied to the PM rate data for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the

procedures in 40 C.F.R. Part 75, Appendix F, Section 3.3.4.1. Following EPA's approval of the plan described in Paragraph 151 and the QA/QC protocol described in Paragraph 152, Defendant shall thereafter operate the PM CEMS in accordance with the approved plan and QA/QC protocol.

154. Defendant shall ensure that performance specification tests on the PM CEMS are conducted, and shall ensure compliance with the PM CEMS installation and correlation plans submitted to and approved by EPA in accordance with Paragraphs 151 and 152 is demonstrated. The PM CEMS shall be operated in accordance with the approved plan and QA/QC protocol. Pursuant to Section XII (Periodic Reporting), the data recorded by the PM CEMS during Unit operation, expressed in lb/mmBTU on a 24-Hour Rolling Average or 30-Day Rolling Average, shall be reported to Plaintiffs pursuant to Section XII (Periodic Reporting).

155. When the Defendant submits the applications for amendment to the Title V Permits pursuant to Paragraph 224, those applications shall include a Compliance Assurance Monitoring ("CAM") plan, under 40 C.F.R. Part 64, for the PM Emission Rates in this Section VII. The PM CEMS required under Paragraph 150 may be used in that CAM plan.

156. Nothing in this Consent Decree is intended to, or shall, alter or waive any applicable law (including but not limited to any defenses, entitlements, challenges, or clarifications related to the Credible Evidence Rule, 62 Fed. Reg. 8,314 (Feb. 24, 1997)), or monitoring requirements of 40 C.F.R. Part 70, concerning the use of data for any purpose under the Act.

## **VIII. PROHIBITION ON NETTING CREDITS OR OFFSETS**

157. Except as provided in Paragraph 158, emission reductions that result from actions to be taken by Defendant to comply with the requirements of this Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a Netting credit or offset under the CAA's Nonattainment NSR and PSD programs, and shall not be used in any way to determine whether or not a project would result in either a "significant emissions increase" or a "significant net emissions increase" under the Nonattainment NSR and PSD programs.

158. The limitations on the generation and use of Netting credits and offsets set forth in the previous Paragraph do not apply to emission reductions achieved by a particular System Unit that are greater than those required under this Consent Decree for that particular System Unit. For purposes of this Paragraph, emission reductions from a System Unit are greater than those required under this Consent Decree if they result from such Unit's compliance with federally-enforceable emission limits that are more stringent than those limits imposed on the Unit under this Consent Decree and under applicable provisions of the CAA or the Iowa SIP.

159. Nothing in this Consent Decree is intended to preclude the emission reductions generated under this Consent Decree from being considered by the applicable state regulatory agency or EPA for the purpose of attainment demonstrations submitted pursuant to § 110 of the Act, 42 U.S.C. § 7410, or in determining impacts on National Ambient Air Quality Standards, PSD increment, or air quality related values, including visibility, in a Class I area.

## **IX. ENVIRONMENTAL MITIGATION PROJECTS**

160. Defendant shall implement the Environmental Mitigation Projects (“Projects”) described in Appendix A to this Consent Decree in compliance with the approved plans and schedules for such Projects and other terms of this Consent Decree. In implementing the Projects, Defendant shall spend no less than \$6,000,000 in Project Dollars. Defendant shall not include its own personnel costs in overseeing the implementation of the Projects as Project Dollars.

161. The Projects described in Appendix A to be performed by Defendant shall be for the purpose of beneficially restoring and/or mitigating the environments that Plaintiffs allege were damaged by the operation of Defendant’s Units, including environments allegedly damaged within the Defendant’s service territory.

162. Defendant shall maintain, and present to Plaintiffs upon request, documents to substantiate the Project Dollars expended to implement the Defendant’s Projects described in Appendix A, and shall provide these documents to Plaintiffs within 60 Days of a request for the documents.

163. All plans and reports prepared by Defendant pursuant to the requirements of this Section IX of the Consent Decree and required to be submitted to Plaintiffs shall be publicly available (subject to the provisions of Paragraph 230 of this Consent Decree) from Defendant without charge in paper or electronic format.

164. Defendant shall certify, as part of each plan submitted to Plaintiffs for any Project, that Defendant is not otherwise required by law to perform the Project described in the plan, that Defendant is unaware of any other person who is required by law to perform the

Project, and that Defendant will not use any Project, or portion thereof, to satisfy any obligations that it may have under other applicable requirements of law, including but not limited to any applicable renewable or energy efficiency portfolio standards.

165. Defendant shall use good faith efforts to secure as much environmental benefit as possible for the Project Dollars it expends, consistent with the applicable requirements and limits of this Consent Decree.

166. If Defendant elects (where such an election is allowed) to undertake a Project by contributing funds to another person or entity that will carry out the Project in lieu of Defendant, but not including Defendant's agents or contractors, that person or instrumentality must, in writing: (a) identify its legal authority for accepting such funding; and (b) identify its legal authority to conduct the Project for which Defendant contributes the funds. Regardless of whether Defendant elects (where such election is allowed) to undertake a Project by itself or to do so by contributing funds to another person or instrumentality that will carry out the Project, Defendant acknowledges that it will receive credit for the expenditure of such funds as Project Dollars only if the Defendant demonstrates that the funds have been actually spent by either the Defendant or by the person or instrumentality receiving them, and that such expenditures met all requirements of this Consent Decree.

167. Defendant shall comply with the reporting requirements described in Appendix A.

168. Within 90 Days following the completion of each Project required under this Consent Decree (including any applicable periods of demonstration or testing), the Defendant shall submit to the Plaintiffs a report that documents the date that the Project was completed, Defendant's results of implementing the Project, including the emission reductions or other

environmental benefits achieved, and the Project Dollars expended by the Defendant in implementing the Project.

#### **X. CIVIL PENALTY**

169. Within 30 Days after the Date of Entry of this Consent Decree, Defendant shall pay to the United States, the State of Iowa, and Linn County a civil penalty in the amount of \$1,100,000 as follows:

- (a) Defendant shall pay a civil penalty of \$733,333 to the United States. The civil penalty to the United States shall be paid by Electronic Funds Transfer (“EFT”) to the United States Department of Justice, in accordance with current EFT procedures provided to Defendant by the Financial Litigation Unit of the U.S. Attorney’s Office for the Northern District of Iowa. The costs of such EFT shall be Defendant’s responsibility. Any funds received after 2:00 p.m. EDT shall be credited on the next Working Day. At the time of payment, Defendant shall provide notice of payment, referencing DOJ Case Number 90-5-2-1-10594 and the civil action case name and case number assigned to the United States’ enforcement action in this case, to the Department of Justice and to EPA in accordance with Section XIX (Notices) of this Consent Decree;
- (b) Defendant shall pay a civil penalty of \$244,444 to the State of Iowa. Payment shall be made by certified check made payable to the State of Iowa and sent to David S. Steward, Assistant Attorney General, Environmental Law Division, Lucas State Office Building, 321 E. 12<sup>th</sup> Street, Room 018, Des Moines, Iowa 50319.

(c) Defendant shall pay a civil penalty of \$122,223 to Linn County. Payment shall be made by certified check made payable to Linn County, Iowa and sent to Lisa Epp, Assistant Linn County Attorney, Civil Division, 935 2<sup>nd</sup> Street SW, Cedar Rapids, Iowa 52404.

170. Failure to timely pay the civil penalty shall subject Defendant to interest accruing from the date payment is due until the date payment is made at the rate prescribed by 28 U.S.C. § 1961, and shall render Defendant liable for all charges, costs, fees, and penalties established by law for the benefit of a creditor or of the United States in securing payment.

171. Payments made pursuant to this Section are penalties within the meaning of Section 162(f) of the Internal Revenue Code, 26 U.S.C. § 162(f), and are not tax-deductible expenditures for purposes of federal law.

## **XI. RESOLUTION OF CLAIMS**

### **A. Resolution of Civil Claims**

172. Claims of the United States, the State of Iowa, and the County of Linn Based on Modifications Occurring Before the Date of Lodging of this Consent Decree. Entry of this Consent Decree shall resolve all civil claims of the United States, the State of Iowa, and the County of Linn against the Defendant that arose from any modifications commenced at any System Unit prior to the Date of Lodging of this Consent Decree, including but not limited to those modifications alleged in the Complaint filed in this civil action, under any or all of: (a) Part C or D of Subchapter I of the CAA, 42 U.S.C. §§ 7470-7492, 7501-7515, and the implementing PSD and Nonattainment NSR provisions of the Iowa SIP; (b) Section 111 of the CAA, 42 U.S.C. § 7411, and 40 C.F.R. § 60.14; and (c) Title V of the CAA, 42 U.S.C. §§ 7661-7661f, but only to

the extent that such Title V claims are based on Defendant's failure to obtain an operating permit that reflects applicable requirements imposed under Part C or D of Subchapter I of the CAA.

173. Claims of the United States Based on Modifications after the Date of Lodging of this Consent Decree. Except as provided below, entry of this Consent Decree also shall resolve all civil claims of the United States that arise from a modification commenced before December 31, 2019, for pollutants regulated under Part C or D of Subchapter I of the CAA and under regulations, which are promulgated thereunder as of the Date of Lodging, where:

- a. such modification is commenced at Burlington Unit 1, Dubuque Unit 1, Dubuque Unit 5, Dubuque Unit 6, Lansing Unit 4, M.L. Kapp Unit 2, Ottumwa Unit 1, Prairie Creek Unit 1, Prairie Creek Unit 2, Prairie Creek Unit 3, Prairie Creek Unit 4, Sutherland Unit 1, or Sutherland Unit 3 after the Date of Lodging of this Consent Decree, or
- b. such modification is one this Consent Decree expressly directs Defendant to undertake.

The term "modification" as used in this Paragraph shall have the meaning that term is given under the CAA, the Iowa SIP, and under the regulations in effect as of the Date of Lodging of this Consent Decree. The claims resolved by this Paragraph shall not include claims based on modifications for Greenhouse Gases and sulfuric acid mist.

174. Reopener. The resolution of the civil claims of the United States against Defendant as provided by this Subsection A, is subject to the provisions of Subsection B of this Section.

175. Claims of the Sierra Club.

- a. Entry of this Consent Decree shall resolve all civil claims of the Sierra Club, and the Sierra Club hereby releases all claims it made or could have made against the Defendant that arose, directly or indirectly, from any modifications commenced at any System Unit prior to the Date of Lodging of this Consent Decree, including but not limited to those set forth in the complaint in this civil action and related to the System Units, under any or all of: (a) Part C or D of Subchapter I of the CAA, 42 U.S.C. §§ 7470-7492, 7501-7515, and the implementing PSD and Nonattainment NSR provisions of the Iowa SIP; (b) Section 111 of the CAA, 42 U.S.C. § 7411, and 40 C.F.R. Section 60.14; and (c) Title V of the CAA, 42 U.S.C. §§ 7661-7661f.
- b. Entry of this Consent Decree shall also resolve all civil claims of the Sierra Club against the Defendant, known or unknown, as to the System Units that arose, directly or indirectly, from violations of opacity standards, carbon monoxide under 42 U.S.C. § 7412, under the Iowa SIP, or any federally-enforceable air pollution control permit through the Date of Lodging of this Consent Decree at any System Unit.
- c. Sierra Club further agrees that it will not pursue Best Available Control Technology or Lowest Achievable Emission Rate limits or New Source Review applicability determinations related to the System Units in any administrative action now pending or contemplated for modifications made prior to the Date of Lodging of this Consent Decree through any filing with a court, any

administrative adjudication, or any formal comments submitted to any governmental entity.

- d. Sierra Club further agrees not to file a legal challenge, including any lawsuit or any petition for a contested case hearing, or take a litigation position or submit comments to any governmental agency in any public forum challenging or criticizing Defendant's request(s) for rate recovery for the costs incurred in achieving compliance with the Consent Decree and/or the issuance of any permits or other regulatory approvals necessary for the construction of any environmental control equipment or Environmental Mitigation Project(s) required by the Consent Decree, except as provided in the section of the Consent Decree concerning dispute resolution. Sierra Club further agrees not to provide legal assistance by any Sierra Club staff, contract with any outside counsel to provide legal assistance, or fund any third parties in any legal challenge, including any lawsuit or any petition for a contested case hearing, or in any proceeding before any public regulatory entity challenging or criticizing the Defendant's request(s) for rate recovery for the costs incurred in achieving compliance with the Consent Decree and/or the issuance of any permits or other regulatory approvals necessary for the construction of any environmental control equipment or Environmental Mitigation Project(s) required by the Consent Decree.
- e. Entry of this Consent Decree also shall resolve all civil claims of the Sierra Club related to the System Units that arise from a modification commenced before December 31, 2019, pursuant to (1) Part C or D of the Act or 42 U.S.C. § 7411,

(2) the Title V program, 42 U.S.C. §§ 7661-7661d, (3) emissions standards or limitations in the existing Iowa SIP, or (4) hazardous air pollutant standard in effect or proposed as of the date of the entry of this Consent Decree and that is promulgated pursuant to 42 U.S.C. § 7412. The future claims resolved by this Paragraph shall not include claims based on modifications that increase Greenhouse Gases or sulfuric acid mist emissions.

- f. Any dispute as to Paragraph 175 is subject to the Dispute Resolution provisions of this Consent Decree, including the written notice and right to cure provisions. Any remedy arising from commitments of Sierra Club pursuant to this Consent Decree is limited to equitable relief (*i.e.*, specific performance) and shall not include monetary damages.

176. Claims of the State of Iowa and Linn County Arising after the Date of Lodging of this Consent Decree.

- a. The State of Iowa and Linn County expressly do not join in giving the Defendant the covenant provided by the United States and Sierra Club in paragraphs 173 and 175(e) of this Consent Decree, do not release any claims under the CAA and its implementing regulations arising after the Date of Lodging of this Consent Decree, and reserves their rights, if any, to bring any actions against Defendant for any claims arising after the Date of Lodging of this Consent Decree.
- b. Notwithstanding paragraph 176(a), the State of Iowa and Linn County release the Defendant from any civil claims that may arise under the CAA and its

implementing regulations for Defendant's performance of activities that this Consent Decree expressly directs the Defendant to undertake.

**B. Pursuit of Civil Claims Otherwise Resolved by Subsection A**

177. Bases for Pursuing Resolved Claims for the System. If: Defendant i) violates a System-Wide Annual Tonnage Limitation for SO<sub>2</sub> or NO<sub>x</sub>; or ii) fails by more than 90 Days to Retire, Refuel, or Repower a Unit as required by this Consent Decree; or iii) fails by more than 90 Days to install, upgrade, or commence Continuous Operation of any emission control device required pursuant to this Consent Decree; or iv) fails by more than 90 Days to achieve any Emission Rate or other obligation or limitation required pursuant to this Consent Decree; then the United States may pursue any claim at any System Unit that is otherwise resolved under Subsection XI.A. (Resolution of Civil Claims), subject to subparagraphs a. and b. below.

- a. For any claims based on modifications undertaken at an Other Unit (*i.e.*, any unit of the System that is not an Improved Unit for the pollutant in question), claims may be pursued only regarding the pollutant that causes the Unit's designation as an Other Unit where the modification(s) on which such claim is based was commenced within the 5 years preceding the violation or failure specified in this Paragraph.
- b. For any claims based on modifications undertaken at an Improved Unit, claims may be pursued only regarding the pollutant that causes the Unit's designation as an Improved Unit where the modification(s) on which such claim is based was commenced: (1) after the Date of Lodging of this Consent Decree, and (2) within the 5 years preceding the violation or failure specified in this Paragraph.

178. Additional Bases for Pursuing Resolved Claims for Modifications at an Improved Unit. Solely with respect to the pollutant that causes the Unit's designation as an Improved Unit, the United States may also pursue claims arising from a modification (or collection of modifications) at an Improved Unit that have otherwise been resolved under Subsection XI.A. (Resolution of Civil Claims), if the modification (or collection of modifications) at the Improved Unit on which such claim is based (a) was commenced after the Date of Lodging, and (b) individually (or collectively) increased the maximum hourly Emission Rate of that Unit for the pollutant that caused the Unit's designation as an Improved Unit (as measured by 40 C.F.R. §§ 60.14(b) and (h)) by more than 10%.

179. Additional Bases for Pursuing Resolved Claims for Modification at an Other Unit. Solely with respect to the pollutant that causes the Unit's designation as an Other Unit, the United States may also pursue claims arising from a modification (or collection of modifications) at an Other Unit that have otherwise been resolved under Subsection XI.A. (Resolution of Civil Claims), if the modification (or collection of modifications) at the Other Unit on which such claim is based was commenced within 5 years preceding any of the following events:

- a. A modification (or collection of modifications) at such Other Unit commenced after the Date of Lodging of this Consent Decree that increases the maximum hourly Emission Rate for such pollutant that caused the Unit's designation as an Other Unit (NO<sub>x</sub> or SO<sub>2</sub>), as measured by 40 C.F.R. §§ 60.14(b) and (h);
- b. The aggregate of all Capital Expenditures made at such Other Unit exceeds \$150/kW on the Other Unit's Boiler Island (based on the generating capacities identified in this Consent Decree) during the period from the Date of Entry of this

Consent Decree through December 31, 2018 (Capital Expenditures shall be measured in calendar year 2015 constant dollars, as adjusted by the McGraw-Hill Engineering News-Record Construction Cost Index); or

- c. A modification (or collection of modifications) at such Other Unit commenced after the Date of Lodging of this Consent Decree that results in an emissions increase for such pollutant that caused the Unit's designation as an Other Unit (NO<sub>x</sub> and/or SO<sub>2</sub>) at such Other Unit, and such increase of such pollutant: (i) presents, by itself, or in combination with other emissions or sources, "an imminent and substantial endangerment" within the meaning of Section 303 of the Act, 42 U.S.C. § 7603; (ii) causes or contributes to violation of a NAAQS in any Air Quality Control Area that is in attainment with that NAAQS; (iii) causes or contributes to violation of a PSD increment; or (iv) causes or contributes to any adverse impact on any formally-recognized air quality and related values in any Class I area. The introduction of any new or changed NAAQS shall not, standing alone, provide the showing needed under this Subparagraph (c) to pursue any claim for modification at an Other Unit resolved under Subsection A of this Section.

## **XII. PERIODIC REPORTING**

180. After entry of this Consent Decree, Defendant shall submit to Plaintiffs a periodic report, within 60 Days after the end of each half of the calendar year (January through June and July through December). The report shall include the following information:

- a. all information necessary to determine compliance during the reporting period with: all applicable 30-Day Rolling Average Emission Rates for NO<sub>x</sub>, 30-Day Rolling Average Emission Rates for SO<sub>2</sub>, and 24-Hour Rolling Average Emission Rates for PM; all applicable 12-Month Rolling Average Emission Rates for NO<sub>x</sub> and all 12-Month Rolling Average Emission Rates for SO<sub>2</sub>; all applicable 3-hour average PM Emission Rates; all applicable Prairie Creek Annual Tonnage Limitations; all applicable System-Wide Annual Tonnage Limitations; the obligation to monitor NO<sub>x</sub>, SO<sub>2</sub>, and PM emissions; the obligation to optimize PM emission controls; and the obligation to Surrender NO<sub>x</sub> Allowances and SO<sub>2</sub> Allowances;
- b. all periods of monitor Malfunction, maintenance, and/or repair as provided in Paragraph 150;
- c. emission reporting and Allowance accounting information necessary to determine Super-Compliant NO<sub>x</sub> and SO<sub>2</sub> Allowances that Defendant claims to have generated in accordance with Paragraphs 110 and 134 through control of emissions beyond the requirements of this Consent Decree;
- d. schedule for the installation or upgrade and commencement of operation of new or upgraded pollution control devices required by this Consent Decree, including the nature and cause of any actual or anticipated delays, and any steps taken by the Defendant to mitigate such delay;
- e. all affirmative defenses asserted pursuant to Paragraph 197 during the period covered by the progress report;

- f. an identification of all periods when any pollution control device required by this Consent Decree to Continuously Operate was not operating, the reason(s) for the equipment not operating, and the basis for Defendant's compliance or non-compliance with the Continuous Operation requirements of this Consent Decree; and
- g. a summary of Defendant's actions implemented and expenditures (cumulative and in the current reporting period) made pursuant to implementation of the Environmental Mitigation Projects required pursuant to Section IX.

If Defendant's initial periodic report covers a period of time of less than 60 Days Defendant shall not be required to submit a periodic report for that period, but shall include all of the above information and data for that period in its next periodic report.

181. In any periodic report submitted pursuant to this Section XII, Defendant may incorporate by reference information previously submitted under its Title V permitting requirements, provided that the Defendant attaches the Title V Permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V Permit report that are responsive to the information required in the periodic report.

182. In addition to the reports required pursuant to this Section, Defendant shall submit to Plaintiffs a report of any violation or deviation from any provision of this Consent Decree within 15 Working Days after Defendant knew or should have known of the event. In the report, the Defendant shall explain the cause or causes of the violation or deviation and all measures taken or to be taken by the Defendant to cure the reported violation or deviation or to prevent such violations or deviations in the future. If at any time the provisions of this Consent

Decree are included in Title V Permits, consistent with the requirements for such inclusion in this Consent Decree, then the deviation reports required under applicable Title V regulations shall be deemed to satisfy all the requirements of this Paragraph.

183. Each report required by this Consent Decree shall be signed by the Responsible Official as defined in Title V of the Clean Air Act for the appropriate System Unit(s), and shall contain the following certification:

*This information was prepared either by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my evaluation, or the direction and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, I hereby certify under penalty of law that, to the best of my knowledge and belief, this information is true, accurate, and complete. I understand that there are significant penalties for submitting false, inaccurate, or incomplete information to the United States.*

### **XIII. REVIEW AND APPROVAL OF SUBMITTALS**

184. Defendant shall submit each plan, report, or other submission required by this Consent Decree to Plaintiffs whenever and in the manner such a document is required to be submitted for review or approval pursuant to this Consent Decree. EPA (after consultation with the other Plaintiffs) may approve the submission or decline to approve it and provide written comments explaining the bases for declining such approval as soon as reasonably practicable. Within 60 Days of receiving written comments from EPA, Defendant shall either: (a) revise the submission consistent with the written comments and provide the revised submission to EPA; or (b) submit the matter for dispute resolution, including the period of informal negotiations, under Section XVI (Dispute Resolution) of this Consent Decree.

185. Upon receipt of EPA's final approval of the submission, or upon completion of the submission pursuant to dispute resolution, Defendant shall implement the approved submission in accordance with the schedule specified therein or another EPA-approved schedule.

**XIV. STIPULATED PENALTIES**

186. For any failure by Defendant to comply with the terms of this Consent Decree, and subject to the provisions of Sections XV (Force Majeure) and XVI (Dispute Resolution) and the other Paragraphs in this Section of the Consent Decree, Defendant shall pay, within 30 Days after receipt of written demand by the United States and/or the State of Iowa and/or Linn County, the following stipulated penalties.

<b>Consent Decree Violation</b>	<b>Stipulated Penalty</b>
a. Failure to pay the civil penalty as specified in Section X (Civil Penalty) of this Consent Decree	\$10,000 per Day
b. Failure to comply with any applicable 30-Day Rolling Average Emission Rate for NO <sub>x</sub> or SO <sub>2</sub>	<p>\$2,500 per Day per violation where the violation is less than 5% in excess of the lb/mmBTU limits</p> <p>\$5,000 per Day per violation where the violation is equal to or greater than 5% but less than 10% in excess of the lb/mmBTU limits</p> <p>\$10,000 per Day per violation where the violation is equal to or greater than 10% in excess of the lb/mmBTU limits</p>
c. Failure to comply with any applicable 12-Month Rolling Average Emission Rate for NO <sub>x</sub> or SO <sub>2</sub> , where the violation is less than 5% in excess of the limits set forth in this Consent Decree	\$200 per Day per violation

<p>d. Failure to comply with any applicable 12-Month Rolling Average Emission Rate for NO<sub>x</sub> or SO<sub>2</sub>, where the violation is equal to or greater than 5% but less than 10% in excess of the limits set forth in this Consent Decree</p>	<p>\$400 per Day per violation</p>
<p>e. Failure to comply with any applicable 12-Month Rolling Average Emission Rate for NO<sub>x</sub> or SO<sub>2</sub>, where the violation is equal to or greater than 10% in excess of the limits set forth in this Consent Decree</p>	<p>\$800 per Day per violation</p>
<p>f. Failure to comply with the applicable System-Wide Annual Tonnage Limitations for NO<sub>x</sub> established by this Consent Decree</p>	<p>(1) \$5,000 per ton for first 100 tons, \$10,000 per ton for each additional ton above 100 tons, plus (2) at the option of the Defendant either the Surrender of NO<sub>x</sub> Allowances in an amount equal to two times the number of tons of NO<sub>x</sub> emitted that exceeded the System-Wide Annual Tonnage Limitation for NO<sub>x</sub>, or the payment of \$2,500 per ton for an amount of tons equal to two times the number of tons of NO<sub>x</sub> emitted that exceeded the System-Wide Annual Tonnage Limitation for NO<sub>x</sub></p>

<p>g. Failure to comply with the applicable Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub> established by this Consent Decree</p>	<p>(1) \$5,000 per ton for first 100 tons, \$10,000 per ton for each additional ton above 100 tons, plus (2) at the option of the Defendant either the Surrender of NO<sub>x</sub> Allowances in an amount equal to two times the number of tons of NO<sub>x</sub> emitted that exceeded the Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub>, or the payment of \$2,500 per ton for an amount of tons equal to two times the number of tons of NO<sub>x</sub> emitted that exceeded the Prairie Creek Annual Tonnage Limitation for NO<sub>x</sub></p>
<p>h. Failure to comply with any applicable System-Wide Annual Tonnage Limitations for SO<sub>2</sub> established by this Consent Decree</p>	<p>(1) \$5,000 per ton for the first 100 tons over the limit, and \$10,000 per ton for each additional ton over the limit, plus (2) at the option of the Defendant either the Surrender of SO<sub>2</sub> Allowances in an amount equal to two times the number of tons of SO<sub>2</sub> emitted that exceeded the System-Wide Annual Tonnage Limitation for SO<sub>2</sub>, or the payment of \$2,500 per ton for an amount of tons equal to two times the number of tons of SO<sub>2</sub> emitted that exceeded the System-Wide Annual Tonnage Limitation for SO<sub>2</sub></p>

<p>i. Failure to comply with the applicable Prairie Creek Annual Tonnage Limitation for SO<sub>2</sub> established by this Consent Decree</p>	<p>(1) \$5,000 per ton for the first 100 tons over the limit, and \$10,000 per ton for each additional ton over the limit, plus (2) at the option of the Defendant either the Surrender of SO<sub>2</sub> Allowances in an amount equal to two times the number of tons of SO<sub>2</sub> emitted that exceeded the Prairie Creek Annual Tonnage Limitation for SO<sub>2</sub>, or the payment of \$2,500 per ton for an amount of tons equal to two times the number of tons of SO<sub>2</sub> emitted that exceeded the Prairie Creek Annual Tonnage Limitation for SO<sub>2</sub></p>
<p>j. Failure to comply with any applicable PM Emission Rate, where the violation is less than 5% in excess of the lb/mmBTU limit</p>	<p>\$2,500 per Unit Operating Day per violation, starting on the Unit Operating Day that a stack test result demonstrates a violation and continuing each Unit Operating Day thereafter until and excluding such Unit Operating Day on which a subsequent stack test demonstrates compliance with the applicable PM Emission Rate</p>
<p>k. Failure to comply with any applicable PM Emission Rate, where the violation is equal to or greater than 5% but less than 10% in excess of the lb/mmBTU limit</p>	<p>\$5,000 per Unit Operating Day per violation, starting on the Unit Operating Day a stack test result demonstrates a violation and continuing each Unit Operating Day thereafter until and excluding such Unit Operating Day on which a subsequent stack test demonstrates compliance with the applicable PM Emission Rate</p>

<p>l. Failure to comply with any applicable PM Emission Rate, where the violation is equal to or greater than 10% in excess of the lb/mmBTU limit</p>	<p>\$10,000 per Unit Operating Day per violation, starting on the Unit Operating Day a stack test result demonstrates a violation and continuing each Unit Operating Day thereafter until and excluding such Unit Operating Day on which a subsequent stack test demonstrates compliance with the applicable PM Emission Rate</p>
<p>m. Failure to install, commence Continuous Operation, or Continuously Operate a NO<sub>x</sub>, SO<sub>2</sub>, or PM control device as required under this Consent Decree</p>	<p>\$10,000 per Day per violation during the first 30 Days; \$37,500 per Day per violation thereafter</p>
<p>n. Failure to Retire, Refuel, or Repower as required under this Consent Decree</p>	<p>\$10,000 per Day per violation during the first 30 Days; \$37,500 per Day per violation thereafter</p>
<p>o. Failure to conduct a stack test for PM as required by Section VII.D of this Consent Decree</p>	<p>\$5,000 per Day per violation</p>
<p>p. Failure to install or operate NO<sub>x</sub>, SO<sub>2</sub>, and/or PM CEMS as required in this Consent Decree</p>	<p>\$1,000 per Day per violation</p>
<p>q. Failure to apply for any permit required by Section XVII (Permits)</p>	<p>\$1,000 per Day per violation</p>
<p>r. Failure to timely submit or implement, as approved, the reports, plans, studies, analyses, protocols, or other submittals required by this Consent Decree</p>	<p>\$750 per Day per violation during the first 10 Days; \$1,000 per Day per violation thereafter</p>
<p>s. Failure to Surrender SO<sub>2</sub> Allowances as required under this Consent Decree</p>	<p>\$37,500 per Day. In addition, \$1,000 per SO<sub>2</sub> Allowance not Surrendered</p>
<p>t. Failure to Surrender NO<sub>x</sub> Allowances as required under this Consent Decree</p>	<p>\$37,500 per Day. In addition, \$1,000 per NO<sub>x</sub> Allowance not Surrendered</p>

u. Using, selling, banking, trading, or transferring NO <sub>x</sub> Allowances or SO <sub>2</sub> Allowances except as permitted under this Consent Decree	At the option of the Defendant either the Surrender of Allowances in an amount equal to four times the number of Allowances used, sold, banked, traded, or transferred in violation of this Consent Decree, or the payment of \$2,500 per ton for an amount of tons equal to four times the number of Allowances used, sold, banked, traded, or transferred in violation of this Consent Decree
v. Failure to optimize ESPs as required by Paragraph 137	\$1,000 per Day per violation
w. Failure to undertake and complete as described in Appendix A any of the Environmental Mitigation Projects in compliance with Section IX (Environmental Mitigation Projects) of this Consent Decree	\$1,000 per Day per violation during the first 30 Days; \$5,000 per Day per violation thereafter
x. Any other violation of this Consent Decree	\$1,000 per Day per violation

187. Violations of any limit based on a 30-Day Rolling Average Emission Rate constitutes 30 Days of violation, provided, however, that where such a violation (for the same pollutant and from the same Unit) recurs within periods less than 30 Days, Defendant shall not be obligated to pay a daily stipulated penalty for any Day of the recurrence for which a stipulated penalty has already been paid.

188. Violations of any limit based on a 12-Month Rolling Average Emission Rate constitutes 365 Days of violation, provided, however, that where such a violation (for the same pollutant and from the same Unit) recurs within periods less than 12 months, Defendant shall not be obligated to pay a daily stipulated penalty for any Day of the recurrence for which a stipulated penalty has already been paid.

189. All stipulated penalties shall begin to accrue on the Day after the performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases, whichever is applicable. For example, emissions for one Day may be included in only one 30-Day Rolling Average calculation. Nothing in this Consent Decree shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Consent Decree.

190. Where the United States, the State of Iowa and Linn County seek stipulated penalties for the same violation of this Consent Decree, Defendant shall pay 66% to the United States, 22.5% to the State of Iowa, and 11.5% to Linn County. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiffs.

191. For purposes of the stipulated penalty for failure to make any Allowance Surrender required pursuant to Subparagraphs 186.s to 186.u, Defendant shall make the Surrender of any Allowances required by such Subparagraph by June 30 of the immediately following calendar year.

192. All stipulated penalties shall be paid within 30 Days of receipt of written demand to the Defendant from the United States, the State of Iowa and/or Linn County, and Defendant shall continue to make such payments every 30 Days thereafter until the violation(s) no longer continues, unless Defendant elects within 20 Days of receipt of written demand to dispute the imposition or accrual of stipulated penalties in accordance with the provisions in Section XVI (Dispute Resolution) of this Consent Decree.

193. Stipulated penalties shall continue to accrue as provided in accordance with Paragraph 189 during any dispute, with interest on accrued stipulated penalties payable and calculated at the rate established by the Secretary of the Treasury, pursuant to 28 U.S.C. § 1961, but need not be paid until the following:

- a. If the dispute is resolved by agreement, or by a decision of the Plaintiffs pursuant to Section XVI (Dispute Resolution) of this Consent Decree that is not appealed to the Court, accrued stipulated penalties agreed or determined to be owing, together with accrued interest, shall be paid within 30 Days of the effective date of the agreement or of the receipt of the Plaintiffs' decision;
- b. If the dispute is appealed to the Court and the Plaintiffs prevail in whole or in part, the Defendant shall, within 30 Days of receipt of the Court's decision or order, pay all accrued stipulated penalties determined by the Court to be owing, together with interest accrued on such penalties determined by the Court to be owing, except as provided in Subparagraph c, below;
- c. If the Court's decision is appealed by either Party, the Defendant shall, within 15 Days of receipt of the final appellate court decision, pay all accrued stipulated penalties determined to be owed, together with interest accrued on such stipulated penalties determined to be owed by the appellate court.

Notwithstanding any other provision of this Consent Decree, the accrued stipulated penalties agreed to by the United States and Defendant, or determined by the United States through Dispute Resolution to be owed, may be less than the stipulated penalty amounts set forth in Paragraph 186.

194. All monetary stipulated penalties shall be paid in the manner set forth in Section X (Civil Penalty) of this Consent Decree and all Allowance Surrender stipulated penalties shall comply with the Allowance Surrender procedures of Paragraphs 111 to 112 and 135 to 136.

195. Should Defendant fail to pay stipulated penalties in compliance with the terms of this Consent Decree, the United States, the State of Iowa, and Linn County shall be entitled to collect interest on such penalties, as provided for in 28 U.S.C. § 1961.

196. The stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the Plaintiffs by reason of Defendant's failure to comply with any requirement of this Consent Decree or applicable law, except that for any violation of the Act for which this Consent Decree provides for payment of a stipulated penalty, Defendant shall be allowed a credit for stipulated penalties paid against any statutory penalties also imposed for such violation.

197. Affirmative Defense as to Stipulated Penalties for Excess Emissions Occurring During Malfunctions. If any of the Units in the System exceed an applicable 24-Hour or 30-Day Rolling Average Emission Rate set forth in this Consent Decree, due to Malfunction, the Defendant, bearing the burden of proof by a preponderance of the evidence, has an affirmative defense to a claim for stipulated penalties under this Consent Decree, if Defendant has complied with the reporting requirements of Paragraphs 198 and 199 and demonstrates all of the following:

- a. the excess emissions were caused by a sudden, unavoidable breakdown of technology, beyond the control of the Defendant;

- b. the excess emissions (1) did not stem from any activity or event that could have been foreseen and avoided, or planned for, and (2) could not have been avoided by better operation and maintenance practices in accordance with manufacturers' specifications and good engineering and maintenance practices;
- c. to the maximum extent practicable, the air pollution control equipment and processes were maintained and operated in a manner consistent with good practice for minimizing emissions in accordance with manufacturers' specifications and good engineering and maintenance practices;
- d. repairs were made in an expeditious fashion when Defendant knew or should have known that an applicable 24-Hour or 30-Day Rolling Average Emission Rate was being or would be exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as practicable;
- e. the amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions in accordance with manufacturers' specifications and good engineering and maintenance practices;
- f. all possible steps were taken to minimize the impact of the excess emissions on ambient air quality;
- g. all emission monitoring systems were kept in operation if at all possible in accordance with manufacturers' specifications and good engineering and maintenance practices;

- h. Defendant's actions in response to the excess emissions were documented by properly signed or otherwise validated, contemporaneous operating logs, or other relevant evidence;
- i. the excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and
- j. Defendant properly and promptly notified Plaintiffs as required by this Consent Decree.

198. To assert an affirmative defense for exceedance of an applicable 24-Hour Rolling Emission Rate due to Malfunction under Paragraph 197, the Defendant shall submit all data demonstrating the actual emissions for any 24 hour period during which the excess emissions from the Malfunction occurs. To assert an affirmative defense for exceedance of an applicable 30-Day Rolling Emission Rate due to Malfunction under Paragraph 197, the Defendant shall submit all data demonstrating the actual emissions for the Day the Malfunction occurs and the 29-Unit Operating Day period following the Day the Malfunction occurs. Defendant may, if it elects, submit emissions data for the same 24-Hour or 30-Unit Operating Day period, as applicable, but that excludes the excess emissions.

199. For an affirmative defense under Paragraphs 197, Defendant, bearing the burden of proof by a preponderance of the evidence, shall demonstrate, through submission of the data and information under the reporting provisions of this Section, that all reasonable and practicable measures in accordance with good engineering and maintenance practices and within the Defendant's control were implemented to prevent the occurrence of the excess emissions.

200. Defendant shall provide notice to Plaintiffs in writing of Defendant's intent to assert an affirmative defense for Malfunction under Paragraphs 197 in Defendant's semi-annual progress reports as required by Paragraph 180. This notice shall be submitted pursuant to the provisions of Section XIX (Notices). The notice shall contain:

- a. The identity of each stack or other emission point where the excess emissions occurred;
- b. The magnitude of the excess emissions expressed in lb/mmBTU and the operating data and calculations used in determining the magnitude of the excess emissions;
- c. The time and duration or expected duration of the excess emissions;
- d. The identity of the equipment causing the excess emissions;
- e. The nature and suspected cause of the excess emissions;
- f. The steps taken, if the excess emissions were the result of a Malfunction, to remedy the Malfunction and the steps taken or planned to prevent the recurrence of the Malfunction;
- g. The steps that were or are being taken to limit the excess emissions; and
- h. If applicable, a list of the steps taken to comply with permit conditions governing Unit operation during periods of startup, shutdown, and/or Malfunction.

201. A Malfunction shall not constitute a Force Majeure Event unless the Malfunction also meets the definition of a Force Majeure Event, as provided in Section XV (Force Majeure).

202. The affirmative defense provided herein is only an affirmative defense to stipulated penalties for violations of this Consent Decree, and not a defense to any civil or administrative action for injunctive relief.

## **XV. FORCE MAJEURE**

203. For purposes of this Consent Decree, a “Force Majeure Event” shall mean an event that has been or will be caused by circumstances beyond the control of Defendant, its contractors, or any entity controlled by Defendant that delays or prevents the performance of any obligation under this Consent Decree or otherwise causes a violation of any provision of this Consent Decree despite the Defendant’s best efforts to fulfill the obligation. “Best efforts to fulfill the obligation” include using best efforts to anticipate any potential Force Majeure Event and to address the effects of any such event (a) as it is occurring and (b) after it has occurred, such that the delay and/or violation are minimized to the greatest extent possible and the emissions during such event are minimized to the greatest extent possible. Specific references to Force Majeure in other parts of this Consent Decree do not restrict the ability of the Defendant to assert Force Majeure pursuant to the process described in this Section.

204. Notice of Force Majeure Events. If any event occurs or has occurred that may delay or prevent compliance with or otherwise cause a violation of any obligation under this Consent Decree, as to which Defendant intends to assert a claim of Force Majeure, then the Defendant shall notify Plaintiffs in writing as soon as practicable, but in no event later than 15 Working Days following the date the Defendant first knew, or by the exercise of due diligence should have known, that the event caused or may cause such delay or violation. In this notice, the Defendant shall reference this Paragraph of this Consent Decree and describe the anticipated length of time that the delay or violation may persist, the cause or causes of the Force Majeure Event, all measures taken or to be taken by the Defendant to prevent or minimize the delay or violation, the schedule by which the Defendant proposes to implement those measures, and the

Defendant's rationale for attributing the failure, delay, or violation to a Force Majeure Event. A copy of this Notice shall be sent electronically, as soon as practicable, to Plaintiffs. The Defendant shall adopt all reasonable measures to avoid or minimize such failures, delays, or violations. The Defendant shall be deemed to know of any circumstance which it, its contractors, or any entity controlled by it, knew or should have known.

205. Failure to Give Notice. If the Defendant fails to comply with the notice requirements of this Section, the United States (after consultation with the other Plaintiffs) may void Defendant's claim for Force Majeure as to the specific event for which the Defendant has failed to comply with such notice requirement.

206. Plaintiffs' Response. The United States shall notify the Defendant in writing regarding Defendant's claim of Force Majeure as soon as reasonably practicable. If the United States (after consultation with the other Plaintiffs) agrees that a delay in performance has been or will be caused by a Force Majeure Event, the Plaintiffs and the Defendant shall stipulate to an extension of deadline(s) for performance of the affected compliance requirement(s) by a period equal to the delay actually caused by the event, or as otherwise agreed to by the United States (after consultation with the other Plaintiffs) and the Defendant, in which case the delay at issue shall be deemed not to be a violation of the affected requirement(s) of this Consent Decree. In such circumstances, an appropriate modification shall be made pursuant to Section XXIII (Modification) of this Consent Decree.

207. Disagreement. If the United States (after consultation with the other Plaintiffs) does not agree with the Defendant's claim of Force Majeure, or if the United States and the Defendant cannot agree on the length of the delay actually caused by the Force Majeure Event,

the matter shall be resolved in accordance with Section XVI (Dispute Resolution) of this Consent Decree.

208. Burden of Proof. In any dispute regarding Force Majeure, the Defendant shall bear the burden of proving that any delay in performance, or any other violation of any requirement of this Consent Decree, was caused by or will be caused by a Force Majeure Event. The Defendant shall also bear the burden of proving that the Defendant gave the notice required by this Section and the anticipated duration and extent of any failure, delay, or violation(s) attributable to a Force Majeure Event. An extension of one compliance date may, but will not necessarily, result in an extension of a subsequent compliance date.

209. Events Excluded. Unanticipated or increased costs or expenses associated with the performance of the Defendant's obligations under this Consent Decree shall not constitute a Force Majeure Event.

210. Potential Force Majeure Events. The Parties agree that, depending upon the circumstances related to an event and the Defendant's response to such circumstances, the kinds of events listed below are among those that could qualify as Force Majeure Events within the meaning of this Section: construction, labor, or equipment delays; Malfunction of a Unit or emission control device; unanticipated coal supply or pollution control reagent delivery interruptions; acts of God; acts of war or terrorism; and orders by a government official, government agency, other regulatory authority, or a regional transmission organization (e.g., the Midcontinent Independent System Operator, Inc.), acting under and authorized by applicable law or tariff as accepted by the Federal Energy Regulatory Commission, that directs the Defendant to supply electricity so long as such order is a response to a system-wide (state-wide or regional)

emergency which could include unanticipated required operation to avoid loss of load or unserved load or is necessary to preserve the reliability of the bulk power system. Depending upon the circumstances and the Defendant's response to such circumstances, failure of a permitting authority or the Iowa Utilities Board to issue a necessary permit or order with sufficient time for the Defendant to achieve compliance with this Consent Decree may constitute a Force Majeure Event where the failure of the authority to act is beyond the control of the Defendant and the Defendant has taken all steps available to it to obtain the necessary permit or order, including, but not limited to: submitting a complete permit application or request; responding to requests for additional information by the authority in a timely fashion; and accepting lawful permit terms and conditions after expeditiously exhausting any legal rights to appeal terms and conditions imposed by the authority.

211. Extended Schedule. As part of the resolution of any matter submitted to this Court under Section XVI (Dispute Resolution) of this Consent Decree regarding a claim of Force Majeure, the United States and Defendant by agreement, or this Court by order, may in appropriate circumstances extend or modify the schedule for completion of work and/or obligations under this Consent Decree to account for the delay in the work and/or obligations that occurred as a result of any delay agreed to by the United States or approved by the Court. The Defendant shall be liable for stipulated penalties pursuant to Section XIV (Stipulated Penalties) for its failure thereafter to complete the work and/or obligations in accordance with the extended or modified schedule (provided that the Defendant shall not be precluded from asserting that a further Force Majeure Event has caused or may cause a delay in complying with the extended or modified schedule).

## **XVI. DISPUTE RESOLUTION**

212. The dispute resolution procedure provided by this Section shall be available to resolve all disputes arising under this Consent Decree, provided that the Party invoking such procedure has first made a good faith attempt to resolve the matter with the other Party. The provisions of this Section XVI shall be the sole and exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

213. The dispute resolution procedure required herein shall be invoked by one Party giving written notice to the other Party advising of a dispute pursuant to this Section. The notice shall describe the nature of the dispute and shall state the noticing Party's position with regard to such dispute. The Party receiving such a notice shall acknowledge receipt of the notice, and the Parties in dispute shall expeditiously schedule a meeting to discuss the dispute informally not later than 14 Days following receipt of such notice.

214. Disputes submitted to dispute resolution under this Section shall, in the first instance, be the subject of informal negotiations between the Parties. Such period of informal negotiations shall not extend beyond 30 Days from the date of the first meeting between the Parties' representatives unless they agree in writing to shorten or extend this period.

215. If the Parties are unable to reach agreement during the informal negotiation period, the Plaintiff or Plaintiffs shall provide Defendant with a written summary of their position(s) regarding the dispute. The written position provided by the Plaintiff or Plaintiffs, or by the United States if Plaintiffs have different positions, shall be considered binding unless, within 45 Days thereafter, the Defendant, or the State of Iowa, Linn County, or Sierra Club if Plaintiffs have different positions, seeks judicial resolution of the dispute by filing a petition with

this Court. Any Party opposing such petition may submit a response to the petition within 45 Days of filing.

216. The time periods set out in this Section may be shortened or lengthened upon motion to the Court of one of the Parties to the dispute, explaining the Party's basis for seeking such a scheduling modification.

217. This Court shall not draw any inferences nor establish any presumptions adverse to either Party as a result of invocation of this Section or the Parties' inability to reach agreement.

218. As part of the resolution of any dispute under this Section, in appropriate circumstances the Parties may agree, or this Court may order, an extension or modification of the schedule for the completion of the activities required under this Consent Decree to account for the delay that occurred as a result of dispute resolution. The Defendant shall be liable for stipulated penalties pursuant to Section XIV (Stipulated Penalties) for its failure thereafter to complete the work in accordance with the extended or modified schedule, provided that Defendant shall not be precluded from asserting that a Force Majeure Event has caused or may cause a delay in complying with the extended or modified schedule.

219. The Court shall decide all disputes pursuant to applicable principles of law for resolving such disputes. In their filings with the Court under Paragraph 215, the Parties shall state their respective positions as to the applicable standard of law for resolving the particular dispute.

## **XVII. PERMITS**

220. Unless expressly stated otherwise in this Consent Decree, in any instance where otherwise applicable law or this Consent Decree requires Defendant to secure a permit to authorize construction or operation of any device, including all preconstruction, construction, and operating permits required under State law, the Defendant shall make such application in a timely manner. The State of Iowa and EPA will use best efforts to review expeditiously, to the extent applicable, all permit applications submitted by Defendant to meet the requirements of this Consent Decree.

221. Notwithstanding the previous Paragraphs, nothing in this Consent Decree shall be construed to require Defendant to apply for, amend, or obtain a PSD or Nonattainment NSR permit or permit modification for any physical change in, or any change in the method of operation of, any System Unit that would give rise to claims resolved by Section XI (Resolution of Claims) of this Consent Decree.

222. When permits are required, the Defendant shall complete and submit applications for such permits to the applicable State or local agency to allow sufficient time for all legally required processing and review of the permit request, including requests for additional information by the applicable State or local agency. Any failure by Defendant to submit a timely permit application for a System Unit, as required by permitting requirements under state, local, and/or federal regulations, shall bar any use of Section XV (Force Majeure) of this Consent Decree where a Force Majeure claim is based on permitting delays.

223. Notwithstanding the reference to the Title V Permits for the System Units in this Consent Decree, the enforcement of such permits shall be in accordance with their own terms

and the CAA and its implementing regulations. Such Title V Permits shall not be enforceable under this Consent Decree, although any term or limit established by or under this Consent Decree shall be enforceable under this Consent Decree regardless of whether such term has or will become part of a Title V Permit, subject to the terms of Section XXVII (Termination) of this Consent Decree.

224. Within 180 Days after the Date of Entry of this Consent Decree, the Defendant shall amend any applicable Title V Permit application(s), or apply for amendments of its Title V Permits, to include a schedule for all Unit-specific, plant-specific, and System-specific performance, operational, maintenance, and control technology requirements established by this Consent Decree including, but not limited to, any (a) 12-Month Rolling Average Emission Rate for NO<sub>x</sub>, (b) 12-Month Rolling Average Emission Rate for SO<sub>2</sub>, (c) 30-Day Rolling Average Emission Rate for NO<sub>x</sub>, (d) 30-Day Rolling Average Emission Rate for SO<sub>2</sub>, (e) System-Wide Annual Tonnage Limitation, (f) Prairie Creek Annual Tonnage Limitation, (g) requirements pertaining to the Surrender of SO<sub>2</sub> and NO<sub>x</sub> Allowances, (h) PM Emission Rate and annual stack test requirements, (i) PM CEMS monitoring equipment, and (j) the Retirement, Refueling, or Repowering of any Unit as required under this Consent Decree.

225. Within one year from the Date of Entry of this Consent Decree, the Defendant shall apply to permanently include the requirements and limitations enumerated in this Consent Decree into a federally enforceable permit, such that the requirements and limitations enumerated in this Consent Decree become and remain 'applicable requirements' as that term is defined in 40 C.F.R. Part 70.2. The permit shall require compliance with the following: any applicable (a) 12-Month Rolling Average Emission Rate for NO<sub>x</sub>, (b) 12-Month Rolling Average

Emission Rate for SO<sub>2</sub>, (c) 30-Day Rolling Average Emission Rate for NO<sub>x</sub>, (d) 30-Day Rolling Average Emission Rate for SO<sub>2</sub>, (e) System-Wide Annual Tonnage Limitation, (f) Prairie Creek Annual Tonnage Limitation, (g) requirements pertaining to the Surrender of SO<sub>2</sub> and NO<sub>x</sub> Allowances, (h) PM Emission Rate and annual stack test requirements, (i) PM CEMS monitoring equipment requirements, and (j) Retirement, Refueling, or Repowering requirements.

226. Defendant shall provide the Plaintiffs with a copy of each application for a federally enforceable permit, as well as a copy of any permit proposed as a result of such application, to allow for timely participation in any public comment opportunity.

227. Prior to termination of this Consent Decree, Defendant shall obtain enforceable provisions in its Title V Permits that incorporate all applicable Unit-specific, plant-specific, and System-specific performance, operational, maintenance, and control technology requirements established by this Consent Decree including, but not limited to, any applicable (a) 12-Month Rolling Average Emission Rate for NO<sub>x</sub>, (b) 12-Month Rolling Average Emission Rate for SO<sub>2</sub>, (c) 30-Day Rolling Average Emission Rate for NO<sub>x</sub>, (d) 30-Day Rolling Average Emission Rate for SO<sub>2</sub>, (e) System-Wide Annual Tonnage Limitation, (f) Prairie Creek Annual Tonnage Limitation, (g) requirements pertaining to the Surrender of SO<sub>2</sub> and NO<sub>x</sub> Allowances, (h) PM Emission Rate and annual stack test requirements, (i) PM CEMS monitoring equipment requirements, and (j) Retirement, Refueling, or Repowering requirements.

#### **XVIII. INFORMATION COLLECTION AND RETENTION**

228. Any authorized representative of the United States, the State of Iowa or Linn County, including their attorneys, contractors, and consultants, upon presentation of credentials,

shall have a right of entry upon the premises of a System Unit at any reasonable time for the purpose of:

- a. monitoring the progress of activities required under this Consent Decree;
- b. verifying any data or information submitted to the Plaintiffs in accordance with the terms of this Consent Decree;
- c. obtaining samples and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants; and
- d. assessing Defendant's compliance with this Consent Decree.

229. Where applicable, Defendant shall retain, and instruct its contractors and agents to preserve, all non-identical copies of all records and documents (including records and documents in electronic form) in its or its contractors' or agents' possession or control, and that directly relate to Defendant's performance of its obligations under this Consent Decree for the following periods: (a) until December 31, 2023, for records concerning physical or operational changes undertaken in accordance with Section V (NO<sub>x</sub> Emission Reductions and Controls), Section VI (SO<sub>2</sub> Emission Reductions and Controls), and Section VII (PM Emission Reductions and Controls); and (b) until December 31, 2021, for all other records. This record retention requirement shall apply regardless of any corporate document retention policy to the contrary.

230. All information and documents submitted by Defendant pursuant to this Consent Decree shall be subject to any requests under applicable law providing public disclosure of documents unless (a) the information and documents are subject to legal privileges or protection or (b) Defendant claims and substantiates in accordance with 40 C.F.R. Part 2 and any applicable State law that the information and documents contain confidential business information.

231. Nothing in this Consent Decree shall limit the authority of EPA to conduct tests and inspections at Defendant's facilities under Section 114 of the Act, 42 U.S.C. § 7414, or any other applicable federal laws, regulations, or permits.

### **XIX. NOTICES**

232. Unless otherwise provided herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

As to the United States of America:

(if by mail service)  
Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611, Ben Franklin Station  
Washington, DC 20044-7611  
DJ# 90-5-2-1-10594

(if by commercial delivery service)  
Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
ENRD Mailroom, Room 2121  
601 D Street, NW  
Washington, DC 20004  
DJ# 90-5-2-1-10594

and

(if by mail service)  
Director, Air Enforcement Division  
Office of Enforcement and Compliance Assurance  
U.S. Environmental Protection Agency  
Mail Code 2242A  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

(if by commercial delivery service)

Director, Air Enforcement Division  
Office of Enforcement and Compliance Assurance  
U.S. Environmental Protection Agency  
Ariel Rios South Building, Room 1119  
1200 Pennsylvania Avenue, NW  
Washington, DC 20004

and

Chief, Air Permitting and Compliance Branch  
U.S. EPA Region VII  
11201 Renner Blvd  
Lenexa, KS 66219

As to the State of Iowa

Brian Hutchins  
Environmental Program Supervisor  
Iowa Department of Natural Resources  
7900 Hickman Rd., Suite 1  
Windsor Heights, IA 50324

and

David S. Steward  
Assistant Attorney General  
Environmental Law Division  
Lucas State Office Building  
321 E. 12<sup>th</sup> Street, Room 018  
Des Moines, IA 50319

As to Linn County:

James Hodina  
Manager, Environmental Public Health  
Linn County Public Health  
501 13<sup>th</sup> Street NW  
Cedar Rapids, IA 52405

and

Lisa Epp  
Assistant Linn County Attorney  
Civil Division

935 2<sup>nd</sup> Street SW  
Cedar Rapids, IA 52402

As to the Sierra Club:

Director, Environmental Law Program  
Sierra Club  
85 Second Street, 2<sup>nd</sup> Fl.  
San Francisco, CA 94105

and

David C. Bender  
Pamela McGillivray  
McGillivray Westerberg & Bender LLC  
211 S. Paterson St., Ste 320  
Madison, WI 53703

As to Defendant:

President, Interstate Power and Light Company  
200 1<sup>st</sup> St. SE  
Cedar Rapids, Iowa 52401

and

General Counsel, Interstate Power and Light Company  
4902 N. Biltmore Lane  
Madison, WI 537118

and

Vice President, Environmental Affairs, Interstate Power and Light Company  
200 1<sup>st</sup> St. SE  
Cedar Rapids, Iowa 52401

233. All notifications, communications, or submissions made pursuant to this Section shall be sent either by: (a) overnight mail or overnight delivery service with signature required for delivery, or (b) certified or registered mail, return receipt requested. All notifications, communications, and transmissions (a) sent by overnight, certified, or registered mail shall be

deemed submitted on the date they are postmarked, or (b) sent by overnight delivery service shall be deemed submitted on the date they are delivered to the delivery service.

234. Any Party may change either the notice recipient or the address for providing notices to it by serving the other Parties with a notice setting forth such new notice recipient or address.

**XX. SALES OR TRANSFERS OF OPERATIONAL OR OWNERSHIP INTERESTS**

235. If Defendant proposes to sell or transfer an Operational Interest or Ownership Interest in a System Unit to an entity unrelated to Defendant (a “Third Party Purchaser”), Defendant shall advise the Third Party Purchaser in writing of the existence of this Consent Decree prior to such sale or transfer, and shall send a copy of such written notification and a copy of any written agreement proposing the transfer of an Operation or Ownership Interest to the United States and the State of Iowa pursuant to Section XIX (Notices) of this Consent Decree at least 60 Days before such proposed sale or transfer. Recipients of this notice shall treat it as confidential for the 60 days if requested by the Defendant; provided that nothing in this Paragraph prevents Defendant from claiming additional confidentiality protections in accordance with 40 C.F.R. Part 2 and any applicable State law.

236. No earlier than 30 days after providing the notice in Paragraph 235, the Defendant may file a motion with the Court to modify this Consent Decree to make the terms and conditions of this Consent Decree applicable to the Third Party Purchaser. No sale or transfer to a Third Party Purchaser of an Operational Interest or Ownership Interest shall take place before the Third Party Purchaser has executed, and the Court has approved, a modification pursuant to Section XXIII (Modification) of this Consent Decree making the Third Party Purchaser a party to

this Consent Decree and liable for the Defendant's applicable requirements of this Consent Decree.

237. This Consent Decree shall not be construed to impede the transfer of any Operational Interests or Ownership Interests between Defendant and any Third Party Purchaser so long as the requirements of this Consent Decree are met. This Consent Decree shall not be construed to prohibit a contractual allocation – as between Defendant and any Third Party Purchaser of Operational Interests or Ownership Interests – of the burdens of compliance with this Consent Decree.

238. No sale or transfer of an Operational or Ownership Interest, whether in compliance with the procedures of this Section or otherwise, shall relieve Defendant of its obligation to ensure that the terms of this Consent Decree are implemented, unless (1) the transferee agrees to undertake all of the obligations required by this Consent Decree that may be applicable to the transferred or purchased Operational or Ownership Interests, and to be substituted for the Defendant as a Party under the Decree pursuant to Section XXIII (Modification) and thus be bound by the terms thereof, and (2) the United States (after consultation with the other Plaintiffs) consents to relieve the Defendant of its obligations. The United States (after consultation with the other Plaintiffs) may refuse to approve the substitution of the transferee for the Defendant if it determines that the proposed transferee does not possess the requisite technical abilities or financial means to comply with the Consent Decree. Notwithstanding the foregoing, however, Defendant may not assign, and may not be released from, any obligation under this Consent Decree that is not specific to the purchased or

transferred Operational Interest or Ownership Interests, including the obligations set forth in Sections IX (Environmental Mitigation Projects) and X (Civil Penalty).

239. Paragraphs 236 to 238 of this Consent Decree do not apply if an Ownership Interest is sold or transferred solely as collateral security in order to consummate a financing arrangement (not including a sale-leaseback), so long as the Defendant: (a) remains the Owner or Operator (as those terms are used and interpreted under the Clean Air Act) of the subject Unit(s); (b) remains subject to and liable for all obligations and liabilities of this Consent Decree; and (c) supplies Plaintiffs with the following certification within 30 Days of the sale or transfer:

“Certification of Change in Ownership Interest Solely for Purpose of Consummating Financing. We, the Chief Executive Officer and General Counsel of Interstate Power and Light Company, hereby jointly certify under Title 18 U.S.C. Section 1001, on our own behalf and on behalf of Interstate Power and Light Company, that any change in Interstate Power and Light Company’s Ownership Interest in any Unit that is caused by the sale or transfer as collateral security of such Ownership Interest in such Unit(s) pursuant to the financing agreement consummated on [insert applicable date] between Interstate Power and Light Company and [insert applicable entity]: a) is made solely for the purpose of providing collateral security in order to consummate a financing arrangement; b) does not impair Interstate Power and Light Company’s ability, legally or otherwise, to comply timely with all terms and provisions of the Consent Decree entered in *United States et al. v. Interstate Power and Light Company*, Civil Action\_\_\_\_\_; c) does not affect Interstate Power and Light Company’s ownership or operational control of any Unit covered by that Consent Decree in a manner that is inconsistent with Interstate Power and Light Company’s performance of its obligations under the Consent Decree; and d) in no way affects the status of Interstate Power and Light Company’s obligations or liabilities under that Consent Decree.”

#### **XXI. EFFECTIVE DATE**

240. The effective date of this Consent Decree shall be the Date of Entry.

#### **XXII. RETENTION OF JURISDICTION**

241. The Court shall retain jurisdiction of this case after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree and to take any

action necessary or appropriate for the interpretation, construction, execution, or modification of the Consent Decree, or for adjudication of disputes. During the term of this Consent Decree, any Party to this Consent Decree may apply to the Court for any relief necessary to construe or effectuate this Consent Decree.

### **XXIII. MODIFICATION**

242. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by Plaintiffs and the Defendant. Where the modification constitutes a material change to any term of this Consent Decree, it shall be effective only upon approval by the Court.

### **XXIV. GENERAL PROVISIONS**

243. When this Consent Decree specifies that Defendant shall achieve and maintain a 30-Day Rolling Average Emission Rate, the Parties expressly recognize that compliance with such 30-Day Rolling Average Emission Rate shall commence immediately upon the date specified and that compliance as of such specified date (e.g., December 30) shall be determined based on data from that date and the 29 prior Unit Operating Days.

244. When this Consent Decree specifies that Defendant shall achieve and maintain a 12-Month Rolling Average Emission Rate, then the Month containing that Day if that Day is the first Day of the Month, or if that Day is not the first Day of the Month then the next complete Month, shall be the first Month used in the calculation of the specified 12-Month limitation. For example, if the specified 12-Month Rolling Average Emission Rate is to be achieved starting January 1, 2014, then January 2014 is the first Month used in the calculation of the first applicable 12-Month Rolling Average Emission Rate, such that the first complete 12-Month Rolling Average Emission Rate period would, provided that the Unit fires Fossil Fuel in each

month, include January 2014 through December 2014. For further example, if the specified 12-Month Rolling Average Emission Rate is to be achieved starting July 15, 2014, then August 2014 is the first Month used in the calculation of the first applicable 12-Month Rolling Average Emission Rate, such that the first complete 12-Month Rolling Average Emission Rate period would, provided the Unit fires Fossil Fuel in each month, include August 2014 through July 2015.

245. This Consent Decree is not a permit. Compliance with the terms of this Consent Decree does not guarantee compliance with all applicable federal, state, or local laws or regulations. The emission rates set forth herein do not relieve Defendant from any obligation to comply with other state and federal requirements under the CAA, including Defendant's obligation to satisfy any State modeling requirements set forth in the Iowa SIP.

246. This Consent Decree does not apply to any claim(s) of alleged criminal liability.

247. In any subsequent administrative or judicial action initiated by the United States, the State of Iowa, Linn County, or Sierra Club for injunctive relief or civil penalties relating to a System Unit, as covered by this Consent Decree, Defendant shall not assert any defense or claim based upon principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, or claim splitting, or any other defense based upon the contention that the claims raised by the United States, the State of Iowa, Linn County, or Sierra Club in the subsequent proceeding were brought, or should have been brought, in the instant case; provided, however, that nothing in this Paragraph is intended to affect the validity of Section XI (Resolution of Claims) or in any way compromise or diminish the waivers, releases, and covenants provided by Plaintiffs in Section XI (Resolution of Claims).

248. Nothing in this Consent Decree shall relieve Defendant from its obligation to comply with all applicable federal, state, and local laws and regulations, including laws, regulations, and compliance deadlines that become applicable after the Date of Entry of the Consent Decree. Such laws and regulations include, but are not limited to, the Utility Mercury and Air Toxics Standards, the National Ambient Air Quality Standards, the Utility New Source Performance Standards requirements, and the obligation to apply for a Clean Water Act NPDES permit(s) for the discharge of wastewater, and in connection with any such application or application for permit renewal, to provide the National Pollutant Discharge Elimination System (“NPDES”) permitting authority with all information necessary to appropriately characterize effluent from their operations and develop appropriate effluent limitations, including but not limited to all information necessary for the NPDES permitting authority to appropriately evaluate discharges of total dissolved solids (“TDS”) for their operations. Nothing in this Consent Decree should be construed to provide any relief from the emission limits or deadlines specified in such regulations, including, but not limited to, deadlines for the installation of pollution controls required by any such regulations, nor shall this Decree be construed as a pre-determination of eligibility for the one year extension that may be provided under 42 U.S.C. § 7412(i)(3)(B).

249. Subject to the provisions in Section XI (Resolution of Claims), Section XVI (Dispute Resolution), and XIV (Stipulated Penalties) nothing contained in this Consent Decree shall be construed to prevent or limit the rights of the Plaintiffs to obtain penalties or injunctive relief under the Act or other federal, state, or local statutes, regulations, or permits.

250. Each limit and/or other requirement established by or under this Consent Decree is a separate, independent requirement.

251. Performance standards, emissions limits, and other quantitative standards set by or under this Consent Decree must be met to the number of significant digits in which the standard or limit is expressed. For example, an Emission Rate of 0.100 is not met if the actual Emission Rate is 0.101. Defendant shall round the fourth significant digit to the nearest third significant digit, or the third significant digit to the nearest second significant digit, depending upon whether the limit is expressed to three or two significant digits. For example, if an actual Emission Rate is 0.1004, that shall be reported as 0.100, and shall be in compliance with an Emission Rate of 0.100, and if an actual Emission Rate is 0.1005, that shall be reported as 0.101, and shall not be in compliance with an Emission Rate of 0.100. Defendant shall report data to the number of significant digits in which the standard or limit is expressed.

252. This Consent Decree does not limit, enlarge, or affect the rights of any Party to this Consent Decree as against any third parties.

253. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Consent Decree, and supersedes all prior agreements and understandings among the Parties related to the subject matter herein. No document, representation, inducement, agreement, understanding, or promise constitutes any part of this Consent Decree or the settlement it represents, nor shall they be used in construing the terms of this Consent Decree.

254. Defendant, the United States, the State of Iowa, and Linn County shall each bear its own costs and attorneys' fees. Defendant shall pay Sierra Club's reasonable attorneys' fees and costs, pursuant to 42 U.S.C. § 7604(d), for the time and expenses incurred in this case. The deadline for Sierra Club to file a motion for costs of litigation (including attorneys' fees) for

activities prior to entry of this Consent Decree by the Court is hereby extended until 30 Days after this Consent Decree is entered by the Court. Prior to and/or during this 30-Day period, Sierra Club and Defendant shall seek to resolve informally any claim for costs of litigation (including attorneys' fees), and, if they cannot, will submit that issue to the Court for resolution. An award of fees for activities prior to entry of this Consent Decree by the Court under this Paragraph does not waive Sierra Club's ability to seek recovery for costs of litigation (including attorneys' fees) incurred to monitor and/or enforce the provisions of this Consent Decree.

#### **XXV. SIGNATORIES AND SERVICE**

255. Each undersigned representative of Defendant, the State of Iowa, Linn County, and the Sierra Club, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind to this document the Party he or she represents.

256. This Consent Decree may be signed in counterparts, and such counterpart signature pages shall be given full force and effect.

257. Each Party hereby agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

258. Unless otherwise ordered by the Court, the Plaintiffs agree that Defendant is not required to file any answer or other pleading responsive to the concurrently filed Complaint(s) in this matter until and unless the Court expressly declines to enter this Consent Decree, in which

case Defendant shall have no less than 30 Days after receiving notice of such express declination to file an answer or other pleading in response to the Complaints.

#### **XXVI. PUBLIC COMMENT/AGENCY REVIEW**

259. The Parties agree and acknowledge that final approval by the United States and entry of this Consent Decree is subject to the procedures of 28 C.F.R. § 50.7, which provides for notice of the lodging of this Consent Decree in the Federal Register, an opportunity for public comment, and the right of the United States to withdraw or withhold consent if the comments disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper, or inadequate. Defendant shall not oppose entry of this Consent Decree by this Court or challenge any provision of this Consent Decree unless the United States has notified the Defendant, in writing, that the United States no longer supports entry of this Consent Decree.

#### **XXVII. TERMINATION**

260. Once Defendant has:
- a. completed the requirements of Sections IV (Requirement to Retire, Refuel, or Repower Units), V (NO<sub>x</sub> Emission Reductions and Controls), VI (SO<sub>2</sub> Emission Reductions and Controls), VII (PM Emission Reductions and Controls), IX (Environmental Mitigation Projects);
  - b. maintained continuous compliance with this Consent Decree, including continuous operation of all pollution controls required by this Consent Decree, for a period of 24 months;
  - c. paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree;

- d. either included the requirements and limitations enumerated in this Consent Decree into a federally enforceable permit or obtained a site-specific amendment to the Iowa SIP for each plant in the Interstate System, as required by Section XVII (Permits) of this Consent Decree such that the requirements and limitations enumerated in this Consent Decree, including all Unit-specific, plant-specific, and system-specific performance, operational, maintenance, and control technology requirements established by this Consent Decree become and remain “applicable requirements” as that term is defined in 40 C.F.R. Part 70.2; and
- e. certified that the date of Defendant’s Request for Termination is later than December 31, 2027,

Defendant may serve upon the Plaintiffs a Request for Termination of this Consent Decree as a whole, stating that Defendant has satisfied all the requirements of this Paragraph, together with all necessary supporting documentation.

261. Notwithstanding the provisions of Paragraph 260, Defendant may serve upon Plaintiffs a Request for Termination as to Completed Tasks. As soon as Defendant completes a construction project, retirement, or any other requirement of this Consent Decree that is not ongoing or recurring, Defendant may serve upon Plaintiffs a Request for Termination of the provision or provisions of this Consent Decree that imposed the requirement.

262. Following receipt by the Plaintiffs of Defendant’s Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether the Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the other

Plaintiffs, agrees that the Decree may be termination, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

263. If the United States, after consultation with the other Plaintiffs, does not agree that the Decree may be termination, Defendant may invoke Dispute Resolution under Section XVI of this Decree. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 213 of Section XVI, until 60 days after service of its Request for Termination or receipt of an adverse decision from the Plaintiffs, whichever is earlier.

#### **XXVIII. FINAL JUDGMENT**

264. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between the Plaintiffs and the Defendant.

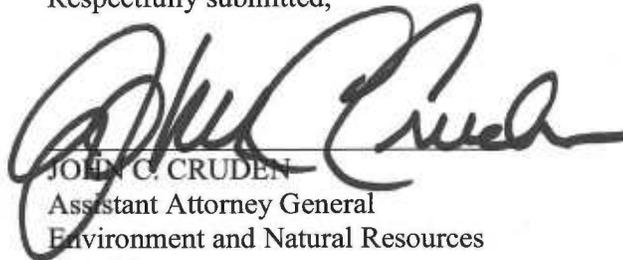
September 2, 2015.

  
UNITED STATES DISTRICT JUDGE  
Northern District of Iowa

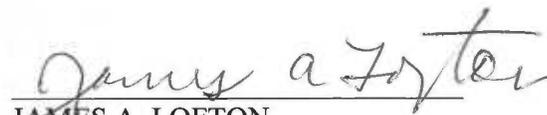
Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR THE UNITED STATES DEPARTMENT OF JUSTICE

Respectfully submitted,



JOHN C. CRUDEN  
Assistant Attorney General  
Environment and Natural Resources  
Division  
United States Department of Justice



JAMES A. LOFTON  
Counsel to the Chief  
Environmental Enforcement Section  
Environment and Natural Resources  
Division  
P.O. Box 7611  
Washington, DC 20044-7611  
(202) 514-2750



JASON A. DUNN  
Senior Attorney  
Environmental Enforcement Section  
Environment and Natural Resources  
Division  
P.O. Box 7611  
Washington, DC 20044-7611  
(202) 514-1111

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR THE UNITED STATES DEPARTMENT OF JUSTICE

Respectfully submitted,

KEVIN W. TECHAU  
United States Attorney  
Northern District of Iowa

  
\_\_\_\_\_  
MATTHEW J. COLE  
Chief of the Civil Division  
U.S. Attorney's Office  
Northern District of Iowa  
111 7th Avenue, SE  
Box #1  
Cedar Rapids, IA 52401  
Phone: (319) 363-6333  
Cedar Rapids Fax Line: (319) 363-1990  
Cedar Rapids TTY Line: (319) 286-9258

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Respectfully submitted,



---

CYNTHIA GILES  
Assistant Administrator  
Office of Enforcement and  
Compliance Assurance  
United States Environmental  
Protection Agency



---

PHILLIP A. BROOKS  
Director, Air Enforcement Division  
United States Environmental  
Protection Agency



---

KELLIE ORTEGA  
Attorney-Advisor  
United States Environmental  
Protection Agency  
1200 Pennsylvania Ave, N.W. (2242A)  
Washington, DC 20460

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
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FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Respectfully submitted,



MARK HAGUE  
Acting Regional Administrator  
U.S. Environmental Protection Agency  
Region VII



DAVID COZAD  
Regional Counsel  
U.S. Environmental Protection Agency  
Region VII



SARAH LABODA  
Assistant Regional Counsel  
U.S. Environmental Protection Agency  
Region VII

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR THE STATE OF IOWA

Respectfully submitted,

THOMAS J. MILLER  
ATTORNEY GENERAL  
OF THE STATE OF IOWA

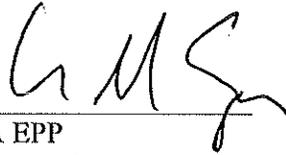


\_\_\_\_\_  
DAVID S. STEWARD  
Assistant Attorney General  
Environmental Law Division  
Iowa Department of Justice  
Lucas State Office Building  
321 E. 12th Street, Ground Flr.  
Des Moines, IA 50319  
(515) 281-5351

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR LINN COUNTY, IOWA

Respectfully submitted,

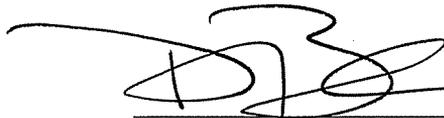
A handwritten signature in black ink, appearing to read 'L E P P', written over a horizontal line.

LISA EPP  
Assistant Linn County Attorney  
Civil Division  
935 2<sup>nd</sup> Street SW  
Cedar Rapids, IA 52402

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR SIERRA CLUB

By its Counsel:



6/23/15

DAVID C. BENDER  
McGillivray Westerberg & Bender LLC  
211 S. Paterson Street, Ste 320  
Madison, WI 53703

Signature Page for *United States of America et al. v. Interstate Power and Light Company*  
Consent Decree

FOR INTERSTATE POWER AND LIGHT COMPANY

Respectfully submitted,

Handwritten signature of Douglas R. Kopp in cursive script.

---

DOUGLAS R. KOPP  
President,  
Interstate Power and Light Company

## APPENDIX A

### ENVIRONMENTAL MITIGATION PROJECTS

#### I. Overall Schedule and Budget for Environmental Mitigation Projects

- A. Within 120 Days from the Date of Entry of this Consent Decree, as further described below, Defendant shall submit proposed project plan(s) to EPA for review and approval pursuant to Section XIII of the Consent Decree (Review and Approval of Submittals) for completing its Environmental Mitigation Project expenditure commitments over a period of not more than 5 years from the date of plan approval. Defendant shall spend no less than, and nothing in the Consent Decree or this Appendix shall require Defendant to spend any more than, \$6,000,000 in total Project Dollars, consistent with the requirements of this Appendix. The Project Dollars shall be spent on Projects outlined in Sections II through VI of this Appendix. Defendant also may elect to spend Project Dollars on Projects pursuant to Section VII of this Appendix. If in addition to the Project Dollars that it spends pursuant to the Consent Decree, Defendant elects to seek additional funding from another source, Defendant shall, at the time the request for additional funding is made, inform the other funder that it is contributing its Project Dollars pursuant to this Consent Decree. EPA reserves the right to disapprove any of the proposed plans should the Agency determine, based on an analysis of the plans submitted by Defendant and all the potential environmental impacts, that the project is not consistent with the requirements of this Consent Decree. If Defendant opts not to or is unable to perform one of the Projects detailed in Sections II through VI of this Appendix, Defendant shall not have any obligation for such Project pursuant to this Consent Decree, including performance, reporting, or closure requirements for that Project, provided that the Defendant is otherwise in compliance with the Environmental Mitigation Project requirements of this Consent Decree, which may include performing one or more Projects approved by EPA pursuant to Section VII of this Appendix. If Defendant subsequently opts not to perform a Project for which it has submitted a plan that has been approved by EPA, then it shall indicate withdrawal from the Project in its next periodic report pursuant to Paragraph 182 of the Consent Decree.
- B. Defendant may, at its election, consolidate the Project plans for which it is responsible under this Consent Decree into a single plan. Where expressly authorized in the Project descriptions in Sections II – VII, upon approval of EPA of its project plan, Defendant may complete, in whole or in part, the Project through a third-party non-profit organization or through a foundation to which Defendant would provide the funds required for the implementation or funding of the Project(s), provided that Defendant limits the use of Project Dollars for any third-party administrative expenses associated with implementation of the Project to no greater than 10% of the

Project Dollars that Defendant provides to the third-party.

- C. The Parties agree that Defendant is entitled to spread its payments for Environmental Mitigation Projects over the 5-year period commencing upon the date of plan approval. Defendant is not, however, precluded from accelerating payments to better effectuate a proposed mitigation plan, provided that the Defendant shall not be entitled to any reduction in the nominal amount of the required payments by virtue of the early expenditures.
- D. All proposed project plans shall include the following:
  - 1. A plan for implementing the project;
  - 2. A summary level budget for the project;
  - 3. A time line for implementation of the project;
  - 4. A description of the anticipated environmental benefits of the project, including an estimate of any emission reductions or emission mitigation (*e.g.*, SO<sub>2</sub>, NO<sub>x</sub>, PM, CO<sub>2</sub>) expected to be realized, and the methodology and any calculations used in the derivation of such expected benefits, reductions, or mitigation; and
  - 5. For each Project undertaken, a certification, as part of each plan submitted to EPA for the Project, that prior to the Date of Lodging of this Consent Decree, Defendant had not otherwise committed to perform the Project generally described in the plan, that Defendant is unaware of any other person who is committed to perform the same Project, and that Defendant will not use any portion of the Project to satisfy any obligations that it may have under other applicable requirements of law, including but not limited to any applicable renewable or energy efficiency portfolio standards.
- E. Upon EPA approval of the Project plan(s) required by this Appendix, Defendant shall complete the approved Projects according to the approved plan(s). Nothing in this Consent Decree shall be interpreted to prohibit Defendant from completing the Projects ahead of schedule.
- F. Commencing with the first periodic report due pursuant to Section XII (Periodic Reporting) of the Consent Decree, and continuing biannually thereafter until completion of the Project(s), Defendant shall include in the periodic report information describing the progress of the Project and the Project Dollars expended on the Project.
- G. In accordance with the requirements of Paragraph 170 of the Consent Decree, within

90 Days following the completion of each Project, Defendant shall submit to EPA for approval of Project closure, a Project completion report that documents:

1. The date the Project was completed;
  2. The results and documentation of implementation of the Project, including an estimate of any emission reductions or emission mitigation (*e.g.*, SO<sub>2</sub>, NO<sub>x</sub>, PM, CO<sub>2</sub>) expected to be realized, and the methodology and any calculations used in the derivation of such expected benefits, reductions, or mitigation;
  3. The Project Dollars incurred by Defendant in implementing the Project; and
  4. Certification by an authorized representative in accordance with Paragraph 185 of the Consent Decree that the Project has been completed in full satisfaction of the requirements of the Consent Decree and this Appendix.
- H. If EPA (after consultation with the other Plaintiffs) concludes based on the Project completion report or subsequent information provided by Defendant that a Project has been performed and completed in accordance with the Consent Decree, then EPA will approve completion of the Project for purposes of the Consent Decree.
- I. Nothing in this Appendix shall relieve Defendant of its obligation to comply with all applicable federal, state, and local laws and regulations, including, but not limited to, any obligations to obtain any permits pursuant to the Clean Water Act or Clean Air Act.

## **II. Major Solar Photovoltaic Development Project (Up to \$3 million)**

- A. Consistent with the requirements of this Appendix, Defendant may propose a plan to spend up to \$3 million to develop new major solar photovoltaic (“PV”) installation(s) of at least 500 kilowatts (“kW”) rated nameplate capacity (direct current) in Defendant’s service territory in the state of Iowa (the “Solar Project” or the “Project”). Defendant will own, operate and maintain the Project and will enter into an agreement with a third-party project developer (the “Project Developer”) to design and construct the Project. As required by Paragraph 166 of the Consent Decree, such Projects shall be in addition to any other legal obligations, including Defendant’s obligations under any state Renewable Portfolio Standard (“RPS”). Producing additional generation from renewable solar power is expected to offset coal generation.
- B. Prior to implementation of the Project, Defendant shall complete, or shall ensure the completion of, a solar PV feasibility of any prospective siting area. One prospective siting area for the Project is Defendant’s Sixth Street Generating Station in Cedar Rapids, Iowa.

- C. For purposes of calculating Project Dollars, Project Dollar credit shall exclude the cost of any Project studies or feasibility analysis, and any maintenance or third-party management costs once the Project is interconnected and providing generation. In addition, Project Dollar credit shall reflect the difference between Defendant's cost in implementing the Project and any economic benefit resulting from the Project during the first 10 years of performance (as measured from the day that power is first provided from the Project) (the "Initial 10 Years").
- D. Defendant shall not use and will retire all Renewable Energy Credits generated during the Initial 10 Years in accordance with all applicable rules, and shall identify these RECs as retired in the Midwest Renewable Energy Tracking System ("M-RETS") or any other tracking system designated as acceptable by the program recognizing the RECs. Defendant shall not use the RECs generated during the Initial 10 Years of the PPA(s) for compliance with any RPS or for any other compliance purpose during or after the Initial 10 Years. Defendant may use any RECs generated after the initial 10 Years of the PPA(s) for compliance with any RPS or for any other compliance purpose.
- E. The Project shall be considered completed for purposes of this Consent Decree after the Initial 10 Years. Following the Initial 10 Years, Defendant will no longer be bound by the terms governing Environmental Mitigation Projects identified in Section IX of the Consent Decree and this Appendix, including but not limited to limitations on the use of RECs. RECs generated following the Initial 10 Years may be used for any purpose authorized by law, including but not limited to satisfying regulatory requirements or sales of RECs.
- F. In addition to the requirements of Section I of this Appendix, the plan required to be submitted pursuant to this Section of this Appendix shall satisfy the following criteria:
  - 1. Demonstrate how the proposed project in the plan is consistent with the requirements of this Section and the Consent Decree, and how the project will result in the emission reductions projected to be reduced pursuant to this Section.
  - 2. Provide that Defendant will issue requests for proposals ("RFP(s)") as quickly as practicable and enter into contract(s) with one or more Project Developers as quickly as practicable, but no later than 3 years after the date of plan approval.
  - 3. Include an anticipated schedule for issuing RFP for the project and an overall schedule for implementing this project.

4. Describe the process that Defendant will use to solicit bids for the project and select appropriate PV development(s) to participate in the project.
  5. Specify that the RFP(s) shall provide that each major solar PV development will have at least 500 kW of capacity (direct current) and will be interconnected with the utility grid with appropriate metering and monitoring to track the net power output and identify the expected capacity (kW) and energy output of the major PV development(s) within five years of plan approval.
  6. Specify that Defendant will evaluate bids using criteria that include and prioritize:
    - i. The cost-effectiveness of the project, measured by the proposed cost of the project and the expected energy delivery and environmental benefits of the project.
    - ii. The timeframe for completion of construction and interconnection of the project, which shall be no later than within five years of plan approval, but which may be earlier.
  7. Provide that Defendant shall report the actual kW hours generated each year for the Initial 10 Years in each report required by Section I.F of this Appendix.
- G. In addition to the information required to be included in the reports pursuant to Section I.F of this Appendix, Defendant shall include in each report progress in developing the project (including with respect to the RFP process, construction, interconnection, and generation), identification of the Project Developer(s) and any other third-parties who would have a coordination or project management role, an accounting of Project Dollar expenditures, details of the major PV developments including the total capacity (kW) of each system, components installed, total cost, expected energy output and environmental benefits, and the actual kW hours generated for the Initial 10 Years.

### **III. Anaerobic Digestion Installation Project (Up to \$ 3 million)**

- A. Consistent with the requirements of this Appendix, Defendant may propose a plan to spend up to \$3 million to develop a new or expand an existing Anaerobic Digester with Nutrient Recovery or Nutrient Removal (the “Anaerobic Digester with Nutrient Recovery/Removal Installation Project(s)” or the “Project(s)”) at, one or more farm(s) or other agricultural facilities, properties, or operations, including those at or associated with universities (individually, or collectively, the “Project Beneficiar(y)(ies)”) at any location within the State of Iowa. Defendant shall

implement the Project(s) as described below. As required by Paragraph 166 of the Consent Decree, such Projects shall be in addition to any other legal obligations, including Defendant's obligations under any state RPS. Producing additional generation from an Anaerobic Digester is expected to offset coal generation.

B. Definitions:

1. "Anaerobic Digestion" is a biological process in which bacteria break down organic matter in the absence of oxygen.
2. An "Anaerobic Biodigester" or "Anaerobic Digester" is an airtight chamber in which Anaerobic Digestion of manure, biosolids, food waste, other organic wastewater streams or a combination of these feedstocks occurs. This process produces commodities such as biogas (a blend of methane and carbon dioxide), animal bedding, and fertilizer.
3. "Nutrient Recovery" is the recovery of stable and useful nutrient-containing products from wastewater and solids, including anaerobically digested manure.
4. "Nutrient Removal" is the reduction, elimination, or rendering insoluble of nutrient constituents in wastewater and solids, including anaerobically digested manure.
5. "Nutrient Recovery and Nutrient Removal Products" are organic and inorganic liquid and/or solid materials either produced with a Nutrient Recovery technology, or remaining after Nutrient Removal technologies or processes have been employed, after Anaerobic Digestion.

C. An Anaerobic Digester with Nutrient Recovery/Removal Installation Project will, at a minimum, consist of: (1) the installation of the Anaerobic Digester system, which includes the digester, engine-generator set, and all related piping, pumps, and controls at a single location with planned biomass feedstock access, producing a total installed capacity of at least 150 kW alternating current; (2) the appropriate Anaerobic Digester system foundation and structural equipment for the Project site location; (3) wiring, conduit, and associated switch gear and metering equipment required for interconnecting the anaerobic digester system generator(s) to the utility grid; (4) digestate storage and feedstock storage (if the Project accepts off-site feedstocks) that minimizes, to the greatest extent practicable, any loss of feedstock or digestate to the environment; (5) technology for Nutrient Recovery or Nutrient Removal; (6) appropriate monitoring equipment and controls to enable staff tracking and monitoring of the total and hourly energy output of the system (kW hours), hourly digester temperature (oC), biogas production and appropriate voltage, power, and current metrics; (7) monitoring system and data collection to track and monitor

- Nutrient Recovery or Nutrient Removal effectiveness, including total volume of feedstock digested, total volume of digester outputs treated, nutrient recovery/removal efficiencies, and nutrient content ratio of generated products, and data shall be made available to the EPA; (8) a contingency plan for fate of nutrients in the event of system failure (i.e., enough crop-land on-site for agronomic application of digester outputs); and (9) a plan for the disposition or use of the digestate that prevents migration of nutrients into any waters of the State or waters of the United States.
- D. The Project(s) shall be installed on the customer side of the meter and ownership of the system, and any environmental benefits that result from the installation of the Project(s), including associated RECs, shall be conveyed to the Project Beneficiary. For example, the Project Beneficiary may utilize Nutrient Recovery and Nutrient Removal Products, or a portion of untreated digestate, on land areas owned by or under its control, providing usage is consistent with nutrient management practices that ensure appropriate agricultural utilization of the nutrients. The Project Beneficiary may also sell or otherwise transfer some or all of the Nutrient Recovery and Nutrient Removal Product, provided that the Project Beneficiary provides the recipient with the most current nutrient analysis and maintains records of the date, name and address, and the approximate amount sold to the recipient.
- E. Defendant shall ensure that there is a warranty in place for the major subcomponents of the Project(s), which, at a minimum, covers the digester design for 10 years, digester equipment for 3 years, and engine-generator set for 1 year (individually, or collectively, the “Parts Warrant(y)(ies)”).
- F. Defendant shall fund one or more service contracts (“Project Service Contract(s)”) for the benefit of the Project Beneficiary that provides for operation and maintenance of the Project(s) for 20 years from the date of operation. The Project Service Contract(s) shall, at a minimum, provide for annual system checkups and for normal component maintenance and replacements, including installation of new system components as needed to ensure the ongoing maintenance and performance of the system for no less than 20 years. Defendant shall fund the Project Service Contract through an escrow in aggregate amount equal to 50% of the anticipated operation and maintenance of the Project(s) for 20 years (the “Project Escrow”). Defendant shall ensure that the Project Beneficiary has a binding obligation to fund or otherwise secure the funding for the remaining 50% of the operation and maintenance of the Project(s) from the date of operation.
- G. Defendant shall limit the use of the Project Escrow funds by the Project Beneficiary to use for purposes of maintaining the Project(s).
- H. Services under the Project Service Contract may be performed by third-party provider(s) and administered by the Project Beneficiary by way of payment from the

Project Escrow. Other than with respect to its funding of the escrow, Defendant is not responsible for any repair and maintenance costs for the Project(s).

- I. In addition to the requirements of Section I of this Appendix, the plan required to be submitted pursuant to this Section of this Appendix shall satisfy the following criteria:
1. Describe how the proposed project is consistent with the requirements of this Section and the Consent Decree, will result in the emission reductions projected to be reduced pursuant to this Section, and how the how Defendant shall maintain that the emissions avoided or reduced by the project shall be maintained.
  2. Include a feasibility study that analyzes the technical and financial viability of any proposed project and identifies any additional sources of funding.
  3. Include a budget and schedule for completing each project on a phased schedule (if applicable), and the supporting methodologies and calculations for the budget.
  4. Describe the methodology and include any calculations that Defendant proposes to use in order to document the emission reductions associated with any project to be implemented as part of this Section.
  5. Describe the process and criteria Defendant will use to select the potential Project Beneficiaries, including such factors as base electricity usage, anaerobic digester feedstock access availability, and other relevant criteria.
  6. Provide detailed accounting supporting the costs and activities associated with the Project Service Contract, including the schedule and monetary installments for deposits to the Project Escrow to support the operation and maintenance activities of the system and a demonstration that the Project Escrow includes appropriate restrictions on the Service Contract Beneficiary's use of escrow funds in accordance with the requirements of this Section.
  7. Identify any person or entity, other than Defendant, that will be involved in the project(s) and describe the third-party's role in the project and the basis for asserting that such entity is able and suited to perform the intended role. Any proposed third-party must be legally authorized to perform the proposed role and to receive Project Dollars. This does not include contractors or installers who would complete the siting analysis and/or installation of the proposed project but does include any proposed affiliate or third party who would have a coordination or project management role in the project.
  8. Identify the expected nameplate capacity (kilowatts) and energy output of each system.
- J. In addition to the information required to be included in the report pursuant to Section I.F of this Appendix, Defendant shall include in each report progress in developing the project (including with respect to the RFP process, construction, interconnection, and generation), identification of the locations where the Projects were installed and any other third-parties who would have a role in the Project, an accounting of Project Dollar expenditures, details of the major Project developments including the total capacity (kW) of each system, components installed, total cost, expected energy output and environmental benefits, and the actual kW hours generated.

#### **IV. Fleet Replacement Program (Up to \$500,000)**

- A. Consistent with the requirements of this Appendix, Defendant may propose to spend up to \$500,000 to replace its or publicly owned gasoline and diesel powered fleet vehicles (passenger cars, light trucks, and heavy duty service vehicles) with newly manufactured Alternative Fuels Vehicles (as defined below) and/or compressed natural gas (“CNG”) vehicles. The replacement of gasoline and diesel vehicles with such vehicles will reduce emissions of NO<sub>x</sub>, PM, VOCs, and other air pollutants. Such vehicles shall be owned by Defendant or shall be publicly-owned motor vehicles.
- B. Definitions:
1. “Alternative Fuels Vehicle” means a Hybrid Vehicle, Plug-in Hybrid Vehicle, Plug-in Battery Vehicle, or Electric Vehicle.
  2. “Hybrid Vehicle” means a vehicle that can generate, store, and utilize electric power to reduce the vehicle’s consumption of fossil fuel.
  3. “Plug-in Hybrid Vehicle” means a vehicle that can be charged from an external source and can generate, store, and utilize electric power to reduce the vehicle’s consumption of fossil fuel. These vehicles typically include a larger battery pack to allow an extended range of operation without the use of the gasoline or diesel engine.
  4. “Plug-in Battery Vehicle” means a vehicle that does not utilize an internal combustion engine and instead relies entirely on battery power for propulsion.
- C. With respect to costs associated with vehicles, Defendant shall only receive credit toward Project Dollars for the incremental cost of Alternative Fuels Vehicles or CNG Vehicles, as compared to the cost of a newly manufactured, similar motor vehicle powered by conventional diesel or gasoline engines.
- D. In addition to the requirements of Section I of this Appendix, the plan required to be submitted pursuant to this Section of this Appendix shall satisfy the following criteria:
1. Describe how the plan is consistent with the requirements of this Section and the Consent Decree, and how the project will result in the emission reductions projected to be reduced pursuant to this Section.
  2. Prioritize the replacement or retrofit of diesel powered vehicles to the greatest extent practical and available.

3. Identify the portions of Defendant's fleet and/or publicly-owned fleets in Defendant's service territory for participation in this project.
4. Provide that all vehicles proposed for inclusion in this program will be regular production models that meet all applicable engine standards, certifications, or verifications.
5. Describe the process and criteria Defendant will use to select any fleet operators and owners to participate in the program, consistent with the requirements of this Section.
6. Describe the rationale and basis (including a discussion of cost) for selecting the make and model of the Alternative Fuel Vehicle(s), CNG Vehicle(s) chosen for this project, including information about other available vehicles and why such vehicles were not selected.
7. Specify a mechanism for each replaced vehicle to be properly disposed, which must include destruction of the engine block, and provide certification of proper disposal.
8. Propose a method to account for the amount of Project Dollars that will be credited for each replaced vehicle, in accordance with the requirements of this Section.
9. Certify that the replacement program vehicles will be retained and operated for their useful life.
10. Identify any person or entity, other than Defendant, that will be involved in the project, including any proposed third-party who would have a coordination or project management role, but not including vehicle manufacturers or dealers who would provide vehicles.

**V. Coal-Fired Boiler Replacement in Schools (up to \$1.5 million)**

- A. Schools within Iowa may use coal-fired boilers for heat generation. Replacement of those boilers with lower-emitting or zero emission heating and cooling technologies will reduce emissions of SO<sub>2</sub>, PM, and other air pollutants being emitted in the vicinity of children and young adults. Consistent with the requirements of this Appendix, Defendant may provide up to \$1.5 million in funding for use in the replacement (including design, equipment purchase, installation, and project start up) of one or more coal-fired boilers utilized by public schools located in Iowa through installation of a natural gas boiler or geothermal technologies ("Boiler Project" or the "Project").

- B. In addition to the requirements of Section I of this Appendix, the plan required to be submitted pursuant to this Section of this Appendix shall satisfy the following criteria:
1. Describe the process Defendant will utilize to identify public schools that may be eligible to participate in the Boiler Project and to solicit their interest in participating in the Project. In awarding funding, Defendant shall consider the following factors: (1) capability of the school to participate in, complete, and operate a replacement project; (2) proximity of the school to the Defendant's facilities in the state of Iowa; (3) emissions reductions that will result from the Project; and (4) experience and demonstrated interest of applicant.
  2. Ensure that participating schools do not otherwise have a legal obligation to reduce emissions through replacement of their coal-fired boilers.
  3. Ensure that participating schools will bind themselves to operate the replacement heating and cooling systems for either the reasonable lifespan of the replacement system or of the school, which shall be for at least ten years.
  4. Provide a schedule for completing each portion of the project, including solicitation of interest, preparation of project budgets, and completion of the project.
  5. If Defendant is funding only part of the full replacement cost of the boiler, provide a demonstration of secured sources of funding for the remainder of the cost of the replacement.
  6. Describe generally the expected environmental benefits of the project, including any fuel efficiency improvements, and quantify emissions reductions expected.

**VI. Residential Wood-burning Appliance Change-Out Program (Up to \$1.5 million)**

- A. Consistent with the requirements of this Appendix, Defendant may propose a plan to spend up to \$1.5 million to sponsor a wood burning appliance (*e.g.*, stoves, boilers and fireplaces) replacement and retrofit program that would be implemented by one or more third-party nonprofit organizations or a government entity (the "Program").
- B. Defendant shall sponsor the implementation of the Program within Defendant's service territories in Linn County and within Defendant's extended service territories in the state of Iowa.
- C. The air pollutant reductions shall be obtained by replacing, retrofitting, or upgrading

inefficient, higher polluting wood burning appliances, including fireplaces, with cleaner burning appliances and technologies, such as: (1) retrofitting older hydronic heaters (aka outdoor wood boilers) to meet EPA Phase II hydronic heater standards; (2) replacing older hydronic heaters with EPA Phase II hydronic heaters, EPA-certified woodstoves, other cleaner burning, more energy efficient hearth appliances (e.g., wood pellet, gas or propane appliances), or EPA Energy Star qualified heating appliances; (3) replacing non EPA-certified woodstoves with EPA-certified woodstoves or cleaner burning, more energy-efficient hearth appliances; (4) replacing spent catalysts in EPA-certified woodstoves; and (5) replacing/retrofitting wood burning fireplaces with EPA Phase 2 Qualified Retrofit devices or cleaner burning natural gas fireplaces. To qualify for replacement, retrofitting, or upgrading, the wood burning appliance/fireplace must be in regular use in a primary residence during the home-heating season, and preference shall be given to replacement, retrofitting, or upgrading wood burning appliances/fireplaces that are a primary or significant source of residential heat. The appliances that are replaced under the Program shall be permanently removed from use and appropriately disposed.

- D. Defendant and the nonprofit organization(s) or government entity that will implement the Program shall consult with EPA's Residential Wood Smoke Reduction Team and shall implement the Program consistent with the materials available on EPA's Burn Wise website at <http://www.epa.gov/burnwise>.
- E. The Program shall provide incentives for the wood burning appliance and fireplace replacements, retrofits, and upgrades described above in this Section through rebates, vouchers, and/or discounts. A wood moisture meter shall be provided to every Program participant that receives a new wood-burning appliance or retrofits an existing wood-burning appliance.
- F. The Program shall provide educational information and outreach regarding the energy efficiency, health, and safety benefits of cleaner wood burning appliances and the proper operation of appliances including, if applicable, information related to the importance of burning dry seasoned wood. The costs associated with this element of the Program shall count towards Project Dollars and will not be considered part of the 10% administrative costs described in Section I.B; however, the costs associated with this element of the Program shall be marginal as compared to the total Project Dollars attributed to the Program.
- G. In addition to the requirements of Section I of this Appendix, the Program plan proposed by Defendant shall:
  - 1. Describe how the plan is consistent with the requirements of this Section and the Consent Decree, and how the project will result in the emission reductions projected to be reduced pursuant to this Section.

2. Identify the governmental entity or nonprofit organization(s) that have agreed to implement the proposed Program.
3. Describe the schedule and the budgetary increments in which Defendant shall provide the necessary funding to implement the proposed Program.
4. Describe all of the elements of the proposed Program, including measures, to ensure that it is implemented in accordance with the requirements of this Appendix, and that the Program Dollars will be used to support the actual replacement, retrofitting, and/or upgrading of wood burning appliances and fireplaces currently in regular use in a primary residence during the home-heating season.
5. An estimate of the number and type of appliances the Defendant intends to subsidize or make available through the project, the cost per unit, and the value of the rebate or incentive per unit. In addition, if the plan proposes to provide rebates or vouchers for the full cost of replacing older hydronic heaters or non EPA-certified woodstoves for income-qualified residential homeowners, describe the criteria that will be used to determine which residential homeowners should be eligible for such full cost replacement.
6. If applicable, identify any organizations or entities with which the governmental entity or nonprofit organization(s) will partner to implement the proposed Program, including wood burning appliance trade associations, national or local health organizations, facilities that will dispose of old stoves so that they cannot be resold or reused, individual woodstove/fireplace retailers, propane dealers, housing assistance agencies, local fire departments, and local green energy organizations.
7. Describe how the program will ensure the inefficient, higher polluting wood burning stoves and fireplaces that are replaced under the proposed Program will be properly recycled or disposed.
8. Describe how the government entity or nonprofit organization(s) will conduct outreach within the geographic area of the proposed Program.

## **VII. Unspent Project Dollars**

- A. If, as of 5 years from Date of Entry of this Consent Decree, there are any funds allocated for Defendant's Project Dollar obligations to comply with the requirements in Section IX (Environmental Mitigation Projects) and this Appendix of the Consent Decree that have not been expended, and are not expected to be expended ("Unspent Project Dollars"), Defendant may, upon approval of EPA (in consultation with the other Plaintiffs), allocate those "Unspent Project Dollars" towards another of the

Projects specified in Sections II, III, V, or VI of this Appendix. Defendant shall provide notice pursuant to Section XIX (Notices) and Section XIII (Review and Approval of Submittals) of the Consent Decree of the amount of such Unspent Project Dollars and provide a proposed plan and schedule for one or more new Environmental Mitigation Projects to satisfy the requirements of this Consent Decree.

B. In addition to the requirements of Section I of this Appendix, the plan required to be submitted pursuant to this Section of this Appendix shall satisfy the following criteria:

1. Provide for the expenditure of all remaining Unspent Project Dollars.
2. Describe the reason all remaining Unspent Project Dollars have not been allocated and/or spent.
3. Describe how the proposed projects in the plan are consistent with the requirements of this Section and the Consent Decree, and how the projects will result in the emission reductions projected to be reduced pursuant to this Section.
4. Include a budget and schedule for completing the project on a phased schedule, and the supporting methodologies and calculations for the budget.