

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

**Name of Permitted Facility:**           **Linwood Mining & Minerals  
Corporation**  
**Facility Location:**                   **401 East Front Street  
Davenport, Iowa 52804**

**Air Quality Operating Permit Number: 04-TV-005R1-M001**  
**Expiration Date: June 17, 2015**  
**Permit Renewal Application Deadline: December 17, 2014**

**EIQ Number: 92-3207**  
**Facility File Number: 82-01-015**

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**Responsible Official**

**Name:**                   **Mark Looman**  
**Title:**                   **Vice President – Chemical & Lime**  
**Mailing Address:**   **401 East Front Street  
Davenport, Iowa 52804**  
**Phone #:**               **563-324-1931**

**Permit Contact Person for the Facility**

**Name:**                   **Mark Looman**  
**Title:**                   **Vice President – Chemical & Lime**  
**Mailing Address:**   **401 East Front Street  
Davenport, Iowa 52804**  
**Phone #:**               **563-324-1931**

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

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

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Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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## Abbreviations

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

### Pollutants

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

# I. Facility Description and Equipment List

Facility Name: Linwood Mining and Minerals Corporation  
 Permit Number: 04-TV-005R1-M001

Facility Description: Crushed and Broken Limestone (SIC 1422)

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## Equipment List

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<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
BL01	BL01	East Barge Loadout	02-A-168
BL02	BL02	West Barge Loadout	02-A-169
CC-1	CC-1a	Old Mill (Dryer)	71-A-084-S7
	CC-1b	Old Mill (Cage Mill)	
	CC-1c	Old Mill (Screen)	
	CC-1d	Old Mill (Screen)	
	CC-1e	Old Mill (Separator)	
	CC-1f	Old Mill (Separator)	
	CC-1g	Old Mill (Conveyors/Screws/Elevators)	
	CC-1h	Old Mill (Finished Storage Tank)	
	CC-1i	Old Mill (Finished Storage Tank)	
CC-2	CC-2b	New Mill (Hammermill 1)	86-A-049-S6
	CC-2c	New Mill (Hammermill 2)	
	CC-2d	New Mill (Separator 18')	
	CC-2e	New Mill (Screen)	
	CC-2f	New Mill (Screen)	
	CC-2g	New Mill (Screen)	
	CC-2h	New Mill (Screen)	
	CC-2i	New Mill (Raymond Mill)	
	CC-2j	New Mill (Separator)	
	CC-2k	New Mill (Conveyors/Screws/Elevators)	
CC-3	CC-3	Calcium Loadout	88-A-218-S4
CC-4	CC-4	Scale Loadout	98-A-191-S1
CC-5	CC-2a	New Mill (Dryer)	98-A-846-S2
	CC-2k	New Mill (Conveyors/Screws/Elevators)	
HR 1, 2, & 4	HR 1, 2, & 4	Surface Mining Haulage (unpaved)	Not applicable
HR 3	HR 3	Surface Mining Haulage (paved)	Not applicable

<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
LP-1	LP-1a	K1-2 Lime Transfer Drag Conveyor	71-A-082-S5
	LP-1b	K3 Lime Transfer Drag Conveyor	
	LP-1c	K1-3 Lime Transfer Elevator	
	LP-1d	Silo	
	LP-1e	Shaker screen	
	LP-1f	Elevator	
	LP-1g	Briquetter	
	LP-1ha	Conveyor for oversize fines (fugitive)	
	LP-1hb	Conveyor from Briquetter (fugitive)	
LP-3	LP-3a	Bagging Tank Conveyor	71-A-085-S3
	LP-3b	2-ton Bagger	
	LP-3c	50# Bagger	
LP-4	K-1-4	Calcining and Rotary Kilns 1-4	73-A-219-S5
LP-5	LP-5	Atmospheric Hydrator	78-A-321-S4
LP-6	LP-6	Hydrate Loadout	88-A-219-S4
LP-7	LP-7	Kiln Dust Tank	88-A-220-S3
LP-7L	LP-7L	Kiln Dust Loadout	02-A-019-S3
LP-8	LP-8a	Tank 445	88-A-221-S8
	LP-8b	Tank 446	
	LP-8c	Tank 447	
	LP-8d	Crusher	
	LP-8e	Screen	
	LP-8f	Briquetter	
	LP-8g	Pneumatic Blower	
LP-9	K-1-4	Kiln Baghouse	91-A-324-S5
LP-11	LP-11	Open Storage Coal/Coke	Not applicable
LP-12	LP-12a	Hi-Cal Storage Bin	97-A-1084-S2
	LP-12b	Pneumatic Blower	
	LP-12c	Flourspar Storage Bin	
	LP-12d	Cal-Aluminate Storage Bin	
	LP-12g	Hi-Cal Storage Bin	
LP-13	LP-13a	Rail Car Loadout	02-A-028-S4
	LP-13b	Rail Car Loadout	
NSP 1-6 & SSP 1-8	NSP 1-6 & SSP 1-8	Open Storage	Not applicable
Q-1	Q-1	Primary Crushing	Grandfathered
Q-2LP	Q-2LP	Secondary Crushing/Screening – Lower Plant	Grandfathered
Q-2TP	Q-2TP	Secondary Crushing/Screening – Top Plant	Grandfathered
Q-3P	Q-3P	Crusher and Screen	02-A-017-S1
Q-4P	Q-4P	Crusher and Screen	02-A-030-S1
EMGN 1 EMGN 2	EMGN 1 EMGN 2	Diesel Generators (2 @ 58 bhp each)	Not applicable

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**Insignificant Activities Equipment List**

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<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
ISH	2 Natural Gas Shop Heaters - 0.225 MMBtu/hour each
GS	Gasoline Storage - (1 Tank @ 2,000 Gallons)
DS	Diesel Storage – (1 Tank @ 9,700 Gallon and 1 Tank @ 12,500 gallon)

# I. Plant-Wide Conditions

Facility Name: Linwood Mining & Mineral Corporation  
Permit Number: 04-TV-005R1-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: 5 years  
Commencing on: June 18, 2010  
Ending on: June 17, 2015

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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## Plant-Wide Emission Limits

*The atmospheric emissions from the plant as a whole shall not exceed the following:*

Pollutant: Fugitive Dust

Emission Rate (tons/yr): In accordance with the provisions of 567 IAC 23.3(2)"c"(1), Linwood shall not allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficiency to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. Also in accordance with that rule, Linwood shall take reasonable precautions as defined in the rule to prevent the discharge of visible emissions of fugitive dusts beyond the lot line or the property of which the emissions originate.

Authority for Requirement: IDNR Administrative Consent Order 2002-AQ-10, Condition 1

## Operational Limits & Requirements

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

### Work Practice Standards:

- A. Linwood shall maintain a fence along the property lines as indicated on Exhibit "A" of Iowa DNR Administrative Consent Order 2002-AQ-10, which is attached to this Title V Operating Permit as Appendix A, and by this reference made a part hereof, in order to restrict public access to its facility. Linwood shall maintain a five-foot tall chain link fence, of the type routinely used in industrial areas, on the south and north of Highway 22. The fence shall parallel Highway 22 and shall remain located on Linwood property. The remainder of the fencing, at a minimum, shall continue to consist of a combination of barbed wire and woven wire with three or four strands of barbed wire. Along the portions of the plant property that border the river, Linwood shall continue to maintain and operate equipment adequate to

ensure 24-hour surveillance of all gaps in the fenceline along the river boundaries. "No trespassing" signs shall remain posted at both ends of the gap in the fence coverage to further restrict public access.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10,  
Condition 2

- B. Linwood shall continue implementation of the formal Fugitive Dust Maintenance Program which is attached as Exhibit "B" of Iowa DNR Administrative Consent Order 2002-AQ-10, which is attached to this Title V Operating Permit as Appendix A.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10,  
Condition 3

- C. Linwood shall remove, immediately, any and all foreign material which is deposited at any time on the Iowa Highway 22 roadbed as a result of Linwood's operation crossing Iowa Highway 22. Additionally, in order to ensure a reduction in the use of trucks crossing Highway 22 so as to limit the total amount of raw limestone hauled by the trucks at the facility to 1,395,776 tons per 12-month rolling average. The enclosed rock conveyor belt system shall be included in the monthly site inspections and inspection reports specified in Exhibit "B" of Iowa DNR Administrative Consent Order 2002-AQ-10, which is attached to this Title V Operating Permit as Appendix A.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10,  
Condition 7

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### **Emission Limits**

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

Opacity (visible emissions): 40% opacity

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

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

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

### Particulate Matter:

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

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or

amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).  
Authority for Requirement: 567 IAC 23.3(2)"a"

**Fugitive Dust:** Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

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

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### **Compliance Plan**

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

Unless otherwise noted in Section III of this permit, Linwood Mining & Minerals Corporation is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Linwood Mining & Mineral Corp. shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

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## **40 CFR 60 – Subpart A**

The Permittee shall comply with the applicable requirements of 40 CFR 60 Subpart A – General Provisions as listed below for all sources subject to 40 CFR Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants and 40 CFR 60 Subpart HH – Standards of Performance for Lime Manufacturing Plants. Excerpts of the Subpart A Requirements are shown below and are provided for reference only:

### Sec. 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

### Sec. 60.14 Modification.

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

### Sec. 60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.

Authority for Requirement: 40 CFR 60 Subpart A – General Provisions  
567 23.1(2)

### III. Emission Point-Specific Conditions

Facility Name: Linwood Mining & Mineral Corporation  
Permit Number: 04-TV-005R1-M001

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#### **Emission Point ID Number: BL01**

##### Associated Equipment

Associated Emission Unit ID Numbers: BL01  
Emissions Control Equipment ID Number: BL01  
Emissions Control Equipment Description: Windscreen

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Emission Unit vented through this Emission Point: BL01  
Emission Unit Description: East Barge Loadout  
Raw Material/Fuel: Limestone  
Rated Capacity: 650 tons/hr

#### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 10%

Authority for Requirement: Iowa DNR Construction Permit 02-A-168  
40 CFR Subpart OOO - Standards of Performance for Nonmetallic  
Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 1.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-168

Pollutant: Fugitive Dust

Emission Limit: See Plant-Wide Conditions.

Authority for Requirement: See Plant-Wide Conditions.

## **Operational Limits & Requirements**

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

Control equipment parameters:

- A windscreen shall be installed to help control emissions.

Hours of operation:

- The emission unit shall operate only between the hours of 6 a.m. and 6 p.m.

Process throughput:

- The combined total throughput of emission units BL01 and BL02 shall not exceed 12,600 tons per day.
- The combined total throughput of emission units BL01 and BL02 shall not exceed 1,932,000 tons per 12-month rolling period.

## **NSPS**

- This emission unit is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 02-A-168  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

Reporting & Record keeping:

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

- The date, time of startup for the emission unit (BL01) on that day, the time of shutdown on that day for the emission unit (BL01), the total throughput for the emission unit (BL01) on that day, and the combined throughput of emission units BL01 & BL02 for that day.
- For the first twelve (12) months of operation, determine the combined total throughput of emission units BL01 & BL02 for each month of operation.
- After the first twelve (12) months of operation, determine the combined cumulative throughput of emission units BL01 & BL02 on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 02-A-168

**Emission Point Characteristics**

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

There is no stack associated with this unit.

**Monitoring Requirements**

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

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > 10 % is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: BL02**

### Associated Equipment

Associated Emission Unit ID Numbers: BL02  
Emissions Control Equipment ID Number: BL02  
Emissions Control Equipment Description: Windscreen

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Emission Unit vented through this Emission Point: BL02  
Emission Unit Description: West Barge Loadout  
Raw Material/Fuel: Limestone  
Rated Capacity: 400 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 10%

Authority for Requirement: Iowa DNR Construction Permit 02-A-169  
40 CFR Subpart OOO - Standards of Performance for Nonmetallic  
Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 0.72 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-169

Pollutant: Fugitive Dust

Emission Limit: See Plant-Wide Conditions.

Authority for Requirement: See Plant-Wide Conditions.

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

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

Control equipment parameters:

- A windscreen shall be installed to help control emissions.

Hours of operation:

- The emission unit shall operate only between the hours of 6 a.m. and 6 p.m.

Process throughput:

- The combined total throughput of emission units BL01 and BL02 shall not exceed 12,600 tons per day.
- The combined total throughput of emission units BL01 and BL02 shall not exceed 1,932,000 tons per 12-month rolling period.

NSPS

- This emission unit is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 02-A-169  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

Reporting & Record keeping:

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

- The date, time of startup for the emission unit (BL01) on that day, the time of shutdown on that day for the emission unit (BL01), the total throughput for the emission unit (BL01) on that day, and the combined throughput of emission units BL01 & BL02 for that day.
- For the first twelve (12) months of operation, determine the combined total throughput of emission units BL01 & BL02 for each month of operation.
- After the first twelve (12) months of operation, determine the combined cumulative throughput of emission units BL01 & BL02 on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 02-A-169

**Emission Point Characteristics**

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

There is no stack associated with this unit.

**Monitoring Requirements**

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

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > 10 % is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: CC-1**

Associated Equipment

Associated Emission Unit ID Numbers: CC-1a through CC-1i

Emissions Control Equipment ID Number: CC-1

Emissions Control Equipment Description: Baghouse

**Table 1: Old Mill Units**

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
CC-1	CC-1a	Dryer	Limestone	40 tons/hr*
			Natural Gas or Landfill Gas	0.0147 MMcf/hr
	CC-1b	Cage Mill	Limestone	40 tons/hr*
	CC-1c	Screen	Limestone	60 tons/hr*
	CC-1d	Screen	Limestone	60 tons/hr*
	CC-1e	Separator	Limestone	40 tons/hr*
	CC-1f	Separator	Limestone	30 tons/hr*
	CC-1g	Conveyors/screws/elevators	Limestone	60 tons/hr*
	CC-1h	Finished Storage Tank	Limestone	1200 tons*
	CC-1i	Finished Storage Tank	Limestone	1200 tons*

\* Per Iowa DNR Construction Permit 71-A-084-S7.

**Applicable Requirements**

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

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

Pollutant: Opacity

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

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

Authority for Requirement: Iowa DNR Construction Permit 71-A-084-S7  
567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 2.48 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 71-A-084-S7

Pollutant: Particulate Matter

Emission Limit(s): 2.48 lb/hr, 0.1 gr./dscf

Authority for Requirement: Iowa DNR Construction Permit 71-A-084-S7  
567 IAC 23.3(2)"a"

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

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 71-A-084-S7  
567 IAC 23.3(3)"e"

### **Operational Limits & Requirements**

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

Process throughput:

- The fuel for the Old Mill Dryer (EU CC-1a) is limited to either natural gas or landfill gas.

Control equipment parameters:

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 71-A-084-S7

### **Emission Point Characteristics**

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

Stack Height (ft. from the ground): 72

Stack Opening (inches, dia): 42

Exhaust Flow Rate (scfm): 34,002

Exhaust Temperature (°F): 150

Discharge Style: Vertical, unobstructed

Authority for Requirement: Iowa DNR Construction Permit 71-A-084-S7

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

**Monitoring Requirements**

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: CC-2**

Associated Equipment

Associated Emission Unit ID Numbers: CC-2b through CC-2k

Emissions Control Equipment ID Number: CC-2

Emissions Control Equipment Description: Baghouse

**Table 1: New Mill Emission Units**

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
CC-2	CC-2b	Hammermill 1	Limestone	50 tons/hr*
	CC-2c	Hammermill 2		50 tons/hr*
	CC-2d	Separator		100 tons/hr*
	CC-2e	Screen		25 tons/hr*
	CC-2f	Screen		25 tons/hr*
	CC-2g	Screen		25 tons/hr*
	CC-2h	Screen		25 tons/hr*
	CC-2i	Raymond Mill		35 tons/hr*
	CC-2j	Separator		50 tons/hr*
	CC-2k	Conveyors/Screw/Elevators		100 tons/hr*

\* Per Iowa DNR Construction Permit 86-A-049-S6.

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 7%

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6  
 40 CFR 60 Subpart OOO - Standards of Performance for  
 Nonmetallic Mineral Processing Plants  
 567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 1.61 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6

Pollutant: Particulate Matter

Emission Limit(s): 1.61 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6  
 567 IAC 23.3(2)"a"

Pollutant: Particulate Matter

Emission Limit(s): 0.05 grams/dscm<sup>(1)</sup>

<sup>(1)</sup> 0.05 grams/dscm = 0.022 gr./dscf

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6  
40 CFR 60 Subpart OOO - Standards of Performance for  
Nonmetallic Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: Particulate Matter

LAER Emission Limit(s): 0.01 gr/dscf <sup>(2)</sup>

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6

<sup>(2)</sup> Limit established when the Buffalo area was designated non-attainment for TSP (PM). Any relaxation in the Lowest Achievable Emission Rate (LAER) after the Buffalo Area is re-designated attainment for TSP (PM) is subject to review under the PSD regulations in effect at the time the relaxation occurs.

### **Operational Limits & Requirements**

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

Control equipment parameters:

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

Work practice standards:

- No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility (including crushers, grinding mills, screening operations, bucket elevators, belt conveyors and storage bins) any visible fugitive emissions except emissions from a vent as defined in 40 CFR §60.671.

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6

NSPS:

A. This emission unit is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 60  
Stack Opening (inches, dia): 42  
Exhaust Flow Rate (scfm): 30,602  
Exhaust Temperature (°F): 150  
Discharge Style: Vertical, unobstructed  
Authority for Requirement: Iowa DNR Construction Permit 86-A-049-S6

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

**Monitoring Requirements**

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

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > 7% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: CC-3**

### Associated Equipment

Associated Emission Unit ID Numbers: CC-3  
Emissions Control Equipment ID Number: CC-3  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: CC-3  
Emission Unit Description: Calcium Loadout  
Raw Material/Fuel: Crushed Limestone  
Rated Capacity: 160 tons/hour

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 7%

Authority for Requirement: Iowa DNR Construction Permit 88-A-218-S4  
40 CFR 60 Subpart OOO - Standards of Performance for  
Nonmetallic Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 0.36 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 88-A-218-S4

Pollutant: Particulate Matter

Emission Limit(s): 0.02 gr/dscf<sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 88-A-218-S4  
40 CFR 60 Subpart OOO - Standards of Performance for  
Nonmetallic Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

<sup>(1)</sup> 0.05 grams/dscm = 0.022 gr./dscf

### **Operational Limits & Requirements**

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

#### **NSPS:**

A. This source is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 88-A-218-S4  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

### **Emission Point Characteristics**

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

Stack Height (ft, from the ground): 37

Stack Opening (inches): 16 x 16.5

Exhaust Flow Rate (scfm): 1,500

Exhaust Temperature (°F): 100

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 88-A-218-S4

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

### **Monitoring Requirements**

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

#### **Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > 7% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: CC-4**

### Associated Equipment

Associated Emission Unit ID Numbers: CC-4  
Emissions Control Equipment ID Number: CC-4  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: CC-4  
Emission Unit Description: Scale Loadout  
Raw Material/Fuel: Calcium Carbonate  
Rated Capacity: 100 tons/hour

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 7%

Authority for Requirement: Iowa DNR Construction Permit 98-A-191-S1  
40 CFR 60 Subpart OOO - Standards of Performance for  
Nonmetallic Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 0.10 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 98-A-191-S1

Pollutant: Particulate Matter

Emission Limit(s): 0.05 grams/dscm<sup>(1)</sup>

<sup>(1)</sup> 0.05 grams/dscm = 0.022 gr./dscf

Authority for Requirement: Iowa DNR Construction Permit 98-A-191-S1  
40 CFR 60 Subpart OOO - Standards of Performance for  
Nonmetallic Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

### **Operational Limits & Requirements**

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

#### **NSPS:**

A. This source is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 98-A-191-S1  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

### **Emission Point Characteristics**

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

Stack Height (ft, from the ground): 38.1

Stack Opening (feet): 0.63 x 0.83

Exhaust Flow Rate (scfm): 1,200

Exhaust Temperature (°F): 100

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 98-A-191-S1

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

### **Monitoring Requirements**

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

#### **Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method.

If an opacity > 7% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: CC-5**

Associated Equipment

Associated Emission Unit ID Numbers: CC-2a and CC-2k  
 Emissions Control Equipment ID Number: CC-5  
 Emissions Control Equipment Description: Baghouse

**Table 1: New Mill Emission Units**

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
CC-5	CC-2a	Dryer	Limestone	70 tons/hr*
			Natural Gas or Landfill Gas	0.0287 MMcf/hr
	CC-2k	Conveyors/Screws/Elevators	Limestone	100 tons/hr*

\* Per Iowa DNR Construction Permit 98-A-846-S2.

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 7%

Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2  
 40 CFR 60 Subpart OOO - Standards of Performance for  
 Nonmetallic Mineral Processing Plants  
 567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 0.93 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf, 0.05 grams/dscm<sup>(1)</sup>

<sup>(1)</sup> 0.05 grams/dscm = 0.022 gr./dscf

Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2  
 40 CFR 60 Subpart OOO - Standards of Performance for  
 Nonmetallic Mineral Processing Plants  
 567 IAC 23.1(2)"bbb"

Pollutant: Particulate Matter

LAER Emission Limit(s): 0.01 gr/dscf <sup>(2)</sup>

Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2

<sup>(2)</sup> Limit established when the Buffalo area was designated non-attainment for TSP (PM). Any relaxation in the Lowest Achievable Emission Rate (LAER) after the Buffalo Area is re-designated attainment for TSP (PM) is subject to review under the PSD regulations in effect at the time the relaxation occurs.

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

Emission Limit(s): 500 ppmv

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

### **Operational Limits & Requirements**

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

Process throughput:

- The fuel for the New Mill Dryer (CC-2a) is limited to either natural gas or landfill gas.

Control equipment parameters

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2

### **NSPS:**

A. These units are subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 97  
Stack Opening (inches, dia.): 30  
Exhaust Flow Rate (scfm): 20,600  
Exhaust Temperature (°F): 100  
Discharge Style: Vertical unobstructed  
Authority for Requirement: Iowa DNR Construction Permit 98-A-846-S2

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

**Monitoring Requirements**

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

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > 7% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: HR 1, 2, 3 & 4**

### Associated Equipment

Associated Emission Unit ID Numbers: HR 1, 2, 3 & 4

Emissions Control Equipment ID Number: CE-1

Emissions Control Equipment Description: Chemical Dust Suppressant

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### **Applicable Requirements**

Emission Unit vented through this Emission Point: HR 1, 2, 3 & 4

Emission Unit Description: Surface Mining Haulage

Raw Material/Fuel: Limestone

Rated Capacity: 1.699 VMT/hour per road

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

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

Pollutant: Fugitive Dust

Emission Limit: See Plant-Wide Conditions.

Authority for Requirement: See Plant-Wide Conditions.

### **Operational Limits & Requirements**

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

Control equipment parameters:

The unpaved and paved haul road areas marked on Exhibit "A" of Iowa DNR Administrative Consent Order 2002-AQ-10, which is attached to this Title V Operating Permit as Appendix A. Instructions for the mitigation of fugitive dust emissions from unpaved and paved roads follow.

Control of Fugitive Emissions from Unpaved Haul Roads:

- (i) Linwood shall continue to control the fugitive emissions from the unpaved facility haul roads with an effective control efficiency of 95% by using a chemical dust suppressant. There are 7,100 feet of unpaved plant roads. The spray application width is 20 feet. A solution of chemical dust suppressant shall be applied in one or more applications resulting in 0.05 gallons of chemical dust suppressant per square yard. A total of 789 gallons of chemical dust suppressant shall be applied no less frequently than once every other week to maintain the ground inventory. Linwood may elect to use any chemical dust suppressant that is capable of achieving the 95 percent control efficiency. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts of chemical dust suppressant other than those specified above be applied, Linwood shall

notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

- (ii) If the selected chemical dust suppressant can not be applied because the ambient air temperatures (as measured at the facility during daylight operating hours) will be less than 35° F (1.7° C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after scheduled application date as the conditions preventing the application have abated.
- (iii) Linwood shall maintain records of these applications, which shall include the dates and times of each application, the chemical dust suppressant used, the amount of chemical dust suppressant applied, dilution ration, the specific area to which the solution was applied, and documentation of road and weather conditions, if necessary, and the operator's initials. If the selected chemical dust suppressant is not applied as planned, then records should so indicated and provide an explanation. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

Control of Fugitive Emissions from Paved Haul Road No. 3:

- (i) Linwood shall control fugitive emissions from paved Haul Road No. 3 by water flushing a minimum of twice daily Monday through Friday and a minimum of once daily on Saturday and Sunday, except as specified below. Water flushing and the record keeping requirements described below shall begin within 30 days of the effective date of IDNR Administrative Consent Order 2002-AQ-10. More frequent water flushing of the paved haul roads shall be accomplished as weather and operational conditions dictate to prevent fugitive dust emissions from crossing the facility fencelines.
- (ii) If water flushing can not be accomplished because the ambient air temperatures (as measured at the facility during daylight operating hours) will be less than 35° F (1.7° C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the water flushing shall be postponed and accomplished as soon as the conditions preventing the application have abated. Additionally, water flushing need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period or the paved road(s) will not be used on a given day.
- (iii) Records of the applications shall be maintained and shall include the dates and times of each application, the amount of water applied, the areas treated, and the operator's initials. If water is not applied due to the conditions specified in Conditions 4b(ii) above, the conditions which prevented such applications, then records should so indicated and provide an explanation. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10, Conditions 4, 4a, and 4b

**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: LP-1**

Associated Equipment

Associated Emission Unit ID Numbers: See table 1 below.

Emissions Control Equipment ID Number: LP-1

Emissions Control Equipment Description: Baghouse

Table 1: Lime Plant Transfer and Conveying

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
LP-1	LP-1a	K1-2 Lime Transfer Drag Conveyor	Lime	24.2 tons/hr
	LP-1b	K3 Lime Transfer Drag Conveyor		
	LP-1c	K1-3 Lime Transfer Elevator		
	LP-1d	Silo		
	LP-1e	Shaker screen		
	LP-1f	Elevator		
	LP-1g	Briquetter		
	LP-1ha	Conveyor for oversize fines		
	LP-1hb	Conveyor from briquetter		

**Applicable Requirements**

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

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

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 71-A-082-S5  
567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 0.82 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 71-A-082-S5

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 71-A-082-S5  
567 IAC 23.3(2)"a"

### **Emission Point Characteristics**

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

Stack Height (ft, from the ground): 40

Stack Opening (inches, dia): 24

Exhaust Flow Rate (scfm): 7,600

Exhaust Temperature (°F): 90

Discharge Style: Vertical, unobstructed

Authority for Requirement: Iowa DNR Construction Permit 71-A-082-S5

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

### **Operational Limits & Requirements**

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

Control equipment parameters

- The baghouse will be operated and maintained according to manufacturer's specifications.

Reporting & Record keeping:

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

- A log shall be kept of all maintenance and repairs performed on the baghouse.

Authority for Requirement: Iowa DNR Construction Permit 71-A-082-S5

### **Monitoring Requirements**

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

#### **Stack Testing:**

Pollutant – Particulate Matter

Stack Test to be Completed within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the equipment proposed in construction permit 71-A-082-S5

Test Method – Iowa Compliance Sampling Manual Method 5

Authority for Requirement - IDNR Construction Permit 71-A-082-S5

Pollutant – PM-10

Stack Test to be Completed within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the equipment proposed in construction permit 71-A-082-S5

Test Method – 40 CFR 51, Appendix M, 201A with 202 or approved alternative  
Authority for Requirement - IDNR Construction Permit 71-A-082-S5

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

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

*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.*

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: LP-3**

Associated Equipment

Associated Emission Unit ID Numbers: LP-3a, LP-3b, and LP-3c  
 Emissions Control Equipment ID Number: LP-3  
 Emissions Control Equipment Description: Baghouse

Table 1: Lime Plant Bagging

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
LP-3	LP-3a	Bagging Tank Conveyor	Lime	75 tons/hr*
	LP-3b	2-ton Bagger		20 tons/hr*
	LP-3c	50# Bagger		0.5 tons/hr*

\* Per Iowa DNR Construction Permit 71-A-085-S3.

**Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 0 %

Authority for Requirement: Iowa DNR Construction Permit 71-A-085-S3  
 567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 0.14 lb./hr

Authority for Requirement: Iowa DNR Construction Permit 71-A-085-S3

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 71-A-085-S3  
 567 IAC 23.3(2)"a"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): Vents Inside Building

Stack Opening (inches, dia): 12

Exhaust Flow Rate (scfm): 1,400

Exhaust Temperature (°F): 80

Discharge Style: Horizontal (Vents Inside Building)

Authority for Requirement: Iowa DNR Construction Permit 71-A-085-S3

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

**Monitoring Requirements**

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: LP-4

### Associated Equipment

Associated Emission Unit ID Numbers: K-1-4

Emissions Control Equipment ID Numbers: CE MC1 through MC4 and CE TL1

Emissions Control Equipment Description: Multiple Cyclone (for each kiln) & Limestone Mining Tunnel

Continuous Emissions Monitors ID Numbers: COM1\*

\*EPA-approved Alternative Opacity Monitoring is being used to demonstrate compliance instead of COM1.

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Emission Unit vented through this Emission Point: K-1-4

Emission Unit Description: Calcining and Rotary Kilns 1-4

Raw Material/Fuel: Limestone, Coal, Petroleum Coke, Natural Gas, and Landfill Gas

Rated Capacity: Per Iowa DNR Construction Permit 73-A-219-S5, Kilns 1-4 have the following capacities:

<b>EU Description</b>	<b>Rated Capacity</b>
Dry Rotating Lime Kiln (Kiln #1)	5 tons of lime/hr
Dry Rotating Lime Kiln (Kiln #2)	5 tons of lime /hr
Preheater Lime Kiln (Kiln #3)	8.75 tons of lime/hr
Preheater Lime Kiln (Kiln #4)	21.875 tons of lime/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.*

#### **A. Emission Limits with Kiln 4 Operating:**

Pollutant: Opacity

Emission Limit(s): 15%

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
40 CFR 60 Subpart HH – Standards of Performance for  
Lime Manufacturing Plants  
567 IAC 23.1(2)"y"

Pollutant: PM-10

Emission Limit(s): 45.59 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: PM-10

Emission Limit(s): 0.51 lb/ton lime<sup>(2)</sup>

<sup>(2)</sup> This emission limit is for Kiln 4.

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: Particulate Matter (Federal)  
Emission Limit(s): 0.30 kg/megagram (0.6 lb/ton) of stone feed  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
40 CFR 60 Subpart HH – Standards of Performance for  
Lime Manufacturing Plants  
567 IAC 23.1(2)"y"

Pollutant: Particulate Matter (State)  
Emission Limit(s): 0.51 lb./ton lime<sup>(2)</sup>  
<sup>(2)</sup> This emission limit is for Kiln 4.  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)  
Emission Limit(s): 9.45 lb/hr, 41.4 tons/year  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)  
Emission Limit(s): 500 ppmv – when combusting only gaseous fuels (i.e. natural gas and landfill gas)<sup>(1)</sup>  
<sup>(1)</sup> The sulfur dioxide limit is the stricter of 6 lb./MMBtu and 500 ppmv when using a combination of fuels.  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
567 IAC 23.3(3)

Pollutant: Sulfur Dioxide (SO<sub>2</sub>)  
Emission Limit(s): 6 lb/MMBtu – when combusting only solid fuels (i.e. coal and pet coke).<sup>(1)</sup>  
<sup>(1)</sup> The sulfur dioxide limit is the stricter of 6 lb/MMBtu and 500 ppmv when using a combination of fuels.  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
567 IAC 23.3(3)"a"(1)

Pollutant: Nitrogen Oxides (NO<sub>x</sub>)  
Emission Limit(s): 58.9 lb/hr, 272.2 tons/year  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: Carbon Monoxide  
Emission Limit(s): 46.8 lb./hr, 205.2 tons/year  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: Hydrochloric Acid (HCl)  
Emission Limit(s): 0.35 lb/hr  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

## **B. Emission Limits When Kiln 4 Is Not Operating:**

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: PM-10

Emission Limit(s): 45.59 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: PM-10

Emission Limit(s): 1.58 lb/ton lime

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

Pollutant: Particulate Matter

Emission Limit(s): 1.58 lb/ton lime<sup>(2)</sup>

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

<sup>(2)</sup> The stack is also subject to a standard of 0.1 gr/scf. 567 IAC 23.4(8)

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

Emission Limit(s): 500 ppmv – when combusting only gaseous fuels (i.e. natural gas and landfill gas)<sup>(3)</sup>

<sup>(3)</sup> The sulfur dioxide limit is the stricter of 6 lb./MMBtu and 500 ppmv when using a combination of fuels.

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
567 IAC 23.3(3)

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

Emission Limit(s): 6 lb/MMBtu – when combusting only solid fuels (i.e. coal and pet coke).<sup>(4)</sup>

<sup>(4)</sup> The sulfur dioxide limit is the stricter of 6 lb./MMBtu and 500 ppmv when using a combination of fuels.

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
567 IAC 23.3(3)"a"(1)

## **Operational Limits & Requirements**

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

### Process throughput:

- A. Total lime production for the plant shall be limited according to the plant annual total NO<sub>x</sub> emission limitation listed under the "Emission Limits When Kiln 4 is Operating".
- B. The emission units listed in this permit are limited to coal, petroleum coke, natural gas, and landfill gas as fuels.

### Reporting and Record keeping:

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

### Operating Condition Monitoring

- A. Compliance with the annual NO<sub>x</sub> limit shall be demonstrated as follows:

- 1. Calculate the monthly NO<sub>x</sub> emissions from Kilns #1 - #4:

$$\begin{aligned} \text{Tons of NO}_x \text{ emissions/month} = \\ [(\text{tons of lime production from Kilns \#1 \& \#2}) \times (\text{EF}_1) + (\text{tons of lime production from Kilns \#3 and \#4}) \times \\ (\text{EF}_2)] \div 2000 \text{ lbs./ton} \end{aligned}$$

Where:

- a.  $\text{EF}_1$  = lb NO<sub>x</sub>/ton of lime produced for the combined exhaust from kilns #1 and #2. The combined exhaust shall be used to purge the tunnel at least 12 hours before conducting the stack test, and the lime produced during the test period shall be recorded.
  - b.  $\text{EF}_2$  = lb NO<sub>x</sub>/ton of lime produced for the combined exhaust from kilns #3 and #4. The combined exhaust shall be used to purge the tunnel at least 12 hours before conducting the stack test, and the lime produced during the test period shall be recorded.
- 2. Calculate the twelve (12) month rolling total NO<sub>x</sub> emissions for each month of operation.
- B. The owner or operator of the #4 kiln shall install, calibrate, maintain, and operate a device for measuring the mass rate of stone feed to Kiln #4. The measuring device used must be accurate to within  $\pm 5$  percent of the mass rate over its operating range pursuant to 40 CFR 60, Subpart HH, 60.343(d).
  - C. The owner or operator of the facility (plant number 82-01-015) shall either:

1. Install, calibrate, maintain, and operate a device for measuring the mass rate of lime products from Kilns #1, 2, 3, and 4. The measuring device used must be accurate to within  $\pm 5$  percent of the mass rate over its operating range or
2. In lieu of installing a belt scale on all four (4) kilns, record the total production for Kilns 1 – 3 and the total production for Kiln 4 and use the following formula to demonstrate compliance with the NO<sub>x</sub> limit:

$$\text{Tons of NO}_x \text{ emissions/month} = [(\text{tons of lime production from Kilns \#1, \#2, \& \#3}) \times (\text{EF}_3) + (\text{tons of lime production from Kiln \#4}) \times (\text{EF}_2)] \div 2000 \text{ lb/ton}$$

Where:

- a. EF<sub>3</sub> = lb NO<sub>x</sub>/ton of lime produced for the combined exhaust from kilns #1, #2 and #3. The combined exhaust shall be used to purge the tunnel at least 12 hours before conducting the stack test, and the lime produced during the test period shall be recorded.
- D. If the facility intends on changing the method of demonstrating compliance with either the NO<sub>x</sub> emission limit or the opacity monitoring requirements, the facility shall inform (in writing) the Compliance Supervisor of the Air Quality Bureau and the Field Office of its intentions thirty (30) days prior to making the change.<sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
 40 CFR 60 Subpart HH – Standards of Performance for Lime  
 Manufacturing Plants  
 567 IAC 23.1(2)"y"

<sup>(1)</sup> As of the issuance of the renewal Title V permit, the facility had selected the EPA approved alternative opacity monitoring program as the method to demonstrate compliance. The two options presented in Iowa DNR Construction Permit 73-A-219-S5 are as follows:

1. Install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system for all periods when Kiln #4 is in operation in accordance with the New Source Performance Standards (NSPS) Subpart HH (Standards of Performance for Lime Manufacturing Plants). The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 1 (PS1) or
2. Conduct opacity monitoring for those periods when Kiln # 4 is in operation per an EPA approved alternative opacity monitoring program.

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

NSPS/NESHAP:

- A. Kiln #4 is subject to Subpart A (General Provisions, 40 CFR §60.1 – 40 CFR §60.19) and Subpart HH (Standards of Performance for Lime Manufacturing Plants, 40 CFR §60.340 – 40 CFR §60.344) of the New Source Performance Standards (NSPS).
- B. The other emission units (Kilns #1 – #3) are of the source category for Subpart HH, but are not subject as they commenced construction prior to May 3, 1977 and have not been modified or reconstructed.
- C. This facility is of the source category for Subpart AAAAAA (National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, 40 CFR §63.7080 – 40 CFR §63.7143) of the National Emission Standards for Hazardous Air Pollutants (NESHAP). However, it is not subject as the facility has conducted testing per 40 CFR §63.7142 and it has been determined the facility is an area source.

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart HH – Standards of Performance for Lime  
Manufacturing Plants  
567 IAC 23.1(2)"y"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 79  
Stack Opening (inches, dia): 84  
Exhaust Flow Rate (scfm): 90,900  
Exhaust Temperature (°F): 110  
Discharge Style: Vertical, unobstructed  
Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5

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

**Monitoring Requirements**

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

**Opacity Monitoring:**

When Kiln #4 is not in operation:

No additional opacity monitoring required at this time.

When Kiln #4 is in operation:

Linwood shall use the EPA Region VII approved alternative opacity monitoring program, for the kiln mine exhaust (LP-4), final approved by EPA Region VII on November 20, 2003. If EPA Region VII terminates approval Linwood shall notify the DNR within 30 days of notification from the EPA Region VII if any changes or modifications are made to the alternative opacity monitoring program so an alternative approach acceptable to Linwood, DNR, and EPA can be developed. The alternative opacity monitoring program is included as a permit condition in Iowa DNR Construction Permit 73-A-219-S5 with EPA Region VII approval.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10, Condition 6.

EPA Region VII Alternative Opacity Monitoring\*

\* This procedure is per a letter dated November 17, 1999 from William A. Spratlin of Region VII EPA to Robert Niemela of Linwood Mining and Minerals Corporation. The November 17, 1999 letter limited the approval to one year. This approval was extended per a letter dated November 21, 2000 from Donald Toensing of Region VII EPA to Michael S. Johnson of Linwood Mining and Minerals Corporation. Interim approval was then granted per a letter dated March 8, 2002 from Michael J. Bronoski of Region VII EPA to Lucie Macalister of Linwood. There was no time limit on the extension. EPA final approved the alternative opacity monitoring program on November 20, 2003. A letter was written by William A. Spratlin to both Linwood and the DNR. All four letters are attached to this permit under Appendix C.

Pursuant to 40 CFR 60.13(i)(1) your request for an alternative opacity monitoring procedure is granted, subject to the following conditions:

1. While Kiln #4 is in operation, at least once each operating day, an observer certified in accordance with EPA Method 9 shall perform a set of three 6-minute visible emission observations.
2. If the average opacity for one or more of the 6-minute visible emission observations made in accordance with item 1 above exceeds 10 percent, the observer must collect two additional sets, with each set consisting of three 6-minute visible emission observations.
3. In addition to item 2 above, in the event that the average opacity during a 6-minute period is greater than 15 percent, valid visible emission observations in accordance with Method 9 shall continue to be taken and recorded until such time that the average opacity of a 6-minute period is below 15 percent.
4. Records of the visible emission readings described above must be maintained for a period of five years from the date of the reading. The records shall include the date, time, name of the reader, field sheets, and the results of each reading.
5. Thirty days after the end of each calendar quarter in which visible emission readings are taken pursuant to this letter, a report shall be submitted to the Iowa Department of Natural Resources providing the results of each visible emission reading and a description of corrective actions taken to minimize particulate emissions.

Authority for Requirement: Letter from EPA Region VII Dated 11/17/99, 11/21/00, 3/8/02 & 11/20/03.

## Stack Testing:

### Pollutant – PM (Federal)

Stack Test to be Completed: May 18, 2013

(2 years from the issuance of this permit)

Test Method – 40 CFR 60, Appendix A, Method 5

Authority for Requirement – 567 IAC 22.108(3)

### Pollutant – PM (State)

Stack Test to be Completed: May 18, 2013

(2 years from the issuance of this permit)

Test Method – Iowa Compliance Sampling Manual Method 5

Authority for Requirement – 567 IAC 22.108(3)

### Pollutant – PM-10

Stack Test to be Completed: May 18, 2013

(2 years from the issuance of this permit)

Test Method – 40 CFR 51, Appendix M, 201A with 202 or approved alternative

Authority for Requirement – 567 IAC 22.108(3)

### Test # 1 Pollutant – Nitrogen Oxides (NO<sub>x</sub>)<sup>(1)</sup>

<sup>(1)</sup> Either test the combined exhaust from kilns 1 & 2 (if selecting condition A1 from Operating Condition Monitoring to demonstrate compliance with the NO<sub>x</sub> limit) or the combine exhaust from kilns 1, 2, & 3 (if selecting condition C2 from the Operating Condition Monitoring to demonstrate compliance with the NO<sub>x</sub> limit) The emission rate shall be calculated based on properly recorded lime production rates at the time of the test. The emission rate shall be converted to lb. of NO<sub>x</sub> per ton of lime produced.

Stack Test to be Completed: June 17, 2012

Test Method – 40 CFR 60, Appendix A, Method 7E or an approved alternative.

Authority for Requirement – 567 IAC 22.108(3)

### Test # 2 Pollutant – Nitrogen Oxides (NO<sub>x</sub>)<sup>(1)</sup>

<sup>(1)</sup> Either test the combined exhaust from kilns 3 & 4 (if selecting condition A1 from Operating Condition Monitoring to demonstrate compliance with the NO<sub>x</sub> limit) or the exhaust from just kiln 4 (if selecting condition C2 from the Operating Condition Monitoring to demonstrate compliance with the NO<sub>x</sub> limit) The emission rate shall be calculated based on properly recorded lime production rates at the time of the test. The emission rate shall be converted to lb. of NO<sub>x</sub> per ton of lime produced.

Stack Test to be Completed: June 17, 2012

Test Method – 40 CFR 60, Appendix A, Method 7E or an approved alternative.

Authority for Requirement – 567 IAC 22.108(3)

**Continuous Emissions Monitoring:**

*In Iowa DNR Construction Permit 73-A-219-S5 there are two options for continuous emission monitoring. Linwood is currently demonstrating compliance with the opacity limits for this emission point using option #2, an EPA Region VII approved alternative opacity monitoring program instead of operating a continuous emission monitoring system. The two options in Iowa DNR Construction Permit 73-A-219-S5 are listed below.*

Pollutant – Opacity

Operational Specifications -

1. The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system for all periods when Kiln #4 is in operation in accordance with the New Source Performance Standards (NSPS) Subpart HH (Standards of Performance for Lime Manufacturing Plants). The system shall be designed to meet the 40 CFR, Part 60, Appendix B, performance specification 1 (PS1) or
2. Conduct opacity monitoring for those periods when Kiln # 4 is in operation per an EPA approved alternative opacity monitoring program.

Date of Initial System Calibration and Quality Assurance – 11/97

Authority for Requirement: Iowa DNR Construction Permit 73-A-219-S5  
40 CFR 60 Subpart HH – Standards of Performance for  
Lime Manufacturing Plants  
567 IAC 23.1(2)"y"

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: LP-5**

### Associated Equipment

Associated Emission Unit ID Numbers: LP-5  
Emissions Control Equipment ID Number: LP-5  
Emissions Control Equipment Description: Wet Scrubber

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Emission Unit vented through this Emission Point: LP-5  
Emission Unit Description: Atmospheric Hydrator  
Raw Material/Fuel: Lime and Water Sprays  
Rated Capacity: 12 tons/hour

### **Applicable Requirements**

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

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

Pollutant: Opacity

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

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

Authority for Requirement: Iowa DNR Construction Permit 78-A-321-S4  
567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 5.15 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 78-A-321-S4

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 78-A-321-S4  
567 IAC 23.3(2)"a"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 90

Stack Opening (inches, dia): 36

Exhaust Flow Rate (scfm): 6,100

Exhaust Temperature (°F): 200

Discharge Style: Vertical, unobstructed

Authority for Requirement: Iowa DNR Construction Permit 78-A-321-S4

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

**Monitoring Requirements**

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

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

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

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

As of the issuance date of this Title V permit, this source was not operational. When it becomes operational, it must follow the steps to determine the normal differential pressure range as described in Appendix D of this permit.

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: LP-6**

### Associated Equipment

Associated Emission Unit ID Numbers: LP-6  
Emissions Control Equipment ID Number: LP-6  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: LP-6  
Emission Unit Description: Hydrate Loadout  
Raw Material/Fuel: Hydrated Lime  
Rated Capacity: 40 tons/hour

### **Applicable Requirements**

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

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

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 88-A-219-S4  
567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 0.10 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 88-A-219-S4

Pollutant: Particulate Matter

Emission Limit(s): 0.23 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 88-A-219-S4  
567 IAC 23.3(2)"a"

**Operational Limits & Requirements**

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

Control equipment parameters:

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 88-A-219-S4

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 25

Stack Opening (feet): 0.63 x 0.83

Exhaust Flow Rate (scfm): 1,200

Exhaust Temperature (°F): 80

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 88-A-219-S4

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

**Monitoring Requirements**

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: LP-7**

### Associated Equipment

Associated Emission Unit ID Numbers: LP-7  
Emissions Control Equipment ID Number: LP-7  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: LP-7  
Emission Unit Description: Kiln Dust Tank  
Raw Material/Fuel: Lime Fines  
Rated Capacity: 2.2 tons/hour, 1050 ton storage capacity

### **Applicable Requirements**

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

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

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 88-A-220-S3

Pollutant: PM-10

Emission Limit(s): 0.15 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 88-A-220-S3

Pollutant: Particulate Matter

Emission Limit(s): 0.62 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 88-A-220-S3  
567 IAC 23.3(2)"a"

### **Operational Limits & Requirements**

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

Control equipment parameters:

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 88-A-220-S3

### **Emission Point Characteristics**

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

Stack Height (ft from the ground): 94

Stack Opening (inches): 12 x 9

Exhaust Flow Rate (scfm): 3,300

Exhaust Temperature (°F): 100

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 88-A-220-S3

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

**Monitoring Requirements**

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

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: LP-7L**

### Associated Equipment

Associated Emission Unit ID Numbers: LP-7L  
Emissions Control Equipment ID Number: LP-7L  
Emissions Control Equipment Description: Baghouse

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Emission Unit vented through this Emission Point: LP-7L  
Emission Unit Description: Kiln Dust Loadout  
Raw Material/Fuel: Lime Kiln Dust (Terra Loc)  
Rated Capacity: 75 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 02-A-019-S3

Pollutant: PM-10

Emission Limits: 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-019-S3

Pollutant: Particulate Matter

Emission Limit(s): 0.11 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 02-A-019-S3  
567 IAC 23.3(2)"a"

**Operational Limits & Requirements**

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

Control equipment parameters:

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 02-A-019-S3

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 25.5

Stack Opening (inches): 7 x 5.625

Exhaust Flow Rate (scfm): 600

Exhaust Temperature (°F): 100

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 02-A-019-S3

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

**Monitoring Requirements**

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: LP-8

### Associated Equipment

Associated Emission Unit ID Numbers: LP-8a, LP-8b, LP-8c, LP-8d, LP-8e, LP-8f , LP-8g

Emissions Control Equipment ID Number: LP-8

Emissions Control Equipment Description: Baghouse

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity*
LP-8	LP-8a	Tank 445	Lime	500 tons
	LP-8b	Tank 446	Lime	500 tons
	LP-8c	Tank 447	Lime	500 tons
	LP-8d	Crusher	Lime	50 tons/hr
	LP-8e	Screen	Lime	50 tons/hr
	LP-8f	Briquetter	Lime	5 tons/hr
	LP-8g	Pneumatic Blower	Lime	8.3 tons/hr

\* Per Iowa DNR Construction Permit 88-A-221-S8.

### Applicable Requirements

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

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

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 88-A-221-S8

Pollutant: PM-10

Emission Limit(s): 0.94 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 88-A-221-S8

Pollutant: Particulate Matter

Emission Limit(s): 1.0 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 88-A-221-S8  
567 IAC 23.3(2)"a"

### **Operational Limits & Requirements**

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

Control equipment parameters:

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 88-A-221-S8

### **Emission Point Characteristics**

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

Stack Height (ft, from the ground): 32

Stack Opening (inches, dia): 22

Exhaust Flow Rate (scfm): 5,500

Exhaust Temperature (°F): 100

Discharge Style: Vertical, unobstructed

Authority for Requirement: Iowa DNR Construction Permit 88-A-221-S8

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

**Monitoring Requirements**

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

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

*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.*

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

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: LP-9

### Associated Equipment

Associated Emission Unit ID Numbers: K-1 through K-4

Emissions Control Equipment ID Number: CE MC1 through MC4, LP-9

Emissions Control Equipment Description: Multiple Cyclone (for each kiln) & Baghouse

Emission Point	Emission Unit	Emission Unit Description	Raw Materials	Rated Capacity
LP-9	K-1	Dry Rotating Lime Kiln #1	Limestone, coal, petroleum coke, natural gas and landfill gas	5 tons of lime/hr*
	K-2	Dry Rotating Lime Kiln #2		5 tons of lime/hr*
	K-3	Preheater Lime Kiln #3		8.75 tons of lime/hr*
	K-4	Preheater Lime Kiln #4		21.875 tons of lime/hr*

\* Per Iowa DNR Construction Permit 91-A-324-S5

### Applicable Requirements

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

Pollutant: Opacity

Emission Limit(s): 15%<sup>(1)</sup>

<sup>(1)</sup> The 15% opacity standard shall apply to this emission point during all periods of Kiln #4 operation. A 0% opacity standard shall apply to this emission point when Kiln #4 is not in operation.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
40 CFR 60 Subpart HH - Standards of Performance for Lime  
Manufacturing Plants  
567 IAC 23.1(2)"y"

Pollutant: PM-10

Emission Limit(s): 29.9 lb/hr, 14.0 tons/yr

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5

Pollutant: Particulate Matter (Federal)

Emission Limit(s): 0.30 kg/megagram (0.6 lb/ton) of stone feed

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
40 CFR 60 Subpart HH - Standards of Performance for Lime  
Manufacturing Plants  
567 IAC 23.1(2)"y"

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

Emission Limit(s): 39.0 tons/year<sup>(2)</sup>

<sup>(2)</sup> Emission limit for Kiln 4

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5

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

Emission Limit(s): 500 ppmv – when combusting only gaseous fuels (i.e. natural gas and landfill gas)<sup>(1)</sup>

<sup>(1)</sup> The sulfur dioxide limit is the stricter of 6 lb/MMBtu and 500 ppmv when using a combination of fuels.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
567 IAC 23.3(3)"e"

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

Emission Limit(s): 6 lb/MMBtu – when combusting only solid fuels (i.e. coal and pet coke).<sup>(1)</sup>

<sup>(1)</sup> The sulfur dioxide limit is the stricter of 6 lb/MMBtu and 500 ppmv when using a combination of fuels.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
567 IAC 23.3(3)"a"(1)

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

Emission Limit(s): 39.0 tons/year <sup>(2)</sup>

<sup>(2)</sup> Emission limit for Kiln 4.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 95.0 tons/year <sup>(2)</sup>

<sup>(2)</sup> Emission limit for Kiln 4.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5

### **Operational Limits & Requirements**

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

#### **Work Practice Standards:**

- A. Operation through this emission point shall not exceed 876 hours per year on a rolling twelve-month total.
- B. The operation of Kilns 1, 2, 3, and 4 shall be operated in accordance with all conditions set forth in the construction permit for LP-4 (73-A-219-S5).
- C. This emission point is limited to the following operating scenarios:
  - Any of the four (4) kilns operating individually.
  - Kilns 3 & 4
  - Kilns 1, 2, and 3
  - Kilns 1, 2, and 4
  - Kilns 1 & 4
  - Kilns 2 & 4
  - Kilns 1 & 3
  - Kilns 2 & 3
  - Kilns 1 & 2

NOTE: The following operating limits are set forth in lieu of the continuous opacity monitoring requirements established by NSPS, Subpart HH. Should the owner or operator elect to install a COM in accordance with 60 CFR 60.343, these operating limits shall be disregarded.\*

\* These operating limits are per a letter dated June 27, 1997 from William A. Spratlin of Region VII EPA to Roberta Niemela of Linwood Mining and Minerals Corporation. The letter is attached to this permit under Appendix C.

- D. Should the emissions from Kiln #4 be routed to the LP-9 baghouse for more than 876 hours in any consecutive twelve (12) month period, a COM shall be installed and certified on the baghouse within ninety (90) days of exceeding this time limit.
- E. A log shall be maintained indicating the beginning and ending dates and times that emissions from Kiln #4 are routed to the LP-9 baghouse. Baghouse operating parameters, such as pressure drop, shall be recorded daily as an indicator of baghouse operation.
- F. Visible emission observations in accordance with Method 9 shall be taken by a certified observer for at least three six (6) minute periods each day that emissions from Kiln #4 are routed to the LP-9 baghouse.
- G. The date, time, and results of the visible emission observations described in Item F above shall be recorded.
- H. The visible emission observations described in Item F above shall be initiated at random times during each day the emission from kiln #4 are routed to the LP-9 baghouse.
- I. In the event that the average opacity during a six (6) minute period is greater than 15%, visible emission observations in accordance with Method 9 shall continue to be taken and recorded until such time that the average opacity of a six (6) minute period is below 15%.
- J. Reports of excess emissions, including the information specified in 40 CFR 60.7(c), shall be submitted semiannually. For purposes of this report, periods of excess emissions that shall be reported are defined as all six (6) minute periods during which the average opacity is greater than 15%.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
Letter from EPA Region VII Dated 6/27/97

Reporting & Record keeping:

All records, as required below, shall be maintained on site for five (5) years and be available for inspection upon request by representatives of the Department of Natural Resources. These records shall show the following:

- A. Operator personnel shall maintain a log of baghouse usage on-site. This tabulation shall include hours of usage per day, per month, and per year. Annual hours of operation shall be determined on a rolling-12-month total.

NOTE: The following operating limits are set forth in lieu of the continuous opacity monitoring requirements established by NSPS, Subpart HH. Should the owner or operator elect to install a COM in accordance with 60 CFR 60.343, these operating limits shall be disregarded.

- B. A log shall be maintained indicating the beginning and ending dates and times that emissions from Kiln #4 are routed to the LP-9 baghouse. Baghouse operating parameters, such as pressure drop, shall be recorded daily as an indicator of baghouse operation.
- C. Visible emission observation in accordance with Method 9 shall be taken by a certified observer for at least three six (6) minute periods each day that emissions from Kiln #4 are routed to the LP-9 baghouse.
- D. The date, time, and results of the visible emission observations required in Item F of the above "Work Practice Standards" section shall be recorded.
- E. Reports of excess emissions, including the information specified in 40 CFR 60.7(c), shall be submitted semiannually.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
Letter from EPA Region VII Dated 6/27/97

**NSPS/NESHAP:**

- A. Kiln #4 is subject to Subpart A (General Provisions, 40 CFR §60.1 – 40 CFR §60.19) and Subpart HH (Standards of Performance for Lime Manufacturing Plants, 40 CFR §60.340 – 40 CFR §60.344) of the New Source Performance Standards (NSPS).
- B. The other emission units (Kilns #1 – #3) are of the source category for Subpart HH, but are not subject as they commenced construction prior to May 3, 1977 and have not been modified or reconstructed.
- C. This facility is of the source category for Subpart AAAAA (National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, 40 CFR §63.7080 – 40 CFR §63.7143) of the National Emission Standards for Hazardous Air Pollutants (NESHAP). However, it is not subject as the facility has conducted testing per 40 CFR §63.7142 and it has been determined the facility is an area source.

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart HH – Standards of Performance for Lime  
Manufacturing Plants  
567 IAC 23.1(2)"y"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 72

Stack Opening (inches, dia): 84

Exhaust Flow Rate (scfm): 65,000

Exhaust Temperature (°F): 220

Discharge Style: Vertical, unobstructed

Authority for Requirement: Iowa DNR Construction Permit 91-A-324-S5

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

**Monitoring Requirements**

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

**Opacity Monitoring:**

When Kiln #4 is in operation:

See Operational Limits & Requirements.

When Kiln #4 is not in operation:

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > (0%) is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: LP-11**

### Associated Equipment

Associated Emission Unit ID Numbers: LP-11  
Emissions Control Equipment Description: none

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Emission Unit vented through this Emission Point: LP-11  
Emission Unit Description: Open Storage Coal/Coke  
Raw Material/Fuel: Coal and Coke  
Rated Capacity: 7803.5 m<sup>2</sup>/hour or 0.5 acres

### **Applicable Requirements**

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

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

Pollutant: Fugitive Dust  
Emission Limit: See Plant-Wide Conditions.  
Authority for Requirement: See Plant-Wide Conditions.

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

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

#### Work practice standards:

Linwood shall locate the storage pile bases as designated on Exhibit "C" of Iowa DNR Administrative Consent Order 2002-AQ-10, which is attached to this Title V Operating Permit as Appendix A. Linwood shall limit storage pile area and height to the areas and heights indicated on Exhibit "C". Exhibit "C" shall by this reference become a part of Iowa DNR Administrative Consent Order 2002-AQ-10. The inactive South Stockpile #6 shall remain inactive. "Inactive" in this instance means that no material may be added to or removed from the South Stockpile #6 area specified in Exhibit "c" until a written notice, that includes the results of computer dispersion modeling showing no exceedances of the PM<sub>10</sub> NAAQS, is submitted to and accepted by the DNR, Iowa DNR Administrative Consent Order 2002-AQ-10 is amended or superseded to reflect the activation of the South Stockpile #6, and a final revision to the PM<sub>10</sub> SIP for Buffalo is promulgated in the Federal Register.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10, Condition 5.

**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: LP-12

### Associated Equipment

Associated Emission Unit ID Numbers: LP-12a, LP-12b, LP-12c, LP-12d, and LP-12g

Emissions Control Equipment ID Number: LP-12

Emissions Control Equipment Description: Bin Vent Filter

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
LP-12	LP-12a	Hi-Cal Storage Bin	Hi-Cal Lime	165 tons*
	LP-12b	Pneumatic Blower	Hi-Cal Lime	25 tons/hr*
	LP-12c	Flourspar Storage Bin	Flourspar	50 tons*
	LP-12d	Cal-Aluminate Storage Bin	Calcium-Aluminate	50 tons*
	LP-12g	Hi-Cal Storage Bin	Hi-Cal Lime	75 tons*

\* Per Iowa DNR Construction Permit 97-A-1084-S2.

### Applicable Requirements

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

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

Pollutant: Opacity

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

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

Authority for Requirement: Iowa DNR Construction Permit 97-A-1084-S2  
567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 0.05 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 97-A-1084-S2

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 97-A-1084-S2  
567 IAC 23.3(2)"a"

**Emission Point Characteristics**

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

Stack Height (ft, from the ground): 56.5

Stack Opening (inches, dia.): 12

Exhaust Flow Rate (scfm): 670

Exhaust Temperature (°F): 70

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 97-A-1084-S2

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

**Monitoring Requirements**

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: LP-13

### Associated Equipment

Associated Emission Unit ID Numbers: LP-13a, LP-13b and LP-13c

Emissions Control Equipment ID Number: CE LP-13

Emissions Control Equipment Description: Baghouse

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
LP-13	LP-13a	Rail Car Loadout	Lime	100 tons/hr
	LP-13b	Rail Car Loadout		100 tons/hr
	LP-13c	Rail Car Loadout		100 tons/hr

### Applicable Requirements

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

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

Pollutant: Opacity

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

<sup>(1)</sup> An exceedence of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Authority for Requirement: Iowa DNR Construction Permit 02-A-028-S4

Pollutant: PM-10

Emission Limit(s): 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-028-S4

Pollutant: Particulate Matter

Emission Limit(s): 0.31 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 02-A-028-S4  
567 IAC 23.3(2)"a"

### **Operational Limits & Requirements**

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

Control equipment parameters:

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

Reporting & Record keeping:

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

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

Authority for Requirement: Iowa DNR Construction Permit 02-A-028-S4

### **Emission Point Characteristics**

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

Stack Height (ft, from the ground): 25.6

Stack Opening (inches): 10.5 x 9.5

Exhaust Flow Rate (scfm): 1,800

Exhaust Temperature (°F): 100

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 02-A-028-S4

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

### **Monitoring Requirements**

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

#### **Stack Testing:**

Pollutant – Opacity

1st Stack Test to be Completed by (date) – within sixty (60) days of after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.

Test Method – 40 CFR 60, Appendix A, Method 9

Authority for Requirement – Iowa DNR Construction Permit 02-A-028-S4

Pollutant – PM-10

1st Stack Test to be Completed by (date) – within sixty (60) days of after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.

Test Method – 40 CFR 51, Appendix M, 201A with 202<sup>(1)</sup>  
<sup>(1)</sup> or an approved alternative.

Authority for Requirement – Iowa DNR Construction Permit 02-A-028-S4

Pollutant – Particulate Matter

1st Stack Test to be Completed by (date) – within sixty (60) days of after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.

Test Method – 40 CFR 60, Appendix A, Method 5

Authority for Requirement – Iowa DNR Construction Permit 02-A-028-S4

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

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

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

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

(See Appendix D for applicable CAM plan)

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: NSP 1-6 & SSP 1-8**

### Associated Equipment

Associated Emission Unit ID Numbers: NSP 1-6 & SSP 1-8

Emissions Control Equipment ID Number: none

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Emission Unit vented through this Emission Point: NSP 1-6 & SSP 1-8

Emission Unit Description: Open Storage

Raw Material/Fuel: Limestone

Rated Capacity: 138.89 MMcf Total Volume

### **Applicable Requirements**

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

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

Pollutant: Fugitive Dust

Emission Limit: See Plant-Wide Conditions.

Authority for Requirement: See Plant-Wide Conditions.

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

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

#### Work practice standards:

Linwood shall locate the storage pile bases as designated on Exhibit "C" of Iowa DNR Administrative Consent Order 2002-AQ-10, which is attached to this Title V Operating Permit as Appendix A. Linwood shall limit storage pile area and height to the areas and heights indicated on Exhibit "C". Exhibit "C" shall by this reference become a part of Iowa DNR Administrative Consent Order 2002-AQ-10. The inactive South Stockpile #6 shall remain inactive. "Inactive" in this instance means that no material may be added to or removed from the South Stockpile #6 area specified in Exhibit "c" until a written notice, that includes the results of computer dispersion modeling showing no exceedances of the PM<sub>10</sub> NAAQS, is submitted to and accepted by the DNR, Iowa DNR Administrative Consent Order 2002-AQ-10 is amended or superseded to reflect the activation of the South Stockpile #6, and a final revision to the PM<sub>10</sub> SIP for Buffalo is promulgated in the Federal Register.

Authority for Requirement: Iowa DNR Administrative Consent Order 2002-AQ-10, Condition 5

**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: Q-1**

### Associated Equipment

Associated Emission Unit ID Numbers: Q-1  
Emissions Control Equipment ID Number: WSQ1  
Emissions Control Equipment Description: Water Spray System

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Emission Unit vented through this Emission Point: Q-1  
Emission Unit Description: Primary Crushing  
Raw Material/Fuel: Limestone  
Rated Capacity: 700 tons/hour

### **Applicable Requirements**

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

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

Pollutant: Fugitive Dust  
Emission Limit: See Plant-Wide Conditions.  
Authority for Requirement: See Plant-Wide Conditions.

#### **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**

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: Q-2LP

### Associated Equipment

Associated Emission Unit ID Numbers: Q-2LP  
Emissions Control Equipment ID Number: WSQ2LP  
Emissions Control Equipment Description: Water Spray System

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### Applicable Requirements

Emission Unit vented through this Emission Point: Q-2LP  
Emission Unit Description: Secondary Crushing/Screening – Lower Plant  
Raw Material/Fuel: Limestone  
Rated Capacity: 400 tons/hour

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

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

Pollutant: Fugitive Dust  
Emission Limit: See Plant-Wide Conditions.  
Authority for Requirement: See Plant-Wide Conditions.

#### **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**

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: Q-2TP**

### Associated Equipment

Associated Emission Unit ID Numbers: Q-2TP  
Emissions Control Equipment ID Number: WSQ2TP  
Emissions Control Equipment Description: Water Spray System

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### **Applicable Requirements**

Emission Unit vented through this Emission Point: Q-2TP  
Emission Unit Description: Secondary Crushing/Screening – Top Plant  
Raw Material/Fuel: Limestone  
Rated Capacity: 400 tons/hour

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

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

Pollutant: Fugitive Dust  
Emission Limit: See Plant-Wide Conditions.  
Authority for Requirement: See Plant-Wide Conditions.

### **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**

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter  
*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: Q-3P**

### Associated Equipment

Associated Emission Unit ID Numbers: Q-3P

Emissions Control Equipment ID Number: WSQ-3P

Emissions Control Equipment Description: Wet Suppression

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Emission Unit vented through this Emission Point: Q-3P

Emission Unit Description: Crusher and Screen

Raw Material/Fuel: Limestone

Rated Capacity: 400 tons/hr

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 15 % - Crusher

10 % - All Transfer Points and the Screening Operation

Authority for Requirement: Iowa DNR Construction Permit 02-A-017-S1  
40 CFR 60 Subpart OOO - Standards of Performance for  
Nonmetallic Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 0.15 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-017-S1

Pollutant: Fugitive Dust

Emission Limit: See Plant-Wide Conditions.

Authority for Requirement: See Plant-Wide Conditions.

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

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

- The facility (Plant Number 82-01-015) shall furnish the Department with written notification of equipment relocation within the property, at least (30) days before equipment relocation.
- Wet suppression shall be used to maintain compliance with the opacity limits in NSPS Subpart OOO. Wet suppression does not require the continuous use of water when the rock is wet from mining.

Authority for Requirement: Iowa DNR Construction Permit 02-A-017-S1

NSPS:

- This emission unit is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 02-A-017-S1  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

**Monitoring Requirements**

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

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method. If an opacity > (15 % - Crusher or 10 % - All Transfer Points and the Screening Operation) is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: Q-4P**

### Associated Equipment

Associated Emission Unit ID Numbers: Q-4P  
Emissions Control Equipment ID Number: WSQ-4P  
Emissions Control Equipment Description: Wet Suppression

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Emission Unit vented through this Emission Point: Q-4P  
Emission Unit Description: Crusher and Screen  
Raw Material/Fuel: Limestone  
Rated Capacity: Crusher (300 tons/hr) & Screen (150 tons/hr)

### **Applicable Requirements**

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

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

Pollutant: Opacity

Emission Limit(s): 15 % - Crusher  
10 % - All Transfer Points and the Screening Operation

Authority for Requirement: Iowa DNR Construction Permit 02-A-030-S1  
40 CFR Subpart 000 - Standards of Performance for Nonmetallic  
Mineral Processing Plants  
567 IAC 23.1(2)"bbb"

Pollutant: PM-10

Emission Limit(s): 0.12 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-030-S1

Pollutant: Fugitive Dust

Emission Limit: See Plant-Wide Conditions.

Authority for Requirement: See Plant-Wide Conditions.

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

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

#### Work practice standards:

The facility (Plant Number 82-01-015) shall furnish the Department with written notification of equipment relocation within the property, at least (30) days before equipment relocation.

Process throughput:

The maximum production rate of the crusher shall not exceed 150 tons/hr.

Control equipment parameters:

Wet suppression shall be used to maintain compliance with the opacity limits in NSPS Subpart OOO. Wet suppression does not require the continuous use of water when the rock is wet from mining.

Authority for Requirement: Iowa DNR Construction Permit 02-A-030-S1

NSPS:

This emission unit is subject to New Source Performance Standards (NSPS) Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants).

Authority for Requirement: Iowa DNR Construction Permit 02-A-030-S1  
40 CFR 60 Subpart A – 567 IAC 23.1(2)  
40 CFR 60 Subpart OOO – 567 IAC 23.1(2)"bbb"

Reporting & Record keeping:

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

- The date, the hours of operation for the crusher that day, the total throughput (in tons) for the crusher for that day, and the average throughput of the crusher (in tons/hr) for that day.

Authority for Requirement: Iowa DNR Construction Permit 02-A-030-S1

**Emission Point Characteristics**

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

There is no stack as this is a fugitive source of emissions.

Authority for Requirement: Iowa DNR Construction Permit 02-A-030-S1

**Monitoring Requirements**

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

**Opacity Monitoring:**

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method.

If an opacity > (15 % - Crusher or 10 % - All Transfer Points and the Screening Operation) is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. 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.

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

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

Relevant requirements of O & M plan for this equipment: PM<sub>10</sub> and Particulate Matter

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: EMGN 1 & EMGN 2**

### Associated Equipment

Associated Emission Unit ID Number: EMGN 1 & EMGN 2

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Emission Unit vented through this Emission Point: EMGN 1 & EMGN 2  
Emission Unit Description: K-4 Diesel Generator and K1-3 Diesel Generator  
Raw Material/Fuel: Diesel  
Rated Capacity: 58 bhp each

### **Applicable Requirements**

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

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

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

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

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

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

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

Process throughput:

1. No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

**Reporting & Record keeping:**

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

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

Authority for Requirement: 567 IAC 22.108(3)

**NESHAP:**

This equipment is of the source category affected by the following federal regulation: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) [40 CFR Part 63, Subpart ZZZZ]

Authority for Requirements: 40 CFR Part 63, Subpart ZZZZ

**Monitoring Requirements**

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

## **IV. General Conditions**

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

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

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

### **G2. Permit Expiration**

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

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

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

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

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

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

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

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

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

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

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

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

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

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

**G8. Duty to Provide Information**

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

**G9. General Maintenance and Repair Duties**

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

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

**G10. Recordkeeping Requirements for Compliance Monitoring**

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

- a. The date, place and time of sampling or measurements
- b. The date the analyses were performed.
- c. The company or entity that performed the analyses.
- d. The analytical techniques or methods used.
- e. The results of such analyses; and
- f. The operating conditions as existing at the time of sampling or measurement.
- g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance

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

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

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

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

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

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

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

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

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

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

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

#### **G13. Hazardous Release**

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

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

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

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

## 2. Excess Emissions Reporting

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

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

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

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

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

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

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

**G15. Permit Deviation Reporting Requirements**

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

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

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

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

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

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

- 2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
- 3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
- 4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
- 5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

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

1. Administrative Amendment.

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

- i. Correct typographical errors
    - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
    - iii. Require more frequent monitoring or reporting by the permittee; or
    - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
  - b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
  - c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.
2. Minor Permit Modification.
- a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
    - i. Do not violate any applicable requirements
    - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
    - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
    - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
    - v. Are not modifications under any provision of Title I of the Act; and
    - vi. Are not required to be processed as significant modification.
  - b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
    - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
    - ii. The permittee's suggested draft permit
    - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
    - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
  - c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this

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

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

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

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

#### **G20. Asbestos**

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

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

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

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

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

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

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

## **G24. Permit Reopenings**

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

## **G25. Permit Shield**

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

## **G26. Severability**

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

## **G27. Property Rights**

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

## **G28. Transferability**

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

## **G29. Disclaimer**

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

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

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

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

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

Stack Test Review Coordinator  
Iowa DNR, Air Quality Bureau  
7900 Hickman Road, Suite #1  
Windsor Heights, IA 50324  
(515) 242-6001

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

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

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

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

*567 IAC 26.1(1)*

**G32. Contacts List**

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

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

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

Chief, Air Quality Bureau  
Iowa Department of Natural Resources  
7900 Hickman Road, Suite #1  
Windsor Heights, IA 50324  
(515) 242-5100

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

**Field Office 1**

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

**Field Office 2**

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

**Field Office 3**

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

**Field Office 4**

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

**Field Office 5**

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

**Field Office 6**

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

**Polk County Public Works Dept.**

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

**Linn County Public Health Dept.**

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

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**Appendix A: IDNR Administrative Consent Order  
2002-AQ-10**

**Iowa DNR Administrative Consent Order 2002-AQ-10 has not been approved into Iowa's State Implementation Plan (SIP), therefore it is state enforceable only. Pending incorporation of Administrative Consent Order 2002-AQ-10 into Iowa's SIP, Administrative Consent Order 98-AQ-7 is hereby incorporated by reference and is available upon request from the DNR – Air Quality Bureau's Records Center. The Records Center can be reached by contacting the Iowa DNR Air Quality Bureau at (515)242-5276.**

RECORD COPY

82-01-015

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER

IN THE MATTER OF:

ADMINISTRATIVE CONSENT ORDER

LINWOOD MINING  
& MINERALS CORP.

NO. 2002-AQ-10

TO: Linwood Mining & Minerals Corp.  
c/o Jeff Dahl  
Vice President of Chemical Operations  
401 East Front Street  
Davenport, Iowa 52804

Linwood Mining & Minerals Corp.  
c/o Gregory J. Bush, Registered Agent  
5401 Victoria Avenue  
Davenport, Iowa 52807

I. SUMMARY

This Administrative Consent Order is entered into between the Iowa Department of Natural Resources (DNR) and Linwood Mining & Minerals Corporation (Linwood) for the purpose of resolving PM-10 National Ambient Air Quality Violations monitored in Buffalo, Iowa. This Administrative Consent Order supersedes and replaces Administrative Consent Order No. 98-AQ-7, which became effective on February 13, 1998.

Any questions regarding this order should be directed to:

**For DNR:**

James McGraw  
Iowa Department of Natural Resources  
7900 Hickman Road, Suite 1  
Des Moines, Iowa 50322  
Ph: 515/242-5167

**For Linwood:**

Jeff Dahl  
Linwood Mining & Minerals Corp.  
401 East Front St.  
Davenport, Iowa 502804  
Ph: 563/324-1931

Either party may change its designated representative at any time by providing written notice to the other party.

RECEIVED

FEB 11 2002

## II. STATEMENT OF FACTS

1. DNR has monitored three exceedances of the 24-hour PM-10 National Ambient Air Quality Standard. On October 15, 1995, a DNR monitoring site located at 11100-110th Avenue in Buffalo, Iowa, recorded a PM-10 concentration of 156.5 micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ), and on August 25, 1995, the same monitor recorded a value of 162.7  $\text{ug}/\text{m}^3$ . On April 26, 1994, a monitored value of 229  $\text{ug}/\text{m}^3$  also was recorded at this site. Per 40 C.F.R. Part 50, Appendix K, the number of expected exceedances was calculated to be 4.8 for the three calendar year period from 1993 through 1995.

2. During the period 1993 through 1995, the annual PM-10 National Ambient Air Quality Standard was exceeded. The monitored annual arithmetic mean for 1993 was 46.7  $\text{ug}/\text{m}^3$ , for 1994 was 60.5  $\text{ug}/\text{m}^3$ , and for 1995 was 67.1  $\text{ug}/\text{m}^3$ , for a three year average of 58.1  $\text{ug}/\text{m}^3$ .

3. Linwood Mining & Minerals Corp. has a facility located in Buffalo, Iowa. Modeling has established that Linwood Mining & Minerals Corp. is a contributor to the PM-10 levels monitored.

## 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 and fugitive emissions located at Linwood Mining & Minerals Corp. in Buffalo, 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 18, 1997.

4. The primary and secondary 24-hour ambient air quality standards for PM-10 are 150  $\text{ug}/\text{m}^3$ , 24-hour average concentration. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150  $\text{ug}/\text{m}^3$ , as determined in accordance with 40 C.F.R. Part 50, Appendix K, is equal to or less than one. The concentrations monitored in this case and the resulting estimated number of exceedances constitute a violation of this standard.

5. The level of the primary and secondary annual standards for PM-10 is 50 ug/m<sup>3</sup>, annual arithmetic mean averaged over a three calendar year period. The standards are attained when the expected annual arithmetic mean concentration, as determined in accordance with 40 C.F.R. Part 50, Appendix K, is less than or equal to 50 ug/m<sup>3</sup>. The average of the annual arithmetic means for the period 1993 through 1995 exceeds this standard.

6. An exceedance of the NAAQS for PM-10 constitutes "air pollution" as defined by Iowa Code section 455B.131(3).

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).

8. The provisions of 567 I.A.C. 23.3(2)"c"(1), provide, in relevant part, that all persons, with certain 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. "Reasonable precautions" are defined in this rule.

#### IV. ORDER

THEREFORE, DNR orders and LINWOOD AGREES to the following:

1. In accordance with the provisions of 567 I.A.C. 23.3(2)"c"(1), Linwood shall not allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. Also in accordance with that rule, Linwood shall take reasonable precautions as defined in the rule to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

2. Linwood shall maintain a fence along the property lines as indicated on Exhibit "A" attached to this Consent Order and by this reference made a part hereof, in order to restrict public access to its facility. Linwood shall maintain a five-foot tall chain link fence, of the type routinely used in industrial areas, on the south and north of Highway 22. The fence shall parallel Highway 22 and shall remain located on Linwood property. The remainder of the fencing, at a minimum, shall continue to consist of a combination of barbed wire and woven wire with three or four strands of barbed wire. Along the portions of the plant property that border the river, Linwood shall continue to maintain and operate equipment adequate to ensure 24-hour surveillance of all gaps in the

fenceline along the river boundaries. "No trespassing" signs shall remain posted at both ends of the gap in the fence coverage to further restrict public access.

3. Linwood shall continue implementation of the formal Fugitive Dust Maintenance Program which is attached as Exhibit "B" and by this reference made a part hereof.

4. The unpaved and paved haul road areas are marked on Exhibit "A" attached to this Consent Order. Instructions for the mitigation of fugitive dust emissions from unpaved and paved roads follow.

4a. Control of Fugitive Emissions from Unpaved Haul Roads:

(i). Linwood shall continue to control the fugitive emissions from the unpaved facility haul roads with an effective control efficiency of 95% by using a chemical dust suppressant. There are 7100 feet of unpaved plant roads. The spray application width is 20 feet. A solution of chemical dust suppressant shall be applied in one or more applications resulting in 0.05 gallons of chemical dust suppressant per square yard. A total of 789 gallons of chemical dust suppressant shall be applied no less frequently than once every other week to maintain the ground inventory. Linwood may elect to use any chemical dust suppressant that is capable of achieving the 95 percent control efficiency. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts of chemical dust suppressant other than those specified above be applied, Linwood shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

(ii). If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35° F (1.7° C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated.

(iii). Linwood shall maintain records of these applications, which shall include the dates and times of each application, the chemical dust suppressant used, the amount of chemical dust suppressant applied, dilution ratio, the specific area to which the solution was applied, and documentation of road and weather conditions, if necessary, and the operators initials. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

4b. Control of Fugitive Emissions from Paved Haul Road No. 3:

(i). Linwood shall control fugitive emissions from paved Haul Road No. 3 by water flushing a minimum of twice daily Monday through Friday and a minimum of once daily on Saturday and Sunday, except as specified below. Water flushing and the record

keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. More frequent water flushing of the paved haul roads shall be accomplished as weather and operational conditions dictate to prevent fugitive dust emissions from crossing the facility fencelines.

(ii). If water flushing can not be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35° F (1.7° C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water flushing shall be postponed and accomplished as soon as the conditions preventing the application have abated. Additionally, water flushing need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period or the paved road(s) will not be used on a given day.

(iii). Records of the applications shall be maintained and shall include the dates of each application, the amount of water applied, the areas treated, and the operator's initials. If water is not applied due to the conditions specified in Paragraph 4b(ii) above, the conditions which prevented such application, or made such application unnecessary, shall be documented. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

5. Linwood shall locate the storage pile bases as designated on Exhibit "C" attached to this Consent Order. Linwood shall limit storage pile area and height to the areas and heights indicated on Exhibit "C." Exhibit "C" shall by this reference become a part of this Consent Order. The inactive South Stockpile #6 shall remain inactive. "Inactive" in this instance means that no material may be added to or removed from the South Stockpile #6 area specified in Exhibit "C" until a written notice, that includes the results of computer dispersion modeling showing no exceedances of the PM-10 NAAQS, is submitted to and accepted by the DNR, this Administrative Consent Order is amended or superseded to reflect the activation of the South Stockpile #6, and a final revision to the PM-10 SIP for Buffalo is promulgated in the Federal Register.

6. Linwood shall continue to implement the EPA Region VII approved alternative opacity monitoring program for the kiln mine exhaust (LP4) subject to EPA Region VII approval and shall implement any modifications to the alternative opacity monitoring program mandated by EPA Region VII as part of the approval. If EPA Region VII terminates approval or does not renew its approval of the alternative opacity monitoring program, Linwood shall notify the DNR within 30 days of notification from the EPA Region VII so that an alternative approach acceptable to Linwood, DNR, and EPA can be developed. The alternative opacity monitoring program may be included as a permit condition in Construction Permit No. 73-A-219-S1 with EPA Region VII approval. To amend Construction Permit No. 73-A-219-S1, Linwood shall send a written notification to the DNR that includes a copy of the EPA Region VII approval to incorporate the alternative opacity monitoring program into Construction Permit No. 73-A-219-S1.

7. Linwood shall remove, immediately, any and all foreign material which is deposited at any time on the Iowa Highway 22 roadbed as a result of Linwood's operation crossing Iowa Highway 22. Additionally, in order to ensure a reduction in the use of trucks crossing Highway 22, Linwood shall operate the enclosed rock conveyor which crosses Highway 22 so as to limit the total amount of raw limestone hauled by the trucks at the facility to 1,395,776 tons per 12 month rolling average. The enclosed rock conveyor belt system shall be included in the monthly site inspections and inspection reports specified in Exhibit "B" of this Administrative Consent Order.

#### V. NO ADMISSION

While Linwood agrees to comply with the orders contained herein, it makes no admission as to the Findings of Facts and Conclusions of Law.

#### VI. WAIVER OF APPEAL RIGHTS

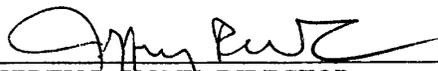
This order is entered into knowingly and with the consent of Linwood. For that reason, Linwood waives its right to appeal this order or any part thereof.

#### VII. NONCOMPLIANCE

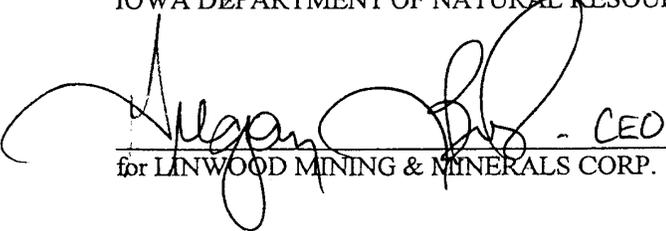
Failure to comply with this order may result in the imposition of administrative penalties or referral to the Attorney General's office to obtain injunctive relief and civil penalties.

Procedural questions regarding this order should be directed to:

Anne Preziosi  
Iowa Department of Natural Resources  
Air Quality Bureau  
7900 Hickman Road, Suite 1  
Urbandale, Iowa 50322  
515-281-6243

  
\_\_\_\_\_  
JEFFREY R. VONK, DIRECTOR  
IOWA DEPARTMENT OF NATURAL RESOURCES

Dated this 4<sup>th</sup> day of  
March, 2002.

  
\_\_\_\_\_  
Megan - CEO  
for LINWOOD MINING & MINERALS CORP.

Dated this 4<sup>th</sup> day of  
FEB, 2002.

**Exhibit "A"**

**Fence Line & Haul Roads**



**Exhibit "B"**

**FUGITIVE DUST MAINTENANCE PROGRAM**

1. At all times, Linwood shall take reasonable precautions to prevent visible emissions of fugitive dust from going beyond the Linwood property line in accordance with the provisions of 567 I.A.C. 23.3(2)"c."
2. Operating and maintenance personnel must take immediate action to prevent continued discharge of fugitive dust.
3. The General Manager of Operations, or his designee, shall conduct monthly on site inspections of all emission points, emission units, control equipment, and manufacturing equipment. These on site inspections shall be accompanied by the appropriate company personnel. Monthly reports shall be generated following each site visit.
4. Inspection reports shall include all potential equipment maintenance requirements and date of repair. Maintenance items not taken care of prior to the next inspection shall be carried over on the new inspection report.
5. Linwood shall maintain records at the plant site of any other fugitive dust abatement actions taken.
6. These records shall be made available upon request.

**Exhibit "C"**

**Surface Storage Pile Locations**

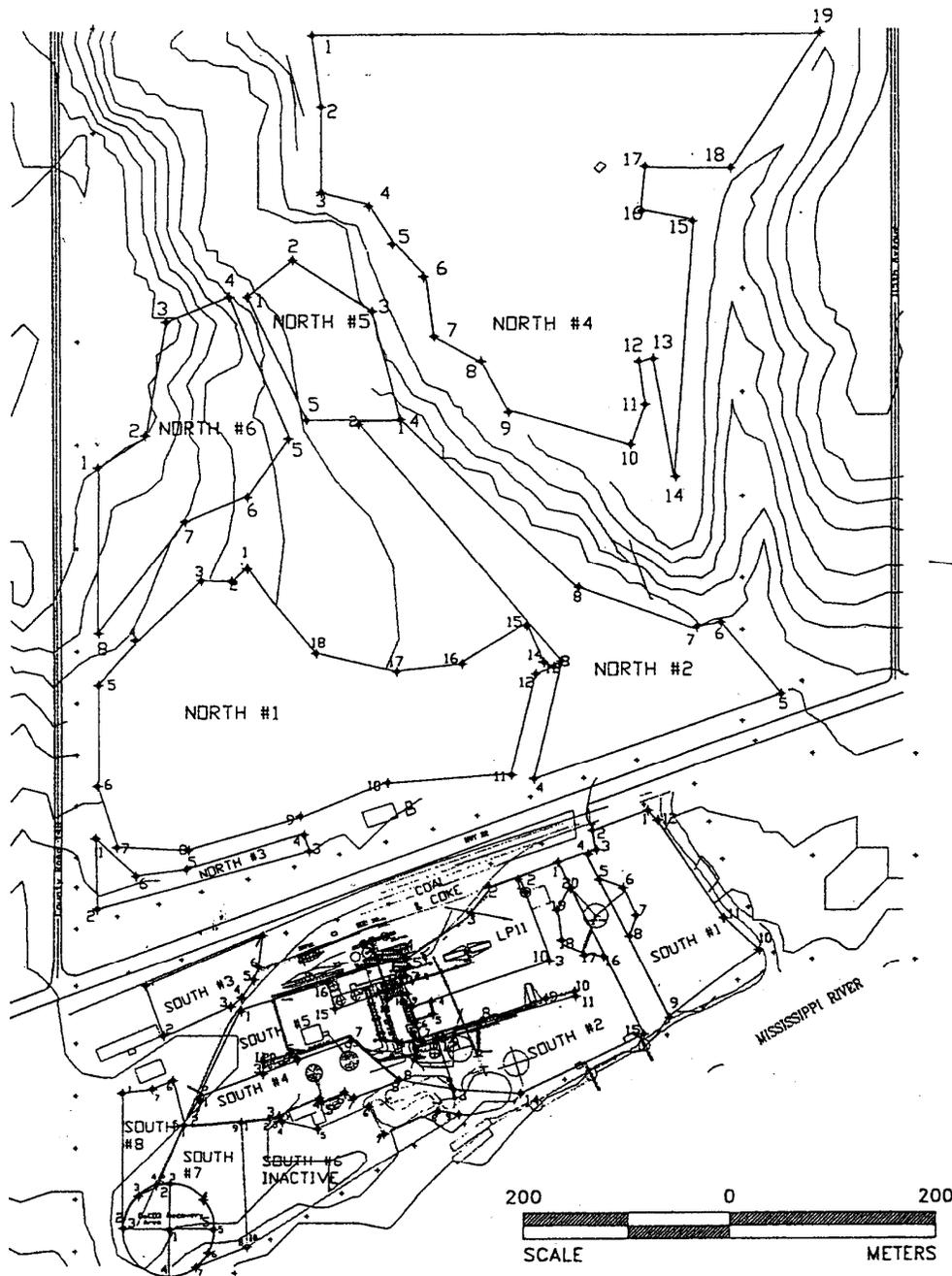


Exhibit "C"  
Vertices Locations for Storage Piles

DRAWN BY: JEM    DATE: 8/17/99    REVISED: 6/6/01    REVISED: 12/28/01

LINWOOD MINING & MINERALS

PRESTON ENGINEERING, INC.  
CONSULTING ENVIRONMENTAL ENGINEERS

DRAWING NUMBER  
96-513.pileutm12\_01

**Linwood Mining and Minerals Pile Volume Calculations for Emission Factor Formation**

Pile Id	Material	Density <sup>1</sup> lbs/ft <sup>3</sup>	Max Angle of Repose <sup>2</sup>	Peak Pile Ht. <sup>3</sup>		AutoCAD Offset <sup>4</sup>		Areas <sup>5</sup>			Volume <sup>6</sup> m <sup>3</sup>	Volume ft <sup>3</sup>	Weight <sup>7</sup> tons	
				Feet	Meters	Feet	Meters	Base Area m <sup>2</sup>	Mid Pt Area m <sup>2</sup>	Top Area m <sup>2</sup>				Base Area acres
NSP 1	Limestone	85	45	42	12.80	21	6.40	71,113	63,375	55,997	812,069	28,677,964	1,218,813	
NSP 2	Limestone	85	45	42	12.80	21	6.40	35,693	28,307	21,360	363,312	12,830,226	545,285	
NSP 3	Limestone	85	45	42	12.80	21	6.40	4,632	1,497	204	23,094	815,560	34,661	
NSP 4	Limestone	85	45	42	12.80	21	6.40	116,263	104,765	94,113	1,342,965	47,426,349	2,015,620	
NSP 5	Limestone	85	45	42	12.80	21	6.40	14,151	11,230	8,622	144,430	5,100,490	216,771	
NSP 6	Limestone	85	45	42	12.80	21	6.40	28,852	23,843	19,257	306,131	10,810,916	459,464	
SSP 1	Limestone	85	45	42	12.80	21	6.40	15,076	11,651	8,565	149,875	5,292,776	224,943	
SSP 2a	Limestone	85	45	42	12.80	21	6.40	2,225	1,006	227	13,817	487,950	20,738	
SSP 2b	Limestone	85	45	42	12.80	21	6.40	18,595	13,150	8,103	169,190	5,974,896	253,933	
Total SSP 1 & 2	Limestone	85	45	42	12.80	21	6.40				332,882	11,755,622	499,614	
SSP 3	Limestone	85	45	42	12.80	21	6.40	5,551	3,630	2,058	47,214	1,667,362	70,863	
SSP 4	Limestone	85	45	42	12.80	21	6.40	7,802	4,927	2,438	63,897	2,256,503	95,901	
SSP 5	Limestone	85	45	15	4.57	7.5	2.29	12,807	11,268	9,784	51,559	1,820,796	77,384	
SSP 7	Limestone	85	45	65	19.81	32.5	9.91	6,672	3,175	924	67,017	2,366,697	100,585	
SSP 8	Limestone	85	45	50	15.24	25	7.62	5,069	2,873	1,292	45,347	1,601,401	68,060	
LPI1	Coal and Coke	54	45	42	12.80	21	6.40	9,147	6,616	4,406	85,380	3,015,176	81,410	
CACO3	Kiln Dust	65	45	25	7.62	12.5	3.81	6,357	5,326	4,386	40,700	1,437,296	46,712	

<sup>1</sup> Density information from Linwood Mining and Perry's Chemical Handbook

Table 3-90. "Density of Selected Solid Substances"

<sup>2</sup> Angle of Repose from site investigation and Perry's Chemical Handbook

<sup>3</sup> Pile height limited due to equipment and process knowledge.

<sup>4</sup> Used to draw midpoint and top areas on AutoCAD pile drawing

<sup>5</sup> Areas from AutoCAD Pile Drawing where piles drawn with respect to turn receptors

<sup>6</sup> Volume Estimation from Prismatoid Volume Formula from "Standard Mathematical Tables, 17th Edition"

where  $V = 1/6 \text{ Height} (\text{Base Area} + 4 \text{ Midpoint Area} + \text{Top Area})$

<sup>7</sup> Weight = Material Density x Volume

## **Appendix B: IDNR Administrative Consent Order 2002-AQ-10-A**

**Iowa DNR Administrative Consent Order 2002-AQ-10-A has not been approved into Iowa's State Implementation Plan (SIP), therefore it is state enforceable only. Pending incorporation of Administrative Consent Order 2002-AQ-10-A into Iowa's SIP, Administrative Consent Order 98-AQ-7 is hereby incorporated by reference and is available upon request from the DNR – Air Quality Bureau's Records Center. The Records Center can be reached by contacting the Iowa DNR Air Quality Bureau at (515)242-5276.**

*Kelli Bank*

FILE SERIES / Initials CON 16 / KBB  
FACILITY ID 82-01-015  
WICACT / Use Code 10 / 102

IOWA DEPARTMENT OF NATURAL RESOURCES  
ADMINISTRATIVE CONSENT ORDER

IN THE MATTER OF:  <b>LINWOOD MINING &amp; MINERALS CORP.</b>	CONSENT AMENDMENT TO ADMINISTRATIVE CONSENT ORDER No. 2002-AQ-10-A
---	--

TO: Jeff Dahl, Vice President of Chemical Operations  
Linwood Mining & Minerals Corp.  
401 East From Street  
Davenport, Iowa 52804

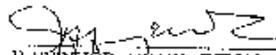
Administrative Consent Order No. 2002-AQ-10 was entered into between Linwood Mining & Minerals Corp. (Linwood) and the Iowa Department of Natural Resources (DNR) on March 4, 2002. The administrative consent order was entered into to resolve PM-10 National Ambient Air Quality Violations monitored in Buffalo, Iowa. The administrative consent order is amended as follows:

1. Storage Pile LP 11 identified in Exhibit "C" may be used as temporary storage for limestone until April 30, 2006.
2. This consent amendment to the administrative consent order shall remain in effect until April 30, 2006. On May 1, 2006, the requirements for Storage Pile LP 11 shall revert back to the previous storage requirements listed in Exhibit "C" of the original administrative consent order. After April 30, 2006, Storage Pile LP 11 shall only be used for storage of coal and coke.
3. In all other respects, Administrative Order No. 2002-AQ-10 remains in full force and effect.

DEC 16 2005

Any questions regarding this order should be directed to:

Kelli Book  
Iowa Department of Natural Resources  
Air Quality Bureau  
7900 Hickman Road  
Urbandale, Iowa 50322  
515-281-8563

  
JEFFREY R. VONK, DIRECTOR  
Iowa Department of Natural Resources

Dated this 10 day of  
December, 2005

  
LINWOOD MINING & MINERALS CORP.

Dated this 15 day of  
December, 2005

#82-01-013; Kelli Book and Chad Daniel (AQ3); Field Office 6; VIII.C.3

## **Appendix C: EPA-Approved Alternative Opacity Monitoring Letters**



JUL 03 1997



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
726 MINNESOTA AVENUE  
KANSAS CITY, KANSAS 66101

JUL 17 1997

Mr. Robert Niemela  
General Manager/Operations  
Linwood Mining & Minerals Corporation  
4321 East 60th Street  
Davenport, IA 52807-9744

Dear Mr. Niemela:

This is in response to your April 7, 1997, letter requesting an alternative to the continuous opacity monitoring requirements found in the New Source Performance Standards (NSPS) for Lime Manufacturing Plants at 40 Code of Federal Regulations (CFR) Part 60, Subpart HH.

The regulations found at 40 CFR § 60.343(a) requires the owner or operator of a rotary lime kiln constructed or modified after May 3, 1977, to install, calibrate, maintain, and operate a continuous opacity monitoring (COM) system to monitor and record the opacity of the gases discharged from the kiln.

The situation described in your April 7, 1997, letter is that the Iowa Department of Natural Resources issued a construction permit for the installation of a new kiln #4 at your facility. Emissions from kiln #4, as well as the other kilns at the facility, will be vented through a common duct to an underground mine shaft and then to a 75 foot stack. A COM will be installed on this stack. This stack is known as LP-4. During maintenance periods on the mine shaft, the emissions from kiln #4, as well as the other kilns, will be ducted to a baghouse identified as LP-9.

Your April 4, 1997, letter requests an alternative to the requirement under 40 CFR § 60.343(a) to install a COM on the LP-9 baghouse.

Some of the reasons identified in your letter for requesting the alternative monitoring requirement include:

1. Mine maintenance periods will be less than 10% of the operating time of the kiln;
2. Permitted particulate emissions during operation of the baghouse are lower than emissions during operation of the LP-4 stack.
3. The cost to purchase, install, and test a separate COM will be prohibitive;
4. The conditioning period and 7 day drift test will be difficult to complete during mine maintenance periods; and,
5. The sharing of a monitor between the baghouse and LP-9 is not feasible due to the distance between the points and the likelihood of damaging the COM.

As an alternative to the COM, you propose to conduct 18 minutes of Method 9 visible emission observations by a certified observer and record baghouse pressure drop readings each day of operation of the baghouse.

The regulation at 40 CFR § 60.13(g) specifies that when the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable COM on each separate effluent unless the installation of fewer systems is approved by the Environmental Protection Agency (EPA). Pursuant to 40 CFR § 60.13(i), EPA may approve alternatives to a monitoring requirement when an affected facility is operated infrequently.

EPA does not agree that the cost of a COM is prohibitive nor does EPA agree that it is technically infeasible to install and certify a COM for use on the LP-9 baghouse. However, alternative monitoring requests can be granted by EPA when the emissions from an affected facility are released through a point on an infrequent basis. Therefore, based upon the information provided in your April 7, 1997, letter that the LP-9 baghouse will be operated infrequently, pursuant to 40 CFR § 60.13, your request

for an alternative to the requirement to install a COM on the LP-9 baghouse is hereby granted. This alternative monitoring requirement is granted pursuant to the following conditions:

1. The alternative monitoring described below may be performed for up to 876 hours in any consecutive 12 month period. Should the emissions from kiln #4 be routed to the LP-9 baghouse for more than 876 hours in any consecutive 12 month period, a COM shall be installed and certified on the baghouse within 90 days of exceeding this time limit.
2. A log shall be maintained indicating the beginning and ending dates and times that emissions from kiln #4 are routed to the LP-9 baghouse. Baghouse operating parameters, such as pressure drop, shall be recorded daily as an indicator of baghouse operation;
3. Visible emission observations in accordance with Method 9 shall be taken by a certified observer for at least three 6-minute periods each day that emissions from kiln #4 are routed to the LP-9 baghouse;
4. The date, time, and results of the visible emission observations described in item 3 above shall be recorded;
5. The visible emission observations described in item 3 above shall be initiated at random times during each day that emissions from kiln #4 are routed to the LP-9 baghouse;
6. In the event that the average opacity during a 6-minute period is greater than 15 percent, visible emission observations in accordance with Method 9 shall continue to be taken and recorded until such time that the average opacity of a 6-minute period is below 15 percent;
7. Reports of excess emissions, including the information specified in 40 CFR § 60.7(c), shall be submitted semiannually. For purposes of this report, periods of excess emissions that shall be reported are defined as all 6 minute periods during which the average opacity is greater than 15 percent.

The conditions specified above shall not relieve the Linwood Mining & Minerals Corporation from its responsibility to comply with other applicable requirements such as the reporting requirements of IAC 567-24.12.

If you have any questions concerning this letter, please contact Tony Petruska of my staff at 913-551-7637.

Sincerely,

*Karen A. Journey*  
for William A. Spratlin  
Director  
Air, RCRA, and Toxics Division

cc: Deborah Henry  
IDNR



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

NOV 17 1999

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Robert Niemela  
General Manager/Operations  
Linwood Mining & Minerals Corporation  
5401 Victoria Avenue  
Davenport Iowa 52807-2991

Dear Mr. Niemela:

This is in response to your June 18, 1999 letter requesting approval of an alternative to the opacity monitoring requirements found in the New Source Performance Standards at 40 Code of Federal Regulations (CFR) Part 60, Subpart HH.

The regulations found in 40 CFR Part 60, Subpart HH are applicable to new rotary lime kilns. These regulations require at 40 CFR § 60.343 that owners and operators install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from the rotary lime kiln.

The regulation at 40 CFR § 60.13(i)(1) states that EPA may approve alternatives to any monitoring procedures or requirements of Part 60 including, alternative monitoring requirements when installation of a continuous monitoring system would not provide accurate measurements due to liquid water interferences.

Your company operates four kilns that are vented through common duct work to an abandoned portion of an underground mine. From the mine, the emissions are exhausted through a 75 foot stack equipped with a continuous opacity monitor. Kiln #4 is the facility subject to 40 CFR Part 60, Subpart HH. Kiln #4 is a preheater style kiln in which the exhaust gases are used to dry the feed material. This causes the water in the exhaust gases exiting the kiln to condense in the mine.

Your June 18, 1999 letter states that condensed water droplets are resulting in opacity readings of 45% to 60%. Method 9 readings are indicating opacity in the range of 5% to 10%. The standard at 40 CFR Part 60, Subpart HH specifies an opacity limit of 15%.

Your June 18, 1999 letter also discussed a number of options for relocating the continuous opacity monitor (COM). Your conclusions are that since particulate matter settles out in the mine and the mine provides some SO<sub>2</sub> and NO<sub>x</sub> control, moving the COM from the stack would not be representative of emissions to the atmosphere. In addition, heating the stack or routing the emissions away from the mine could result in increased emissions and potentially trigger PSD review.

Pursuant to 40 CFR § 60.13(i)(1) your request for an alternate opacity monitoring procedure is granted, subject to the following conditions:

1. While kiln #4 is in operation, at least once each operating day, an observer certified in accordance with EPA Method 9 shall perform a set of three 6-minute visible emission observations.
2. If the average opacity for one or more of the 6-minute visible emission observations made in accordance with item 1 above exceeds 10 percent, the observer must collect two additional sets, with each set consisting of three 6-minute visible emission observations.
3. In addition to item 2 above, in the event that the average opacity during a 6-minute period is greater than 15 percent, valid visible emission observations in accordance with Method 9 shall continue to be taken and recorded until such time that the average opacity of a 6-minute period is below 15 percent.
4. Records of the visible emission readings described above must be maintained for a period of three years from the date of the reading. The records shall include the date, time, name of the reader, field sheets, and results of each reading.
5. Thirty days after the end of each calendar quarter in which visible emission readings are taken pursuant to this letter, a report shall be submitted to the Iowa Department of Natural Resources providing the results of each visible emission reading and a description of corrective actions taken to minimize particulate emissions.
6. This alternative opacity monitoring procedure shall expire one year from date of receipt of this letter. If your company wishes to continue to operate under this alternative opacity monitoring procedure, a request for an extension shall be provided to EPA at least thirty days, but not more than sixty days prior to expiration of this approval.

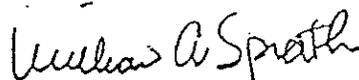
Please note that EPA is aware that the Iowa Department of Natural Resources is reviewing Linwood Mining and Minerals compliance with the emission limits specified in the permit for Kiln #4. As such, this approval is being limited to one year as described above. Should the emission controls or configuration of the facility change as a result of IDNR's compliance review, this approval may be revoked or requests for an extension denied.

3

This letter does not affect the June 27, 1997 letter to you granting an alternative to the continuous opacity monitoring requirements on the LP-9 baghouse. The alternative granted in the June 27, 1997 letter concerns the infrequent use of the LP-9 baghouse during mine maintenance.

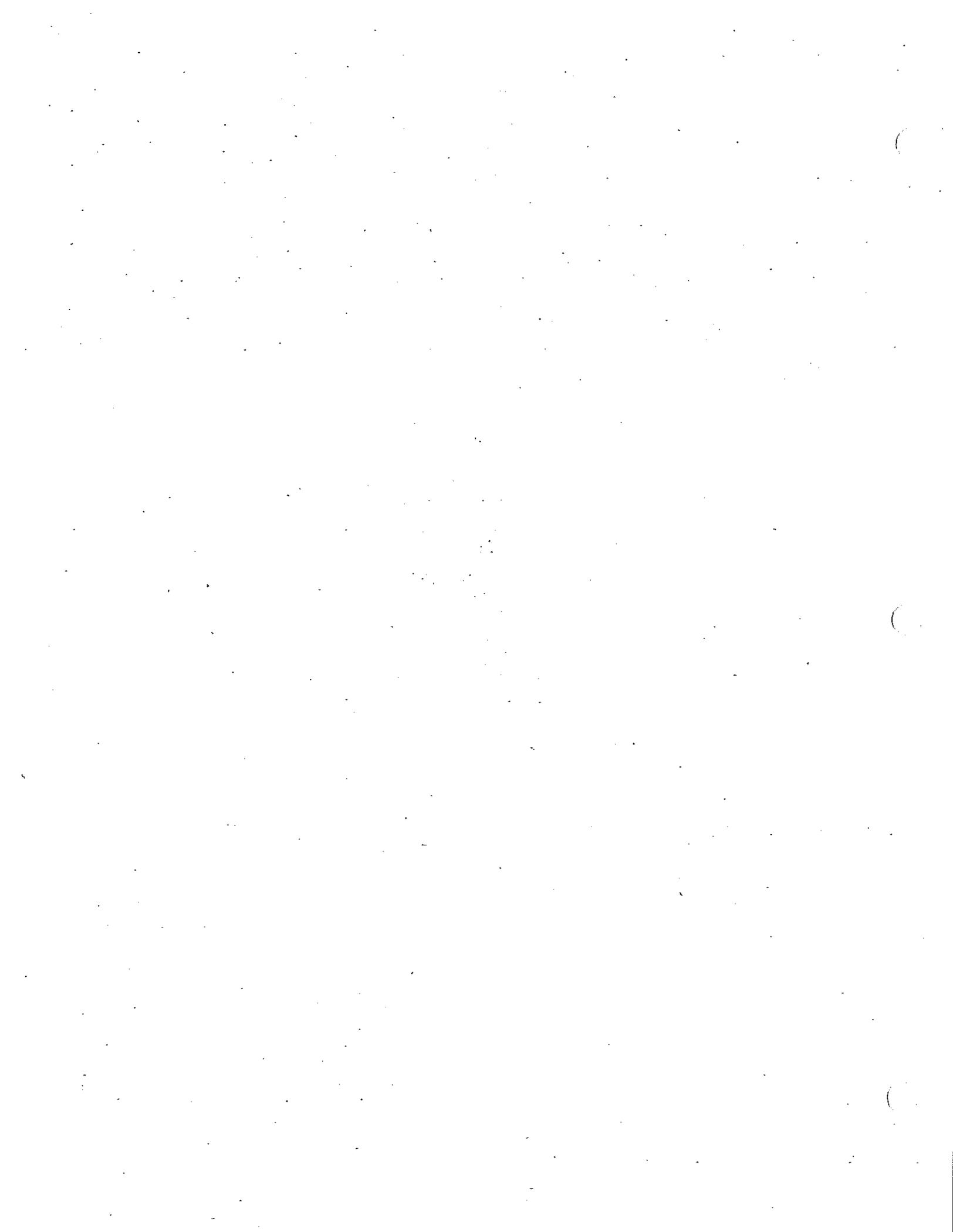
If you have any questions regarding this letter, please contact Tony Petruska at 913-551-7637.

Sincerely,



William A. Spratlin  
Director,  
Air, RCRA, and Toxics Division

cc: Dave Phelps, IDNR



82-01-015



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

21 NOV 2000

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Michael S. Johnson  
Executive Vice President  
Linwood Mining & Minerals Corporation  
5401 Victoria Avenue  
Davenport, Iowa 52807-2991

Dear Mr. Johnson:

This is in response to your October 12, 2000 letter requesting continuing approval of the alternative opacity monitoring at your Buffalo, Iowa mine site. In a letter dated November 17, 1999, from William A. Spratlin, a one-year approval was granted for the alternative opacity monitoring.

As indicated in the November 17, 1999 letter, the approval was granted for one year because the Iowa Department of Natural Resources (IDNR) was reviewing Linwood Mining and Mineral's compliance with the emission limits specified in the permit for kiln #4. We further indicated that should the emission controls or configuration of the facility change as a result of IDNR's compliance review, the approval may be revoked or requests for an extension denied.

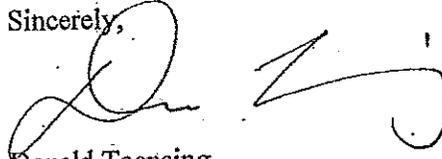
My staff has reviewed your October 12, 2000 letter and have consulted with IDNR concerning your facility's compliance status. It is our understanding that a number of compliance issues remain unresolved. Until such time that the compliance issues are resolved, it remains unclear as to whether or not the emission controls or configuration of the facility will change as a result of IDNR's compliance review. Thus, by this letter, EPA is hereby extending the alternative opacity monitoring procedure approved in the November 17, 1999 letter. Upon resolution of the compliance issues, EPA will determine if the alternative opacity monitoring shall be modified, continued, or terminated. EPA will notify you, in writing, of any decision to modify, continue, or terminate the approval to conduct the alternate opacity monitoring.

Please note that the alternative opacity monitoring procedure continues to be daily visible emission observations in accordance with the conditions specified in the November 17, 1999 letter. We have considered your request to lower the visible emission observations to five days per week.

However, we believe that at a minimum, daily observations are required in lieu of continuous opacity monitoring.

If you have any questions concerning this letter, please contact Tony Petruska at 913-551-7637.

Sincerely,

A handwritten signature in black ink, appearing to read 'Donald Toensing', written in a cursive style.

Donald Toensing  
Chief, Air Permitting and Compliance Branch

cc: Dave Phelps, IDNR.  
Ann Preziosi, IDNR

82-01-015



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

08 MAR 2002

Ms. Lucie Macalister  
Linwood Mining & Minerals Corp.  
5401 Victoria Avenue  
Davenport, IA 52807-2991

Re: NSPS Continuous Opacity Monitor-Alternative Monitoring Request Follow-up, Linwood Mining and Minerals, Buffalo, Iowa

Dear Ms. Macalister:

This is in response to your October 19, 2001, and February 28, 2002, letters requesting final approval of alternative opacity monitoring at your Buffalo, Iowa, mine site.

As you are aware, the November 21, 2000, approval was granted on an interim basis because a number of outstanding compliance issues which might have affected the emission controls or configuration of the facility were unresolved. We have discussed these new requests for final approval with the Iowa Department of Natural Resources (IDNR) and determined that compliance issues remain which may affect the emission controls or configuration of the facility. These include the relocation of McCarthy Asphalt within the property boundary, IDNR's processing of several draft permits needed for the State Implementation Plan which includes continued review of the netting analysis for the addition of Kiln 4, and testing of the backup baghouse for the kilns. Of particular relevance to your request is the ongoing review of the netting analysis for Kiln 4.

Given these compliance issues, we cannot grant final approval of your request for alternative opacity monitoring at this time. However, by copy of this letter, your temporary, interim approval is continued.

If you have any questions or comments on this matter, please contact me at 913-551-7291.

Sincerely,

*Michael J. Bronoski*

Michael J. Bronoski  
Air Compliance & Enforcement-Iowa

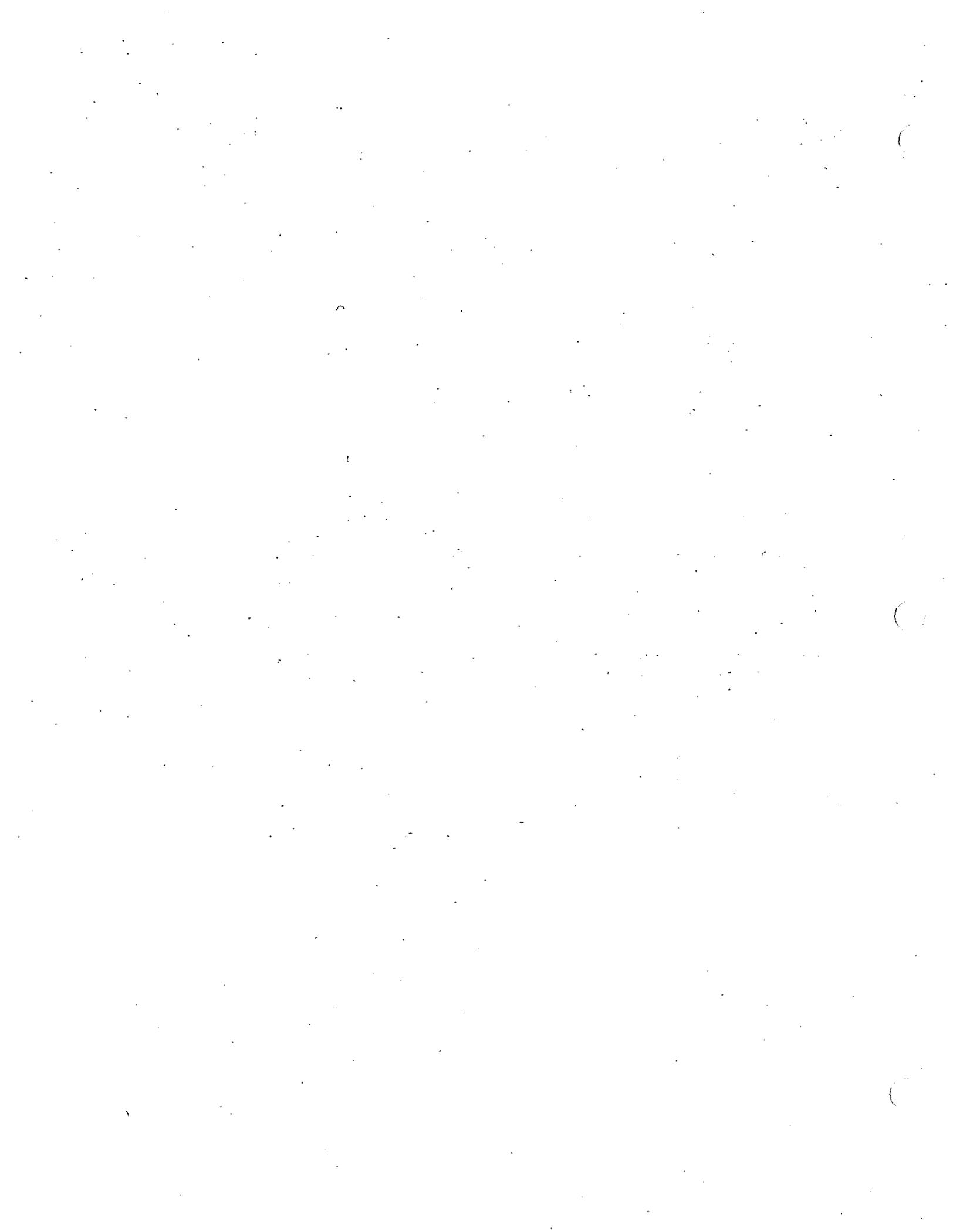
cc: Chris Roling  
Iowa Department of Natural Resources

Chuck Corell  
Iowa Department of Natural Resources

RECEIVED

MAR 15 2002







UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

20 NOV 2003

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Ms. Lucie Macalister  
Linwood Mining & Minerals Corp  
5401 Victoria Avenue  
Davenport, IA 52807-2991

RE: Final Approval, Alternative Opacity Monitoring, Kiln #4

Dear Ms. Macalister:

This is a follow up to my November 17, 1999, letter to Mr. Robert Niemela, General Manager/Operations, granting a one year approval of your request for alternative opacity monitoring for your Kiln #4 pursuant to 40 C.F.R. § 60.13(i)(1). At your request, the tentative approval was renewed annually pending the resolution of potential compliance issues associated with Kiln #4.

We have determined that these compliance issues have been resolved to the extent that we can grant final approval at this time. The conditions of this final approval are the same Conditions 1. - 5. as in the initial, November 17, 1999, approval.

Any questions on this matter should be directed to Michael Bronoski, Air Permitting and Compliance Branch, at 913-551-7291.

Sincerely,

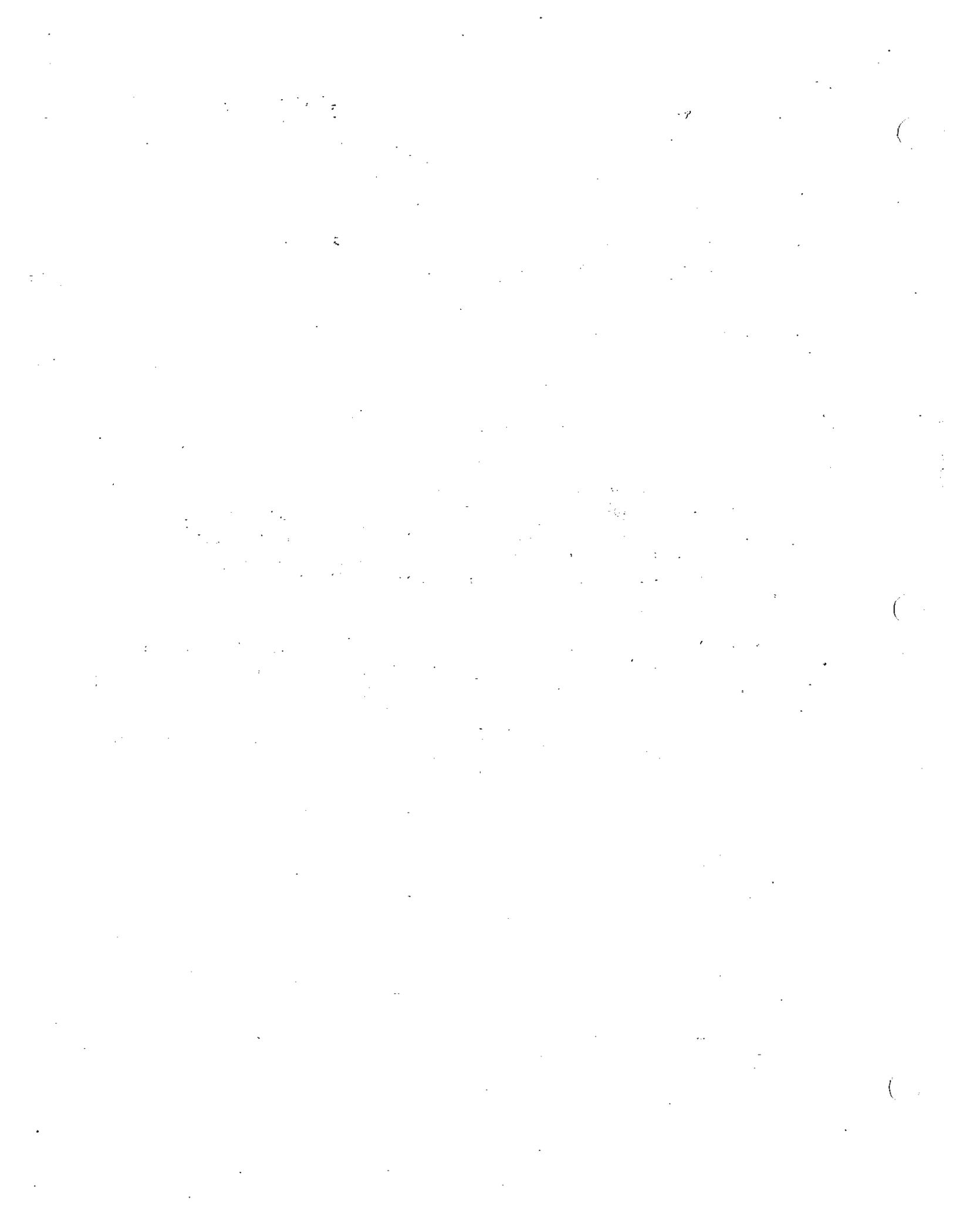
William A. Spratlin  
Director  
Air, RCRA, and Toxics Division

cc: Chris Roling  
Iowa Department of Natural Resources

Marnie Stein  
Iowa Department of Natural Resources

RECEIVED  
NOV 24 2003





# **Appendix D: Compliance Assurance Monitoring (CAM) Plans**

## Compliance Assurance Monitoring Plans (CAM)

Linwood Mining & Minerals – Davenport, IA  
Facility No. 82-01-015  
EIQ No. 92-3207

EP	EU	Emission Limit	Authority for Requirement	Control Technology	Indicators
CC-1	CC-1a through CC-1i	PM10 = 2.48 lb/hr PM = 2.48 lb/hr, PM = 0.1 gr/dscf	71-A-084-S7 71-A-084-S7 567 IAC 23.3(2)"a"	Fabric filter	1. Daily pressure differential measurement.  2. Weekly opacity reading.
CC-2	CC-2b through CC-2k	PM10 = 1.61 lb/hr PM = 1.61 lb/hr PM = 0.1 gr/dscf PM = 0.022 gr/dscf PM = 0.01 gr/dscf	86-A-049-S6 86-A-049-S6 567 IAC 23.3(2)"a" 86-A-049-S6 86-A-049-S6	Fabric filter	
CC-3	CC-3	PM10 = 0.36 lb/hr PM = 0.022 gr/dscf	88-A-218-S4 88-A-218-S4	Fabric filter	
CC-4	CC-4	PM10 = 0.10 lb/hr PM = 0.022 gr/dscf	98-A-191-S1 98-A-191-S1	Fabric filter	
CC-5	CC-2a CC-2k	PM10 = 0.93 lb/hr PM = 0.1 gr/dscf PM = 0.022 gr/dscf PM = 0.01 gr/dscf	98-A-846-S2 98-A-846-S2 98-A-846-S2 98-A-846-S2	Fabric filter	
LP-3	LP-3a through LP-3c	PM10 = 0.14 lb/hr PM = 0.1 gr/dscf	71-A-085-S3 71-A-085-S3	Fabric filter	
LP-4	K-1 through K-4	When Kiln 4 is operating: PM10 = 45.59 lb/hr PM10 = 0.51 lb/ton lime PM = 0.6 lb/ton stone PM = 0.51 lb/ton lime  When Kiln 4 is not operating: PM10 = 45.59 lb/hr PM10 = 1.58 lb/ton lime PM = 1.58 lb/ton time	73-A-219-S5 73-A-219-S5 73-A-219-S5 73-A-219-S5  73-A-219-S5 73-A-219-S5 73-A-219-S5	Cyclones	
LP-5	LP-5	PM10 = 5.15 lb/hr PM = 0.1 gr/dscf	78-A-321-S4 78-A-321-S4	Water scrubber	Note: Not operational when this permit was issued.
LP-6	LP-6	PM10 = 0.10 lb/hr PM = 0.23 lb/hr	88-A-219-S4 88-A-219-S4	Fabric filter	Note: Not operational

## Compliance Assurance Monitoring Plans (CAM)

		PM = 0.1 gr/dscf	88-A-219-S4		when this permit was issued.
LP-7	LP-7	PM10 = 0.17 lb/hr PM = 0.11 lb/hr PM = 0.1 gr/dscf	02-A-019-S3 02-A-019-S3 02-A-019-S3	Fabric filter	1. Daily pressure differential measurement.
LP-9	K-1 through K-4	PM10 = 29.9 lb/hr, 14.0 tpy PM = 0.6 lb/ton stone	91-A-324-S5 91-A-324-S5	Fabric filter	
LP-12	LP-12 a-d & g	PM10 = 0.05 lb/hr PM = 0.1 gr/dscf	97-A-1084-S2 97-A-1084-S2	Bin vent filter	2. Weekly opacity reading.
LP-13	LP-13a LP-13b LP-13c	PM10 = 0.17 lb/hr PM = 0.31 lb/hr PM = 0.1 gr/dscf	02-A-028-S4 02-A-028-S4 02-A-028-S4	Fabric filter	

### Measurement Approach

Operator will obtain and record pressure differential daily (when operating, except during startup and shutdown periods)

Operator will inspect and record visible emissions weekly. If weather conditions prevent the observer from conducting an opacity observation, the observer will note such conditions on the observations sheet. At least three attempts will be made to retake opacity readings at approximately two-hour intervals throughout the day. If unsuccessful that day due to weather, an observation will be made the following day.

Preventative maintenance will be performed monthly (inspection)

### Indicator Ranges

Corrective action will be taken upon observation of abnormal conditions such as visible emissions and monitoring equipment out of range. An abnormal condition does not necessarily indicate a deviation/violation of an applicable requirement. Corrective action may include an investigation for the abnormal condition/excursion, evaluation of the situation, and followup action to return the operation to within the indicator range. Corrective action will be implemented within one day of the observation of the abnormal condition/excursion.

The observed opacity is to be “no visible emissions” from the stack. If noticeable visible emissions are observed, corrective action will be taken to determine the cause and repairs will be made promptly

The observed differential pressure is to be within the normal operating pressure in the following table. If it is observed to be outside the normal operating range, then corrective action will be taken to determine the cause and correct the abnormal condition.

**Compliance Assurance Monitoring Plans  
(CAM)**

EP	EU	Emission Limit	Authority for Requirement	Control Technology	Indicators
CC-1	CC-1a through CC-1i	PM10 = 2.48 lb/hr PM = 2.48 lb/hr, PM = 0.1 gr/dscf	71-A-084-S7 71-A-084-S7 567 IAC 23.3(2)"a"	Fabric filter	2" – 10"
CC-2	CC-2b through CC-2k	PM10 = 1.61 lb/hr PM = 1.61 lb/hr PM = 0.1 gr/dscf PM = 0.022 gr/dscf PM = 0.01 gr/dscf	86-A-049-S6 86-A-049-S6 567 IAC 23.3(2)"a" 86-A-049-S6 86-A-049-S6	Fabric filter	2" – 10"
CC-3	CC-3	PM10 = 0.36 lb/hr PM = 0.022 gr/dscf	88-A-218-S4 88-A-218-S4	Fabric filter	2" – 10"
CC-4	CC-4	PM10 = 0.10 lb/hr PM = 0.022 gr/dscf	98-A-191-S1 98-A-191-S1	Fabric filter	2" – 10"
CC-5	CC-2a CC-2k	PM10 = 0.93 lb/hr PM = 0.1 gr/dscf PM = 0.022 gr/dscf PM = 0.01 gr/dscf	98-A-846-S2 98-A-846-S2 98-A-846-S2 98-A-846-S2	Fabric filter	2" – 10"
LP-3	LP-3a through LP-3c	PM10 = 0.14 lb/hr PM = 0.1 gr/dscf	71-A-085-S3 71-A-085-S3	Fabric filter	2" – 10"
LP-4	K-1 through K-4	When Kiln 4 is operating: PM10 = 45.59 lb/hr PM10 = 0.51 lb/ton lime PM = 0.6 lb/ton stone PM = 0.51 lb/ton lime  When Kiln 4 is not operating: PM10 = 45.59 lb/hr PM10 = 1.58 lb/ton lime PM = 1.58 lb/ton time	73-A-219-S5 73-A-219-S5 73-A-219-S5 73-A-219-S5  73-A-219-S5 73-A-219-S5 73-A-219-S5	Cyclones	0.25" – 8"
LP-5	LP-5	PM10 = 5.15 lb/hr PM = 0.1 gr/dscf	78-A-321-S4 78-A-321-S4	Water scrubber	Note: Not operational when this permit was issued.
LP-6	LP-6	PM10 = 0.10 lb/hr PM = 0.23 lb/hr PM = 0.1 gr/dscf	88-A-219-S4 88-A-219-S4 88-A-219-S4	Fabric filter	Note: Not operational when this permit was issued.

## Compliance Assurance Monitoring Plans (CAM)

LP-7	LP-7	PM10 = 0.17 lb/hr PM = 0.11 lb/hr PM = 0.1 gr/dscf	02-A-019-S3 02-A-019-S3 02-A-019-S3	Fabric filter	2" – 10"
LP-9	K-1 through K-4	PM10 = 29.9 lb/hr, 14.0 tpy PM = 0.6 lb/ton stone	91-A-324-S5 91-A-324-S5	Fabric filter	2" – 10"
LP-12	LP-12 a-d & g	PM10 = 0.05 lb/hr PM = 0.1 gr/dscf	97-A-1084-S2 97-A-1084-S2	Bin vent filter	2" – 10"
LP-13	LP-13a LP-13b LP-13c	PM10 = 0.17 lb/hr PM = 0.31 lb/hr PM = 0.1 gr/dscf	02-A-028-S4 02-A-028-S4 02-A-028-S4	Fabric filter	2" – 10"

To provide reasonable assurance of ongoing compliance with applicable emission limits, Linwood has used historical information, operational and process data, manufacturer's information and maintenance history and experiences as stated in their December 17, 2010 letter.

Full implementation of the CAM plans is effective immediately. Implementation was to take place no later than December 15, 2010 (180 days after the issuance of this renewal Title V permit) [40 CFR 64.4(e)] unless noted below.

### Exception to Implementing CAM plans

As of the issuance of this permit, emission units LP-5 and LP-6 are not operational, therefore, recent historical data is lacking. Within 90 days after becoming operational, Linwood will have 90 days to determine the "normal operating range" and no more than 120 days after start-up to submit the established normal operating range to the Air Quality Bureau Title V section. The normal operating range should be fully implemented no later than 180 days after start-up.

### Performance Criteria

#### Data Representativeness

A differential pressure that is not within the recent normal operating pressure could indicate a decrease in performance of the filter and potentially an increase in particulate emissions.

An observation of "noticeable visible emissions" could indicate a decrease in the performance of the filter and potentially an increase in particulate emissions.

### Verification of Operational Status

Records of pressure differential readings and visible emission readings will be maintained on file for five years.

## **Compliance Assurance Monitoring Plans (CAM)**

### QA/QC Practices and Criteria

All instruments and control equipment will be maintained and operated according to the manufacturer's specifications and maintenance schedule. The facility will maintain a record of all inspections and maintenance activity and any action resulting from the inspection and maintenance of the control equipment.

An adequate spare parts inventory will be maintained.