

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

Name of Permitted Facility: Lehigh Cement Company LLC

Facility Location: 700 25th Street N.W.

Mason City, IA 50401

Air Quality Operating Permit Number: 04-TV-011R2

Expiration Date: May 18, 2022

Permit Renewal Application Deadline: November 18, 2021

EIQ Number: 92-3163

Facility File Number: 17-01-005

Responsible Official

Name: Tom O'Neill

Title: Plant Manager

Mailing Address: 700 25th Street N.W.

Mason City, IA 50401

Phone #: (641) 421-3400

Permit Contact Person for the Facility

Name: Perry Dargitz

Title: Environmental Manager`

Mailing Address: 700 25th Street N.W.

Mason City, IA 50401

Phone #: (641) 421-3459

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

Lori Hanson, Supervisor of Air Operating Permits Section

Date

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Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
dscf.....	dry standard cubic feet
dscm.....	dry standard cubic meters
°F.....	degrees Fahrenheit
EIQ.....	emissions inventory questionnaire
ESP.....	electrostatic precipitator
gr./dscf	grains per dry standard cubic foot
hp./hr.....	horsepower hours
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
KWH.....	kilowatts per hour
MVAC.....	motor vehicle air conditioner
N/A.....	not applicable
ng./dscm.....	nanogram per dry standard cubic meter
NSPS	new source performance standard
ppmv	parts per million by volume
lb./hr.....	pounds per hour
lb./MMBtu	pounds per million British thermal units
MMcf./hr.....	million cubic feet per hour
scfm.....	standard cubic feet per minute
SNCR.....	selective non-catalytic Reduction
TEQ.....	toxicity equivalents
tons/day.....	tons per day
tons/hr.....	tons per hour
TPY.....	tons per year
USEPA.....	United States Environmental Protection Agency
VMT/hr.....	vehicle miles traveled per hour

Pollutants

PM.....	particulate matter
PM ₁₀	particulate matter ten microns or less in diameter
SO ₂	sulfur dioxide
NO _x	nitrogen oxides
VOC	volatile organic compound
CO	carbon monoxide
HAP.....	hazardous air pollutant
D/F.....	dioxins and furans

I. Facility Description and Equipment List

Facility Name: Lehigh Cement Company

Permit Number: 04-TV-011R2

Facility Description: Portland Cement Plant (SIC 3241)

Equipment List

A. Material Transfer Fugitive Emission Sources Subject to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule.

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP1	EU1	Railcar Unloading	N/A
EP7	EU7A	Limestone Transfer	N/A
	EU07	Storage Pile Fugitives	N/A
EP14	EU14A	Clay Delivery and Distribution	N/A
	EU14B	Clay Transfer to Process	
EP15A	EU15A	Raw Material Transfer-Clay Crushing System	N/A
EP15B	EU15B	Raw Material Transfer-Clay Crushing System	N/A
EP40	EU40	Coal Crusher	N/A
EP56A	EU56A	Truck Loading - Limestone	N/A
EP57A	EU57A	Truck Loading - Clay	N/A
EP58A	EU58A	Coal Transfer	N/A
EP59A	EU59A	Sand Delivery & Unloading	N/A
	EU59B	Sand Transfer to Process	
EP60A	EU60A	Clay Delivery & Unloading	N/A
	EU60B	Clay Transfer to Process	
EP61A	EU61A	Clay Delivery and Unloading	N/A
	EU61B	Clay Transfer to Process	
EP62-1	EU62-1	Coal Transfer	N/A
EP63A	EU63A	Kiln Dust Unloading	N/A
EP73A	EU73A	Limestone Transfer to Process pile at Crusher	N/A
EP74A	EU74A	Limestone Transfer to Process pile at Crusher	N/A
EP75A	EU75A	Clinker Transfer to Craneway	N/A
EP76A	EU76A	Clinker, Gypsum, Slag Transfer	N/A

B. Storage Piles

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP14	EU14	Clay Storage Pile No. 1	N/A
EP58	EU58	Coal Storage Pile	N/A

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP59	EU59	Sand Storage Pile	N/A
EP60	EU60	Clay Storage Pile No. 2	N/A
EP61	EU61	Clay Storage Pile No. 3	N/A
EP63	EU63	Kiln Dust Storage Pile	N/A
EP73	EU73	Quarry Run Limestone Storage Pile	N/A
EP74	EU74	Quarry Run Limestone Storage Pile	N/A

C. Storage Piles Subject to 40 CFR 63 Subpart LLL

EP75	EU75	Clinker Storage Pile	N/A
EP76	EU76	Raw Materials Storage Pile	N/A

D. Haulroads

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP56	EU56	Limestone Quarry Haulroad	N/A
EP57	EU57	Clay Quarry Haulroad	N/A
EP63B	EU63B	Kiln Dust Haulroad	N/A
EP80	EU80	Cement Haulroad-Cement Loadout to U.S. 65	N/A

E. Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP11	EU11	Raw Material Transfer-Apron Feeder to Collection Belt	82-A-022-S4
EP18	EU18	Grinding Circuit-Raw Material Transfer	82-A-028-S3
EP19	EU19	Raw Material Transfer to Homogenizing Silo	77-A-223-S3
EP20	EU20	Raw Material Transfer-IBAU Bin Bottom Elevator	82-A-032-S3
EP21	EU21	Raw Material Transfer-IBAU Elevator W to top Silo Conveyor	82-A-029-S3
EP22	EU22	Raw Material Transfer-IBAU Elevator S to top Silo Conveyor	82-A-031-S3
EP23	EU23	IBAU Bin S Top Elevator Raw Material Transfer	82-A-030-S3
EP24	EU24	Raw Material Transfer	82-A-033-S3
EP33	EU33	Outhaul Conveyor Transfer	80-A-175-S3
EP34	EU34	Clinker Truck Loadout	80-A-177-S3
EP35	EU35	Outhaul Conveyor Transfer to Clinker Silo	80-A-179-S3
EP36	EU36	Clinker Withdrawal Conveyor Transfer	80-A-178-S3
EP37	EU37	Clinker Belt 206 to 208 Transfer	80-A-174-S3
EP39	EU39	Clinker Transfer	86-A-021-S3
EP39-1	EU38	Clinker Belt 208 to Belt 211 Transfer	99-A-225-S3

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
	EU39-1	Clinker Ladder	
EP39-2	EU39-2	Gypsum/Anhydrite Bucket Transfer	N/A
EP39-3	EU39-3	Clinker Bucket Transfer	N/A
EP41	EU41	No. 3 Finishing Mill Circuit	00-A-396-S2
	EU41A	Vibrating Conveyor Transfer	
	EU41B	Air Separator	
EP42	EU41	No. 3 Finishing Mill Circuit	00-A-397-S2
	EU41A	Vibrating Conveyor Transfer	
	EU41B	Air Separator	
EP43	EU43	No. 5 Finishing Mill Circuit	00-A-398-S2
	EU43A	Vibrating Conveyor Transfer	
	EU43B	Air Separator	
EP44	EU44	No. 6 Finishing Mill Circuit	00-A-400-S2
	EU44A	Vibrating Conveyor Transfer	
	EU44B	Air Separator	
EP45	EU45	No. 4 Finishing Mill Circuit	82-A-038-S3
	EU45A	Vibrating Conveyor Transfer	
	EU45B	Air Separator	
EP46	EU46	Clinker Transfer	82-A-037-S3
	EU46A	Clinker Transfer	
EP47	EU47	Storage Silo	78-A-322-S3
EP48	EU48	Transfer Bucket Elevator	83-A-008-S3
EP49	EU49	Direct Cement Loadout (Emergency Only)	N/A
EP50	EU50	Silo Row 40 Cement Bulk Loadout	83-A-009-S3
EP51	EU51	Silo Row 30 Cement Loadout	83-A-010-S3
EP52	EU52	Silo Row 50 Rail/Truck Cement Loading System	90-A-365-S3
EP53	EU53	Silo Row 50 Cement Loadout Spout	90-A-366-S3

F. BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP87	EU87	Reagent Bin #1 (South)	03-A-980-P3
EP88	EU88	Reagent Bin #2 (North)	03-A-981-P3
EP92	EU92	Storage Bin Loading System	03-A-985-P2
EP92A	EU92A	Storage Bin Discharge System	05-A-491-P1
EP94	EU94	Secondary Fuel Conveying-Fuel A	03-A-987-P2

G. Non-Fugitive Sources Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP8	EU8	Raw Material Transfer-Belt D-49 to D-01	82-A-027-S4
EP9	EU9	Raw Material Transfer-Belt D-01 to D-02	82-A-020-S4
EP10	EU10	Raw Material Transfer-Belt D-02 to Stone Bin	82-A-021-S4
EP12	EU12	Raw Material Transfer-Reclaim Belt 2 to Crusher/Stone Belt 2	82-A-024-S4

H. Non-Fugitive Sources Subject to 40 CFR 60 Subpart F

EP15	EU15	Clay Crushing	82-A-019-S4
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I. Crushers and Raw Material Transfers

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP2	EU2	Primary Crusher	77-A-260-S3
	EU2A	Raw Material Transfer	
EP3	EU3	Screening	77-A-313-S3
	EU3A	Raw Material TP-Belt 2 to Screen	
	EU3B	Raw Material TP- Screen to Belt 3	
	EU3C	Raw Material TP- Screen to Belt 4	
EP5	EU5	Secondary Crusher	00-A-395-S2
	EU5A	Raw Material Transfer-Stone 5 to 6	
	EU5B	Raw Material Transfer	
EP6	EU6A	Raw Material Transfer	77-A-360-S3
	EU6B	Raw Material Transfer	

J. Miscellaneous Sources

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP25	EU25	Kiln/Calcliner/Preheater	03-A-968-P3
EP26	EU26	Clinker Cooler	03-A-969-P2
EP28	EU28	Kiln Dust Disposal Tank	77-A-361-S3
	EU29	Kiln Dust Loadout	
EP55	EU55	Limestone Drilling	99-A-179-S1
EP55A	EU55A	Quarry Blasting	N/A
EP62	EU62	Coal Mill	87-A-089-S3
EP62A	EU62A	Calcliner Coal Bin & Dosing System	08-A-690
EP92B	EU92B	Alternate Fuel Prehopper & Dosing System	08-A-691
EP101	EU101	Emergency Generator	10-A-117
EP102	EU102	Scrubber Emergency Generator	N/A
EP62B	EU62B	Calcliner Emergency Generator	N/A

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
IN-A1	Plant Used Oil Tank < 1,000 gal.
IN-A2	Quarry Used Oil Tank < 1,000 gal.
IN-A3	Kerosene Tank < 1,000 gal.
IN-A4	Underground Diesel Tank < 1,000 gal.
IN-A5	Underground Gasoline Tank < 1,000 gal.
65	East HCl Tank 5,400 gal.
66	Center HCl Tank 5,400 gal.
67	West HCl Tank 5,400 gal.
68	Grinding Aid Concentrate Tank 12,000 gal.
69A	Grinding Aid Tank (with water) 1,872 gal.
69B	Grinding Aid Tank (with water) 1,872 gal.
70A	Airlon Concentrate Tank 6,000 gal.
70B	Airlon Holding Tank (with water) 1,512 gal
71	Mixing Tank
72	Grinding Aid No. 2 Concentrate 8,000 gal.
103	Portable Quarry De-Watering Pump (97 bhp, Diesel)
104	Portable Quarry De-Watering Pump (97 bhp, Diesel)

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

Insignificant Emission Unit Number	Insignificant Emission Unit Description
EU77	Material Blending System

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

II. Plant-Wide Conditions

Facility Name: Lehigh Cement Company
Permit Number: 04-TV-011R2

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

Permit Duration

The term of this permit is: Five (5) years
Commencing on: May 19, 2017
Ending on: May 18, 2022

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

Emission Limits

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

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

Sulfur Dioxide (SO₂): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:

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

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

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

Operational Limits & Requirements

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

Terms and Conditions: The Permittee shall comply with all applicable requirements of Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32.

Limits and Requirements From Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32

See Appendix A.

Authority for Requirement: Iowa Department of Natural Resources Administrative Consent Order 1999-AQ-32

NSPS and NESHAP Applicability

40 CFR 60 Subpart A

This facility is an affected source and these *General Provisions* apply to the facility. The affected units are emission units 8, 9, 10, 12, 13, 15, 62, and 62A11, 18, 19, 20, 21-24, 33-38, 39-1, 39-2, 39-3, 41, 41A, 41B, 43, 43A, 43B, 44, 44A, 44B, 45, 45A, 45B, 46, 46A, 47-53, 75, 76, 87, 88, 92, 92A, and 94.

See Appendix D for a link to the Standard.

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

40 CFR 60 Subpart F

This facility is subject to Standards of Performance for *Portland Cement Plants*. The affected units are emission units 8, 9, 10, 12, 13, 15, 11, 18, 19, 20, 21-24, 33-38, 39-1, 39-2, 39-3, 41, 41A, 41B, 43, 43A, 43B, 44, 44A, 44B, 45, 45A, 45B, 46, 46A, 47-53, 75, 76, 87, 88, 92, 92A, and 94. .

See Appendix D for a link to the Standard.

Authority for Requirement: 40 CFR Part 60 Subpart F
567 IAC 23.1(2)"c"

40 CFR 60 Subpart Y

This facility is subject to Standards of Performance for *Coal preparation Plants* . The affected units are emission units 62 and 62A.

P

Authority for Requirement: 40 CFR Part 60 Subpart Y
567 IAC 23.1(2)"v"

40 CFR 60 Subpart DDDD

This facility is of the source type subject to Standards of Performance for *Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999*.

See Appendix D for a link to the Standard.

Authority for Requirement: 40 CFR Part 60 Subpart DDDD

40 CFR 60 Subpart IIII

This facility is subject to Standards of Performance for *Stationary Compression Ignition Internal Combustion Engines*. The affected unit is emission unit 62B.

See Appendix D for a link to the Standard.

Authority for Requirement: 40 CFR Part 60 Subpart IIII
567 IAC 23.1(2)"yyy"

40 CFR 63 Subpart A Requirements

This facility is an affected source and these *General Provisions* apply to the facility. The affected units are emission units 8, 9, 10, 11, 12, 18, 19, 20, 21-26, 28-29, 33-39, 39-1, 39-2, 39-3, 41, 41A, 41B, 43, 43A, 43B, 44, 44A, 44B, 45, 45A, 45B, 46, 46A, 47-53, 62B, 75-76, 87, 88, 92, 92A, 92B, 94, 101, and 102.

See Appendix D for a link to the Standard.

Authority for Requirement: 40 CFR Part 60 Subpart A
567 IAC 23.1(4)

40 CFR 63 Subpart LLL

This facility is subject to the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. The affected units are emission units 8, 9, 10, 11, 12, 18, 19, 20, 21-26, 28-29, 33-39, 39-1, 39-2, 39-3, 41, 41A, 41B, 43, 43A, 43B, 44, 44A, 44B, 45, 45A, 45B, 46, 46A, 47-53, 75-76, 87, 88, 92, 92A, 92B, and 94.

See Appendix D for a link to the Standard.

Authority for Requirements: 40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

40 CFR 63 Subpart ZZZZ

Emission units 101, 102, and 62B are subject to the National Emission Standards for Hazardous Air Pollutants for *Stationary Reciprocating Internal Combustion Engines* (RICE NESHAP) [40 CFR Part 63 Subpart ZZZZ].

See Appendix D for a link to the Standard.

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

III. Emission Point-Specific Conditions

Facility Name: Lehigh Cement Company

Permit Number: **04-TV-011R2**

Emission Point ID Number: See Table: Material Transfer Fugitive Emission Sources Subject to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Material Transfer Fugitive Emission Sources Subject to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule

Table: Material Transfer Fugitive Emission Sources Subject to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity/Size
EP1	EU1	Railcar Unloading	Coal, Gypsum, Anhydrite	300 tons/hr
EP7	EU7A	Limestone Transfer	Limestone	750 tons/hr
	EU7	Storage Pile Fugitives		N/A
EP14	EU14A	Clay Delivery and Distribution	Clay	500 tons/hr
	EU14B	Clay Transfer to Process		500 tons/hr
EP15A	EU15A	Raw Material Transfer – Clay Crushing System	Clay & Crushed Limestone	500 tons/hr
EP15B	EU15B	Raw Material Transfer - Clay Crushing System	Clay & Crushed Limestone	500 tons/hr
EP40	EU40	Coal Crusher	Coal	55 tons/hr
EP56A	EU56A	Truck Loading - Limestone	Limestone	1000 tons/hr
EP57A	EU57A	Truck Loading - Clay	Clay	500 tons/hr
EP58A	EU58A	Coal Transfer	Coal	7,200 tons/day
EP59A	EU59A	Sand Delivery & Unloading	Sand	500 tons/hr
	EU59B	Sand Transfer to Process		500 tons/hr
EP60A	EU60A	Clay Delivery & Unloading	Clay	500 tons/hr
	EU60B	Clay Transfer to Process		500 tons/hr
EP61A	EU61A	Clay Delivery & Unloading	Clay	500 tons/hr
	EU61B	Clay Transfer to Process		500 tons/hr

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity/Size
EP62-1	EU62-1	Coal Transfer	Coal	55 tons/hr
EP63A	EU63A	Kiln Dust Unloading	Kiln Dust	300 tons/day
EP73A	EU73A	Limestone Transfer to Process Pile at Crusher	Limestone	19,200 tons/day
EP74A	EU74A	Limestone Transfer-Process Pile at Crusher	Limestone	2,000 tons/day
EP75A	EU75A	Clinker Transfer to Craneway	Clinker	1,200 tons/day
EP76A	EU76A	Clinker, Gypsum, Slag Transfer	Clinker, Gypsum, Slag	3,600 tons/day

Applicable Requirements

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

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

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.0

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

Emission Limit for EP62-1 Only

Pollutant: Opacity

Emission Limit(s): 20%⁽¹⁾

Authority for Requirement: 567 IAC 23.1(2)"v"
40 CFR 60.252(c)

Operational Limits & Requirements

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

Table: Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Process Throughput Limit			Reporting & Recordkeeping ⁽¹⁾	Authority for Requirements
		Max. No. of Transfers	Maximum Daily Throughput -Each Transfer (tons/day)	Maximum Calendar Year Throughput- Each Transfer (tons/year)		
EP1	EU1	3	7,200	200,000	The total daily throughput and throughput rates for each source shall be entered into a daily log, and annual throughputs totaled annually to demonstrate compliance with the daily and annual throughput limits.	Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32
EP7	EU7A	1	19,200 ⁽²⁾	2,500,000		
EP14	EU14A	2	12,000	200,000		
	EU14B	1	12,000	200,000		
EP15A	EU15A	4	12,000	200,000		
EP15B	EU15B					
EP40	EU40	1	1,320	200,000		
EP56A	EU56A	2	16,000 ⁽³⁾	1,675,800		
EP57A	EU57A	2	12,000 ⁽⁴⁾	141,667		
EP58A	EU58A	1	7,200	200,000		
EP59A	EU59A	2	12,000	2,190,000		
	EU59B	1	12,000	2,190,000		
EP60A	EU60A	2	12,000	2,190,000		
	EU60B	1	12,000	2,190,000		
EP61A	EU61A	2	12,000	2,190,000		
	EU61B	1	12,000	2,190,000		
EP62-1	EU62-1	4	1,320	481,800		
EP63A	EU63A	1	300	70,080		
EP73A	EU73A	1	19,200 ⁽²⁾	500,000		
EP74A	EU74A	1	2,000 ⁽⁵⁾	70,000		
EP75A	EU75A	1	1,200 ⁽⁶⁾	15,000		
EP76A	EU76A	1	3,600	50,000		

⁽¹⁾The records shall be kept on site for a minimum of five years, and shall be available for inspection by the Department.

⁽²⁾Maximum hourly throughput will be 1,200 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 750 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

⁽³⁾Maximum hourly throughput will be 1,000 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 666 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

⁽⁴⁾Maximum hourly throughput will be 1,000 ton/hour for the period 8:00 a.m. through 8:00 p.m. and 460 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

⁽⁵⁾Maximum hourly throughput will be 250 ton/hour for the period 8:00 a.m. through 4:00 p.m. and 83.3 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

⁽⁶⁾Maximum hourly throughput will be 100 ton/hour for the period 7:00 a.m. through 7:00 p.m. and 50 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day. If the sources footnoted above operate within the maximum hourly throughput time periods indicated, then the sources daily logs and annual throughput totals shall be used to demonstrate compliance. If these sources operate at other times during any day, then compliance will be demonstrated for that calendar day by entering the hourly throughput and total daily throughput rates for each of these sources in daily logs to demonstrate compliance with the daily and annual throughput limits.

Authority for Requirement: Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32

The coal crusher (emission point 40) shall be operated only in an enclosed structure with all access doors and any other openings closed during normal operations except for doors during ingress and egress.

Authority for Requirement: Section V(4) Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32

NSPS for EP62-1 Only

This unit is subject to Subpart A (General Provisions) and Subpart Y- *Standards of Performance for Coal preparation Plants of the New Source Performance Standards (NSPS)*.

Authority for Requirement: 567 IAC 22.108(3)
40 CFR 60 Subpart Y
567 IAC 23.1(2)"v"

Monitoring Requirements

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

Monitoring For EP62-1 Only:

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. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (>20 %) is observed, 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 ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: See Table: Storage Piles

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Storage Piles

Table: Storage Piles

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Size (acres)
EP14	EU14	Clay Storage Pile No. 1	Clay	1
EP58	EU58	Coal Storage Pile	Coal	3
EP59	EU59	Sand Storage pile	Sand	4
EP60	EU60	Clay Storage Pile No.2	Clay	3
EP61	EU61	Clay Storage Pile No. 3	Clay	3
EP63	EU63	Kiln Dust Storage Pile	Kiln Dust	2
EP73	EU73	Quarry Run Limestone Storage Pile	Limestone	1
EP74	EU74	Quarry Run Limestone Storage Pile	Limestone	0.5
EP75	EU75	Clinker Storage Pile	Clinker	0.5
EP76	EU76	Raw Materials Storage Pile	Clinker, Gypsum, Granulated Blast Furnace Slag	0.75

Applicable Requirements

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

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

Pollutant: Fugitive Dust

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

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

Operational Limits & Requirements

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

1. Unless otherwise allowed for below, the only storage piles allowed within the Lehigh facility shall be the storage piles listed in the table: "Storage Piles", above, and the storage piles shall not exceed the sizes listed under "Size" in same table.
2. Lehigh may relocate a pile specified in the table: "Storage Piles", above, only after providing written notice to DNR and submitting the results of computer dispersion modeling showing that no exceedances of the PM₁₀ NAAQS would result. If an exceedance of the PM₁₀ NAAQS would result based on the computer modeling results, Lehigh shall not move the pile as proposed and the pile shall remain at the location designated in *Exhibit D, Appendix A*.
3. Notwithstanding the requirements of 1. and 2. above, Lehigh may operate temporary piles of materials (not identified in the table: "Storage Piles", above) that result from maintenance or other similar activities. No such temporary pile shall be maintained for more than one 72-hour period.
4. Notwithstanding the requirements of 1, 2 and 3 above Lehigh may maintain temporary piles of overflow raw materials and product (not identified in the table: Storage Piles above) that may result from unforeseen and unplanned operating conditions or problems. Lehigh shall take all reasonable measures to limit the size of any such pile and the fugitive emissions that result therefrom. No more than two such temporary piles may exist at one time. No such temporary pile shall be maintained for more than one (1) month. Lehigh shall maintain records that include the pile location, planned or actual pile size, pile material content, and the planned removal date for each pile. 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: Section V Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32

NSPS and NESHAP

Emission units 75 and 76 are subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL these units are exempted from any otherwise applicable new source performance standards contained in Subpart F, to which it is also subject, that are less stringent than the Subpart LLL requirements.

An O & M plan is required by Subpart LLL for emission units EU75 and EU76. Relevant requirements of O & M plan for this equipment: Fugitive Dust Control Measures-**see Appendix B**, Section 11 Open Clinker Storage Piles.

Authority for Requirements: 40 CFR 60 Subpart F
567 IAC 23.1(2)"c"
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Monitoring Requirements

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: See Table: Haulroads

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Haulroads

Table: Haulroads

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity
EP56	EU56	Limestone Quarry Haulroad	Unpaved Road	70 trips/day
EP57	EU57	Clay Quarry Haulroad	Unpaved Road	1,667 VMT/yr.
EP63B	EU63B	Kiln Dust Haulroad	Paved Road	10 trips/day
EP80	EU80	Cement Haulroad-Cement Loadout to U.S. 65	Paved Road	222 trips/day

Applicable Requirements

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

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

Pollutant: Fugitive Dust

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

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

Operational Limits & Requirements

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

1. Lehigh must have speed controls designed to ensure that the average speed of the haul trucks on the limestone and clay haul roads (Source IDs 56 and 57) does not exceed 18.5 miles per hour. The speed controls shall consist of a combination of speed limit signs, stop signs, and governors on the accelerators of each haul road truck, or other methods approved in writing by DNR.
2. The maximum number of round trips per day and per calendar year on the limestone haul road (Source ID 56) for all of the haul trucks, combined, shall be limited to 70 and 17,640 trips, respectively. The number of trips per day on the limestone haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for

a period of five years following the date of such entries and shall be made available to the DNR upon request.

3. Fugitive emissions from the limestone haul road (Source ID 56) shall be controlled by applying a chemical dust suppressant. A control efficiency of 90 percent shall be maintained on the first 1.41 miles of the limestone haul road from the quarry. This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. This section of limestone haul road is 30 feet wide and 1.41 miles long, giving it a total area of 24,816 square yards. At least 6,204 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 1,241 gallons of the selected chemical dust suppressant shall be applied every calendar month with no more than 35 days between applications, to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

A control efficiency of 95 percent shall be maintained on the remaining length of the limestone haul road from 1.41 miles from the quarry to the primary limestone crusher (emission point EP2). This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. The remaining limestone haul road is 30 feet wide and 2.89 miles long, giving it a total area of 50,864 square yards. At least 12,716 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 2,543 gallons of the selected chemical dust suppressant shall be applied not less than once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard.

If the selected chemical dust suppressant cannot 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. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals./sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. 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 five years following the date of the above entries and shall be made available to the DNR upon request.

4. The maximum number of round trips per day and per calendar year on the clay haul road (Source ID 57) for all of the haul trucks, combined, shall be limited to 130 and 1,667 trips, respectively. The number of trips per day on the clay haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of five years following the date of such entries and shall be made available to the DNR upon request.
5. Fugitive emissions from the clay haul road (EP57) shall be controlled to an effective control efficiency of 95 percent by applying a chemical dust suppressant. A control efficiency of 95 percent will require a ground inventory of 0.25 gallons the selected chemical dust suppressant per square yard. The clay haul road is 30 feet wide and 0.9 miles long, giving it

a total area of 15,840 square yards. At least 3,960 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 792 gallons of the selected chemical dust suppressant shall be applied not less than once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

If the selected chemical dust suppressant cannot 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. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals./sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. 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 five years following the date of the above entries and shall be made available to the DNR upon request.

It is not uncommon for this clay haul road to go unused for periods greater than one-half month. In the event Lehigh does not use the clay haul road for a period greater than one-half month, Lehigh shall not be required to apply the chemical dust suppressant as provided in the above paragraph, on the condition that such event is noted and explained in the records required herein and that, prior to use, an application will be made, weather permitting and requiring.

6. The maximum number of round trips per day and per calendar year on the paved haul road from the product loadout silos to U.S. Highway 65 (emission point EP80) for all haul trucks combined shall be limited to the values listed below.

Month	Maximum Number of Trips per Day
January	80
February	69
March	200
April	250
May	250
June	250
July	203
August	250
September	250
October	250
November	250
December	250
Calendar Year	Maximum Number of Trips Per Year
January through December	37,302

The number of round trips per day on this haul road shall be entered in a monthly log to demonstrate compliance with this requirement. Monthly logs shall be retained for a period of five years following the date of such entries and shall be made available to the DNR upon request.

7. Fugitive emissions from the paved haul road from the product loadout silos to U.S. Highway 65 shall be controlled to an effective control efficiency of 80 percent by water flushing followed by sweeping. Using an application rate of 0.48 gallons per square yard, this haul road shall require a water flushing followed by sweeping application after every 362 vehicle passes to maintain an 80 percent control efficiency. Based on a worse-case round trip estimate of 222 trips per day, the water flushing followed by sweeping will have to be accomplished every two days. The haul road is 24 feet wide and 2072 feet long, giving a total area of 5,525 square yards. Based on an application rate of 0.48 gallons of water per square yard, 2,652 gallons of water will be required for each application. If water flushing followed by sweeping cannot be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35⁰ F (1.7⁰ C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water flushing and sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated. Additionally, water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period. Records of the applications shall be maintained and shall include the dates and times of each application, the calculated application intensity, the areas treated, the operator's initials, and documentation road and weather conditions, if necessary. If the water flushing is not accomplished because ambient air temperatures are less than 35⁰ F during the entire day, or precipitation exceeding 0.2 inches has occurred in the preceding 24 hours, then the records shall indicate this. 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.

Authority for Requirement: Section V(6 through 12) Iowa Department of Natural Resources
Administrative Consent Order No. 1999-AQ-32

Monitoring Requirements

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Numbers: See Table: Conveying System Transfer Points\
Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units
Subject to 40 CFR 63 Subpart LLL**

Associated Equipment

See Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL, below

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (tons/hr)
EP11	EU11	Raw Material Transfer-Apron Feeder to Collection Belt	CE11	Baghouse	Crushed Limestone	440
EP18	EU18	Grinding Circuit-Raw Material Transfer	CE-18	Baghouse	Raw Clay	800
EP19	EU19	Raw Material Transfer to Homogenizing Silo	CE-19	Baghouse	Raw Mix	200
EP20	EU20	Raw Material Transfer-IBAU Bin Bottom Elevator	CE-20	Baghouse	Raw Mix	550
EP21	EU21	Raw Material Transfer-IBAU Elevator W to top Silo Conveyor	CE-21	Baghouse	Raw Mix	550
EP22	EU22	Raw Material Transfer-IBAU Elevator S to top Silo Conveyor	CE-22	Baghouse	Raw Mix	550
EP23	EU23	IBAU Bin S Top Elevator Raw Material Transfer	CE-23	Baghouse	Raw Mix	550
EP24	EU24	Raw Material Transfer	CE-24	Baghouse	Raw Mix	225
EP33	EU33	Outhaul Conveyor Transfer	CE33	Baghouse	Clinker	180
EP34	EU34	Clinker Truck Loadout	CE34	Baghouse	Clinker	100
EP35	EU35	Outhaul Conveyor Transfer to Clinker Silo	CE35	Baghouse	Clinker	300
EP36	EU36	Clinker Withdrawal Conveyor Transfer	CE36	Baghouse	Clinker	180
EP37	EU37	Clinker Belt 206 to 208 Transfer	CE37	Baghouse	Clinker	300
EP39	EU39	Clinker Transfer	CE39	Baghouse	Clinker	114.58
EP39-1	EU38	Clinker Belt 208 to Belt 211 Transfer	CE38	Baghouse	Clinker	300
	EU39-1	Clinker Ladder				300

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (tons/hr)
EP39-2	EU39-2	Gypsum/Anhydrite Bucket Transfer	None	None	Gypsum/Anhydrite	150
EP39-3	EU39-3	Clinker Bucket Transfer	None	None	Clinker	150
EP41	EU41	No. 3 Finishing Mill Circuit	CE-41	Baghouse	Clinker	30
	EU41A	Vibrating Conveyor Transfer				30
	EU41B	Air Separator				30
EP42	EU41	No. 3 Finishing Mill Circuit	CE-41	Baghouse	Clinker	30
	EU41A	Vibrating Conveyor Transfer				30
	EU41B	Air Separator				30
EP43	EU43	No. 5 Finishing Mill Circuit	CE-43	Baghouse	Clinker	30
	EU43A	Vibrating Conveyor Transfer				30
	EU43B	Air Separator				30
EP44	EU44	No. 6 Finishing Mill Circuit	CE-44	Baghouse	Clinker	30
	EU44A	Vibrating Conveyor Transfer				30
	EU44B	Air Separator				30
EP45	EU45	No. 4 Finishing Mill Circuit	CE-45	Baghouse	Clinker	75
	EU45A	Vibrating Conveyor Transfer				75
	EU5B	Air Separator				75
EP46	EU46	Clinker Transfer	CE-46	Baghouse	Clinker	75
	EU46A	Clinker Transfer				75
EP47	EU47	Storage Silo	CE47	Baghouse	Cement	100
EP48	EU48	Transfer Bucket Elevator	CE48	Baghouse	Cement	350
EP49	EU49	Direct Cement Loadout (Emergency Only)	None	None	Cement	300
EP50	EU50	Silo Row 40 Cement Bulk Loadout	CE50	Baghouse	Cement	350
EP51	EU51	Silo Row 30 Cement Loadout	CE51	Baghouse	Cement	350
EP52	EU52	Silo Row 50 Rail/Truck Cement Loading System	CE52	Baghouse	Cement	400
EP53	EU53	Silo Row 50 Cement Loadout Spout	CE53	Baghouse	Cement	400

Applicable Requirements

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

The emissions from these emission points shall not exceed the levels specified in Table:
Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Limits

Emission Point Number	Associated Emission Unit Number	PM₁₀ Limit (lb/hr)	Construction Permit No.
EP11	EU11	0.86	82-A-022-S4
EP18	EU18	1.41	82-A-028-S3
EP19	EU19	1.37	77-A-223-S3
EP20	EU20	0.29	82-A-032-S3
EP21	EU21	0.29	82-A-029-S3
EP22	EU22	0.92	82-A-031-S3
EP23	EU23	0.88	82-A-030-S3
EP24	EU24	1.34	82-A-033-S3
EP33	EU33	0.51	80-A-175-S3
EP34	EU334	0.17	80-A-177-S3
EP35	EU35	1.37	80-A-179-S3
EP36	EU36	0.69	80-A-178-S3
EP37	EU37	0.17	80-A-174-S3
EP39	EU39	1.08	86-A-021-S3
EP39-1	EU38	0.86	99-A-225-S3
	EU39-1		
EP39-2	EU39-2	N/A	None
EP39-3	EU39-3	N/A	None
EP41	EU41	1.16	00-A-396-S2
	EU41A		
	EU41B		
EP42	EU41	1.16	00-A-397-S2
	EU41A		
	EU41B		
EP43	EU43	1.46	00-A-398-S2
	EU43A		
	EU43B		
EP44	EU44	1.46	00-A-400-S2
	EU44A		
	EU44B		
EP45	EU45	5.14	82-A-038-S3
	EU45A		
	EU45B		
EP46	EU46	0.77	82-A-037-S3

Emission Point Number	Associated Emission Unit Number	PM ₁₀ Limit (lb/hr)	Construction Permit No.
	EU46A		
EP47	EU47	1.29	78-A-322-S3
EP48	EU48	0.51	83-A-008-S3
EP49	EU49	N/A	None
EP50	EU50	0.17	83-A-009-S3
EP51	EU51	0.17	83-A-010-S3
EP52	EU52	1.08	90-A-365-S3
EP53	EU53	1.08	90-A-366-S3

Pollutant: Opacity

Emission Limit: 10 %⁽¹⁾

Authority for Requirement: DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits

567 IAC 23.1(4)"bl"

40 CFR 63 Subpart LLL (40 CFR 63.1345)

⁽¹⁾ If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter

Emission Limit: 0.1 gr/dscf

Authority for Requirement: DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits

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.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements
EP11	EU11	Each emission source shall not operate more than 7,884 hours per	Determine the annual hours of operation of each emission	DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw
EP18	EU18			
EP19	EU19			
EP20	EU20			
EP21	EU21			

EP22	EU22	rolling twelve-	source on a rolling twelve-	and Finish Mills\ Storage											
EP23	EU23	month period.			month total for each month	Bins\ Bulk Loading and									
EP41	EU41	Each emission			of operation.	Unloading Units Subject to 40									
	EU41A						source shall not								
	EU41B						operate more than								
EP42	EU41						7,534 hours per								
	EU41A						rolling twelve-								
	EU41B						month period								
EP43	EU43						This emission	DNR Construction Permit							
	EU43A								source shall not						
	EU43B								operate more than						
EP44	EU44								5,843 hours per						
	EU44A								rolling twelve-						
	EU44B								month period.						
EP45	EU45								This emission	86-A-021-S2					
	EU45A										source shall not				
	EU45B										operate more than				
EP46	EU46										5,843 hours per				
	EU46A										rolling twelve-				
EP39	EU39	month period.	source on a rolling twelve-	and Finish Mills\ Storage											
											EU39	Each emission	month total for each month	of operation.	Unloading Units Subject to 40
					EU41	source shall not									
EU41A	operate more than														
EU41B	7,534 hours per														
EP42	EU41	rolling twelve-													
	EU41A	month period													
	EU41B														
EP43	EU43	This emission			source on a rolling twelve-	and Finish Mills\ Storage									
	EU43A						source shall not								
	EU43B						operate more than								
EP44	EU44						5,843 hours per								
	EU44A						rolling twelve-								
	EU44B						month period								
EP45	EU45						This emission	of operation.	Unloading Units Subject to 40						
	EU45A									source shall not					
	EU45B									operate more than					
EP46	EU46									5,843 hours per					
	EU46A									rolling twelve-					
EP39	EU39		month period.	source on a rolling twelve-						and Finish Mills\ Storage					
											EU39	Each emission	month total for each month	of operation.	Unloading Units Subject to 40
EU41A	operate more than														
EU41B	7,534 hours per														
EP42	EU41		rolling twelve-												
	EU41A	month period													
	EU41B														
EP43	EU43	This emission	source on a rolling twelve-		and Finish Mills\ Storage										
	EU43A					source shall not									
	EU43B					operate more than									
EP44	EU44					5,843 hours per									
	EU44A					rolling twelve-									
	EU44B					month period									
EP45	EU45					This emission	of operation.	Unloading Units Subject to 40							
	EU45A								source shall not						
	EU45B								operate more than						
EP46	EU46								5,843 hours per						
	EU46A								rolling twelve-						
EP39	EU39			month period.					source on a rolling twelve-	and Finish Mills\ Storage					
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EP43	EU43	This emission	source on a rolling twelve-	and Finish Mills\ Storage											
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	EU44A				rolling twelve-										
	EU44B				month period										
EP45	EU45				This emission	of operation.	Unloading Units Subject to 40								
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EP43	EU43	This emission	source on a rolling twelve-	and Finish Mills\ Storage											
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	EU44B				month period										
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EP42	EU41							rolling twelve-							
	EU41A	month period													
	EU41B														
EP43	EU43	This emission	source on a rolling twelve-	and Finish Mills\ Storage											

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements (cont.)

Emission Point Number	Associated Emission Unit Number	Process Throughput Limit			Reporting & Recordkeeping ⁽¹⁾	Authority for Requirement
		Max. No. of Transfers	Maximum Daily Throughput -Each Transfer (tons/day)	Maximum Calendar Year Throughput- Each Transfer (tons/year)		
EP39-2	EU39-2	2	3,600	100,000	The total daily throughput and throughput rates for each source shall be entered into a daily log.	Section V(3) Iowa Department of Natural Resources Administrative

EP39-3	EU39-3	2	3,600	500,000	and annual throughputs totaled annually to demonstrate compliance with the daily and annual throughput limits.	Consent Order No. 1999-AQ-32
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⁽¹⁾The records shall be kept on site for a minimum of five years, and shall be available for inspection by the Department.

Additional 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. The records shall show the following:

Monitoring for NESHAP Subpart LLL at the facility shall be done per 40 CFR 63.1350

Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355

Authority for Requirement: DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63 Subpart LLL

NSPS and NESHAP

These emission units are subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL these units are exempted from any otherwise applicable new source performance standard contained in Subpart F, to which they are also subject, that are less stringent than the Subpart LLL requirements.

An O & M plan is required by Subpart LLL for these emission units. Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-**see Appendix B**, Section 9 Clinker Grinding to Manufacture Finish Product for Finish Mills 3, 4, 5, and 6; and Section 10 Material Handling Systems for the other emission units listed in Table Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits.

Authority for Requirements: 40 CFR 60 Subpart F
567 IAC 23.1(2)"c"
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Point Characteristics

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

Emission Point Number	Emission Unit Number	Construction Permit Number	Stack Characteristics				
			Stack Height (ft. from ground)	Stack Opening (inches, dia.)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	Discharge Style
EP11	EU11	82-A-022-S4	51.8'	39 X 16	5,000	70	Horizontal
EP18	EU18	82-A-028-S3	89.6'	24	6,600	200	Horizontal
EP19	EU19	77-A-223-S3	87'8"	24	14,600	120	Horizontal
EP20	EU20	82-A-032-S3	17'7"	26 X 18	1,400	200	Horizontal
EP21	EU21	82-A-029-S3	137'2"	16	1,400	200	Horizontal
EP22	EU22	82-A-031-S3	137'7"	16	4,300	200	Horizontal
EP23	EU23	82-A-030-S3	135'9"	16	4,100	200	Horizontal
EP24	EU24	82-A-033-S3	172'6"	24	6,300	200	Horizontal
EP33	EU33	80-A-175-S3	89'2"	8 X 6	3,000	70	Horizontal
EP34	EU34	80-A-177-S3	87'1"	12 X 12	1,000	70	Horizontal
EP35	EU35	80-A-179-S3	192'	18 X 24	8,000	70	Horizontal
EP36	EU36	80-A-178-S3	13'10"	18 X 12	4,000	70	Horizontal
EP37	EU37	80-A-174-S3	11'11"	6 X 6	1,000	70	Horizontal
EP39	EU39	86-A-021-S3	55'10"	20	12,000	70	Unobstructed Vertical
EP39-1	EU38	99-A-225-S3	55'	17.9 X 20	8,000 - 10,000	70 - 200	Horizontal
	EU39-1						
EP41	EU41	00-A-396-S2	56'2"	16 X 16	13,500	170	Horizontal
	EU41A						
	EU41B						
EP42	EU41	00-A-397-S2	49'3"	16 X 16	13,500	170	Horizontal
	EU41A						
	EU41B						
EP43	EU43	00-A398-S2	49'10"	18 X 18	17,000	170	Horizontal
	EU43A						
	EU43B						
EP44	EU44	00-A-400-S2	72'2"	16 X 16	14,300	170	Unobstructed Vertical
	EU44A						
	EU44B						
EP45	EU45	82-A-038-S3	119'10"	48	60,000	200	Unobstructed Vertical
	EU45A						
	EU45B						
EP46	EU46	82-A-037-S3	77'	28	9,000	100	Horizontal
	EU46A						
EP47	EU47	78-A-322-S3	135'10"	24 X 24	15,000	70	Horizontal
EP48	EU48	83-A-008-S3	47'	12 X 10	3,000	70	Horizontal

			Stack Characteristics				
Emission Point Number	Emission Unit Number	Construction Permit Number	Stack Height (ft. from ground)	Stack Opening (inches, dia.)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	Discharge Style
EP50	EU50	83-A-009-S3	29'2"	4 X 12	1,000	70	Horizontal
EP51	EU51	83-A-010-S3	29'6"	4 X 12	1,000	70	Horizontal
EP52	EU52	90-A-365-S3	48'1"	20 X 17	6,300	70	Horizontal
EP53	EU53	90-A-366-S3	29'3"	8	6,300	70	Horizontal

Authority for Requirement: DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

The facility shall check the opacity as described in 40 CFR 63.1350 (f)

Authority for Requirement: DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

567 IAC 23.1(4)"bl"

40 CFR 63 Subpart LLL

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: See Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Associated Equipment

See Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL, below

Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (tons/hr)
EP87	EU87	Reagent Bin #1 (South)	CE87	Baghouse	Reagent	89.3
EP88	EU88	Reagent Bin #2 (North)	CE88	Baghouse	Reagent	89.3
EP92	EU92	Storage Bin Loading System	CE92	Baghouse	Secondary Fuels	110
EP92A	EU92A	Storage Bin Discharge System	CE92A	Baghouse	Secondary Fuels	110
EP94	EU94	Rotochopper System	CE94	Baghouse	Secondary Fuels	110

Applicable Requirements

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

The emissions from these emission points shall not exceed the levels specified in Tables: *BACT Affected Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-BACT Emission Limits and Other Emission Limits.*

Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL –BACT Emission Limits

Emission Point Number	Associated Emission Unit Number	PM Limit (gr/dscf)	PM ₁₀ Limit (gr/dscf)	Opacity Limit	Authority for Requirement: Construction Permit No.
EP87	EU87	0.01	0.01	5% ⁽¹⁾	03-A-980-P3
EP88	EU88	0.01	0.01	5% ⁽¹⁾	03-A-981-P3
EP92	EU92	0.01	0.01	5% ⁽¹⁾	03-A-985-P2
EP92A	EU92A	0.01	0.01	5% ⁽¹⁾	05-A-491-P1
EP94	EU94	0.01	0.01	5% ⁽¹⁾	03-A-987-P2

⁽¹⁾ The averaging period for this standard is one (1) hour.

Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL –Other Emission Limits

Emission Point Number	Associated Emission Unit Number	PM ₁₀ Limit (lb/hr)	Authority for Requirement: Construction Permit No.
EP87	EU87	0.086	03-A-980-P3
EP88	EU88	0.086	03-A-981-P3
EP92	EU92	0.51	03-A-985-P2
EP92A	EU92A	0.05	05-A-491-P1
EP94	EU94	0.50	03-A-987-P2

Pollutant: Opacity

Emission Limit: 10 %

Authority for Requirement: DNR Construction Permits specified in Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Other Emission Limits

567 IAC 23.1(4)"bl"

40 CFR 63 Subpart LLL

Operational Limits & Requirements

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

Operating Limits

1. The facility (plant number 17-01-005) is required to schedule a PM₁₀ compliance test within thirty (30) days if it exceeds the one (1) hour, 5% BACT opacity limit.

Authority for Requirement: DNR Construction Permits specified in Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Other Emission Limits

Process throughput:

1. The amount of reagent handled by emission unit 87 shall not exceed 32 tons per hour as a daily average.

Authority for Requirement: DNR Construction Permit 03-A-980-P3

2. The amount of reagent handled by emission unit 88 shall not exceed 32 tons per hour as a daily average.

Authority for Requirement: DNR Construction Permit 03-A-981-P3

3. The amount of secondary fuels (i.e. obsolete seed) discharged through emission unit 92A shall not exceed 21 tons per hour as a daily average.

Authority for Requirement: DNR Construction Permit 05-A-491-P1

4. The amount of secondary fuels (i.e. obsolete seed) processed by emission unit 94 shall not exceed 53 tons per hour as a daily average.

Authority for Requirement: DNR Construction Permit 03-A-987-P2

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. The records shall show the following:

1. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.
2. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1350.
3. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1355.

Authority for Requirement: DNR Construction Permits specified in Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Other Emission Limits

567 IAC 23.1(4)"bl"

40 CFR 63.Subpart LLL

4. The total amounts of reagent handled through each unit (87 and 88) each day (in tons), the total number of hours each unit operated (i.e. was filled), and the average hourly amount of reagent handled by each unit (tons/hr).

Authority for Requirement: DNR Construction Permits 03-A-980-P3 (EP87) and 03-A-981-P3 (EP88).

5. The total amount of secondary fuels (i.e. obsolete seed) processed (EU94) or discharged (EU92A) through each unit each day (tons), the total number of hours each unit operated and the average rate of secondary fuels processed (EU94) and discharged (EU92A) by the units (tons/hour).

Authority for Requirement: DNR Construction Permits 03-A-987-P2 (EP94) and 05-A-491-P1 (EP92A).

NSPS and NESHAP

These emission units are subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL these units are exempted from any otherwise applicable new source performance standard contained in Subpart F, to which they are also subject, that are less stringent than the Subpart LLL requirements.

An O & M plan is required by Subpart LLL for these emission units. Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-**see Appendix B**, Section 10 Material Handling Systems.

Authority for Requirements: 40 CFR 60 Subpart F
567 IAC 23.1(2)"c"
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: BACT Affected Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Point Characteristics

Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

Emission Point Number	Emission Unit Number	Construction Permit Number	Stack Characteristics				Discharge Style
			Stack Height (ft. from ground)	Stack Opening (inches, dia.)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	
EP87	EU87	03-A-980-P3	61	10x20	1,000	70	Horizontal
EP88	EU88	03-A-981-P3	55"4"	10x20	1,000	70	Horizontal
EP92	EU92	03-A-985-P2	65	14x16	2,935	82	Horizontal
EP92A	EU92A	05-A-491-P1	10	6	400	70	Vents into building
EP94	EU94	03-A-987-P2	12	12x24	5,800	70	Horizontal

Authority for Requirement: DNR Construction Permits specified in Table: BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall

submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

The facility shall check the opacity as described in 40 CFR 63.1350 (f).

Authority for Requirement: DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

567 IAC 23.1(4)"bl"

40 CFR 63.1350

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: See Table: Non-Fugitive Sources Subject to 40 CFR Part 60 Subpart F

Associated Equipment

See Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F

Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (Tons/hr)
EP8	EU8	Raw Material Transfer-Belt D-49 to D-01	CE8	Baghouse	Crushed Limestone	585
EP9	EU9	Raw Material Transfer-Belt D-01 to D-02	CE9	Baghouse	Crushed Limestone	585
EP10	EU10	Raw Material Transfer-Belt D-02 to Stone Bin	CE10	Baghouse	Crushed Limestone	585
EP12	EU12	Raw Material Transfer-Reclaim Belt 2 to Crusher/Stone Belt 2	CE12	Baghouse	Crushed Limestone	220
EP15	EU15	Clay Crushing	CE15	Baghouse	Clay and Crushed Limestone	500

Applicable Requirements

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

The emissions from these emission points shall not exceed the levels specified in Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F -Emission Limits

Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity ⁽¹⁾ Limit	PM ₁₀ Limit (lb/hr)	PM Limit (gr/scf)	Construction Permit No. (Authority for Requirement)
EP8	EU8	10% ⁽²⁾	0.36	0.1 ⁽³⁾	82-A-027-S4
EP9	EU9	10% ⁽²⁾	0.54	0.1 ⁽³⁾	82-A-020-S4
EP10	EU10	10% ⁽²⁾	0.54	0.1 ⁽³⁾	82-A-021-S4
EP12	EU12	10% ⁽²⁾	0.36	0.1 ⁽³⁾	82-A-024-S4
EP15	EU15	10% ⁽²⁾	0.79	0.1 ⁽³⁾	82-A-019-S4

⁽¹⁾ If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

⁽²⁾ Additional Authority for Requirement 567 IAC 23.1(2)"c" and 40 CFR 60.62(c)

⁽³⁾ Additional Authority for Requirement 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.

Operating Limits

1. Monitoring for NSPS Subpart F at this plant shall be done per 40 CFR§60.63.

Hours of operation:

For EU8, EU9 and EU10:

1. Each emission source shall not operate more than 7,884 hours per rolling twelve (12) month period.

Authority for Requirement: DNR Construction Permits 82-A-027-S4 (EP8), 82-A-020-S4 (EP9) and 82-A-021-S4 (EP10)

For EU12 and EU15:

1. Each emission source shall not operate more than 876 hours per rolling twelve (12) month period.

Authority for Requirement: DNR Construction Permit 82-A-024-S4 (EP12)and 82-A-019-S4 (EP15)

Control equipment parameters:

1. All control equipment shall be maintained according to the manufacturer's specifications.

Authority for Requirement: DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F-Emission Limits

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. The records shall show the following:

1. Determine the annual hours of operation on a rolling twelve month total for each month of operation.
2. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.
3. Recordkeeping for NSPS Subpart F at the facility shall be done per 40 CFR§60.65.

Authority for Requirement: DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F-Emission Limits

NSPS and NESHAP

These emission units are subject to NSPS Subpart A: *General Provisions* and NSPS Subpart F: *Standards of Performance for Portland Cement Plants*.

Authority for Requirement: 40 CFR Part 60 Subpart F
567 IAC 23.1(2)"c"

Emission units 8, 9, 10, and 12 are subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL these units are exempted from any otherwise applicable new source performance standards contained in Subpart F, to which it is also subject, that are less stringent than the Subpart LLL requirements.

An O & M plant is required by Subpart LLL for EP8, EP9, EP10, and EP12. Relevant requirements of O & M plan for this equipment: Opacity-see **Appendix B**, Section 10 Material Handling Systems.

Authority for Requirements: 40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F-Emission Point Characteristics

Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F-Emission Point Characteristics

Emission Point Number	Emission Unit Number	Construction Permit Number	Stack Characteristics				Discharge Style
			Stack Height (ft. from ground)	Stack Opening (inches, dia.)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	
EP8	EU8	82-A-027-S4	8	10 X 12	2,100	70	Horizontal
EP9	EU9	82-A-020-S4	77.4	11 X 20	3,100	70	Horizontal
EP10	EU10	82-A-021-S4	75'8"	16	3,150	70	Horizontal
EP12	EU12	82-A-024-S4	33	16	2,100	70	Horizontal
EP15	EU15	82-A-019-S2	25'8"	30	9,300	70	Obstructed Vertical

Authority for Requirement: DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to 40 CFR 60 Subpart F -Emission Point Characteristics

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 either the

temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

The facility shall check the opacity weekly during a period when the emission units on these emission points are at or near full capacity and record the reading. Maintain a written record of the observations and any action resulting from the observations for a minimum of five years. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the units. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (>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 ☒

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐
For EP15-see Appendix C.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: See Table: Crushers and Raw Material Transfer

Associated Equipment

See Table: Crushers and Raw Material Transfer

Table: Crushers and Raw Material Transfer

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (tons/hr)
EP2	EU2	Primary Crusher	CE2	Baghouse	Limestone and Other Calcareous Materials	750
	EU2A	Raw Material Transfer				
EP3	EU3	Screening	CE3	Baghouse	Limestone and Other Calcareous Materials	750
	EU3A	Raw Material Transfer-Belt 2 to Screen				750
	EU3B	Raw Material Transfer-Screen to Belt 3				487
	EU3C	Raw Material Transfer-Screen to Belt 4				450
EP5	EU5	Secondary Crusher	CE5	Baghouse	Crushed Limestone and Other Calcareous Materials	450
	EU5A	Raw Material Transfer-Stone 5 to 6				450
	EU5B	Raw Material Transfer				450
EP6	EU6	Raw Material Transfer	CE6	Baghouse	Crushed Limestone and Other Calcareous Materials	487
	EU6A	Raw Material Transfer				750

Applicable Requirements

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

The emissions from these emission points shall not exceed the levels specified in Table; Crushers and Raw Material Transfer -Emission Limits

Table: Crushers and Raw Material Transfer -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity ⁽¹⁾ Limit	PM ₁₀ Limit (lb/hr)	PM Limit ⁽²⁾ (gr/scf)	Construction Permit No. (Authority for Requirement)
EP2	EU2	40%	2.4	0.1	77-A-260-S3
	EU2A				

Table: Crushers and Raw Material Transfer-Emission Limits (cont)

Emission Point Number	Associated Emission Unit Number	Opacity ^(1,2) Limit	PM ₁₀ Limit (lb/hr)	PM Limit ⁽³⁾ (gr/scf)	Construction Permit No. (Authority for Requirement)
EP3	EU3	40%	1.03	0.1	77-A-313-S3
	EU3A				
	EU3B				
	EU3C				
EP5	EU5	40%	0.81	0.1	00-A-395-S2
	EU5A				
	EU5B				
EP6	EU6A	40%	0.51	0.1	77-A-360-S3
	EU6B				

⁽¹⁾ If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

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

⁽³⁾ Additional Authority for Requirement 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.

Operating Limits

Hours of operation:

1. Each emission source shall not operate more than 4,380 hours per rolling twelve (12) month period.

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. The records shall show the following:

1. Determine the annual hours of operation on a rolling twelve month total for each month of operation.

Authority for Requirement: DNR Construction Permits specified in Table: Crushers and Raw Material Transfer-Emission Limits

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: Crushers and Raw Material Transfer-Emission Point Characteristics

Table: Crushers and Raw Material Transfer-Emission Point Characteristics

Emission Point Number	Emission Unit Number	Construction Permit Number	Stack Characteristics				Discharge Style
			Stack Height (ft. from ground)	Stack Opening (inches, dia.)	Exhaust Flowrate (scfm)	Exhaust Temp. (°F)	
EP2	EU2	77-A-260-S3	37.6'	36 X 42	28,000	70	Horizontal
	EU2A						
EP3	EU3	77-A-313-S3	45'	24 X 30	12,000	70	Horizontal
	EU3A						
	EU3B						
	EU3C						
EP5	EU5	00-A-395-S2	25'8"	18	9,500	70	Horizontal
	EU5A						
	EU5B						
EP6	EU6	77-A-360-S3	69'	12 X 24	3,000	70	Horizontal
	EU6A						

Authority for Requirement: DNR Construction Permits specified in Table: Crushers and Raw Material Transfer-Emission Limits

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

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

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

Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐
See Appendix C

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: See Table: Kiln/Calciner/Preheater

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Kiln/Calciner/Preheater

Emissions Control Equipment ID Number: See Table: Kiln/Calciner/Preheater

Emissions Control Equipment Description: See Table: Kiln/Calciner/Preheater

Continuous Emissions Monitors ID Numbers: See Table: Kiln/Calciner/Preheater

Table: Kiln/Calciner/Preheater

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Continuous Emissions Monitor Number	Raw Material	Rated Capacity
EP25	EU25	Kiln/Calciner/Preheater	CE25	ESP	ME25A (HCl, SO ₂)	Raw Mix and Fuel	150 short tons of clinker/hr
			CE25A	Wet Scrubber	ME25B (NO _x)		
			CE25B	SNCR	ME25C (PM) ME25D (Hg) ME25E (THC)		

Applicable Requirements

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

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

BACT Emission Limits

Pollutant: Opacity

Emission Limit(s): 15%⁽¹⁾

Authority for Requirement: DNR Construction Permit 03-A-968-P3

⁽¹⁾ One hour average

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.516 lb/ton of clinker

Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.516 lb/ton of clinker

Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Sulfur Dioxide (SO₂)
Emission Limits: 530.3 tons/yr ⁽²⁾ and 1.01 lb/ton of clinker ^{(2) (3)}
Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Nitrogen Oxides (NO_x)
Emission Limits: 1,496 tons/yr ⁽²⁾ and 2.85 lb/ton of clinker ^{(2) (3)}
Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Carbon Monoxide (CO)
Emission Limits: 3.7 lb/ton of clinker
Authority for Requirement: DNR Construction Permit 03-A-968-P3

⁽²⁾ Compliance with the applicable emission standards of this permit are based on the CEM data from the owner/operator. Hourly emissions shall be the average of four 15-minute averages analyzed and recorded by the CEM.

⁽³⁾ The emission limit is a thirty (30) day rolling average. The limit does not include periods of SSM.

Other Emission Limits

Pollutant: Opacity
Emission Limit(s): ⁽⁴⁾
Authority for Requirement: DNR Construction Permit 03-A-968-P3
567C 23.1(4)"bl"
40 CFR 63.1343(b)

Pollutant: Particulate Matter (PM₁₀)
Emission Limit(s): 77.4 lb/hr
Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.07 lb/ton clinker ⁽⁴⁾
Authority for Requirement: 40 CFR 63.1343(b)

⁽⁴⁾ DNR Construction Permit 03-A-968-P3 contains an Opacity limits of 20% and a PM limit of 0.30 lb/ton of kiln feed, limits which were in effect prior to 40 CFR 63 Subpart LLL amendment effective November 9, 2010.

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 458.17 lb/hr ⁽⁵⁾
Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Nitrogen Oxides (NO_x)⁽⁶⁾
Emission Limits: 427.5 lb/hr
Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Carbon Monoxide (CO)
Emission Limits: 1020.0 lb/hr
Authority for Requirement: DNR Construction Permit 03-A-968-P3

Pollutant: Dioxins and Furans (D/F)⁽⁷⁾
Emission Limit(s): 0.4 ng/dscm (1.7×10^{-10} gr/dscf) (TEQ)
Authority for Requirement: DNR Construction Permit 03-A-968-P3
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)

Pollutant: Mercury (Hg)
Emission Limit(s): 55 lb/MM tons clinker ⁽¹⁰⁾
Authority for Requirement: 40 CFR 63.1343(b)

Pollutant: Total Hydrocarbon (THC)
Emission Limit(s): 24 ppmvd ⁽⁸⁾ ⁽¹⁰⁾
Authority for Requirement: 40 CFR 63.1343(b)

Pollutant: Hydrogen Chloride (HCl)
Emission Limit(s): 3 ppmvd ⁽⁹⁾ ⁽¹⁰⁾
Authority for Requirement: 40 CFR 63.1343(b)

⁽⁵⁾ Standard is expressed as a 3 hour average.

⁽⁶⁾ Standard is expressed as a calendar month average.

⁽⁷⁾ Limit is corrected to 7% oxygen and when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 °C (400 °F) or less. If the average of the performance test run average temperatures at the inlet to the particulate matter control device is greater than 204 °C (400 °F) then the D/F standard is 0.2 ng/dscm (8.7 E-11 gr./dscf)(TEQ) corrected to 7% oxygen.

⁽⁸⁾ Limit is corrected to 7% oxygen. Measured as propane. In addition, per 40 CFR 63.1343(b) Table 1, any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP. Initial compliance determined during a Method 320 and Method 18 stack test of the kiln stack for total organic HAP, where a THC Wet (ppmvw) site-specific operating limits is established. If kiln gases are diverted through a coal mill with a separate stack, the coal mill must be stack tested simultaneously for total organic HAP and flow weighted average total organic HAP emissions calculated per 40 CFR 1349(b)(7)(v). Continuous compliance demonstrated through complying with a THC site-specific operating limit using the THC CEMS per 40 CFR 63.1350(j).

⁽⁹⁾ Measured as propane. Per 40 CFR 63.1348(b)(8), as an alternative to the HCl limits, a source may use a SO₂ CEMS to establish an SO₂ Wet (ppmvw) site-specific operating limits during a Method 321 HCl performance test, and monitor SO₂ levels using the procedures specified in 40 CFR 63.1350(l). If kiln gases are diverted through a coal mill with a separate stack, the coal mill must be stack tested simultaneously for HCl and a kiln-specific HCl limit calculated per 40 CFR 1349(b)(6)(iv).

⁽¹⁰⁾ Rolling 30-day average (excludes periods of startup and shutdown).

Operational Limits & Requirements

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

Operating Limits

- A. The kiln and calciner are limited to firing on the following fuels and alternative fuels:
- *Coal*
 - *Coke*
 - *Used oil*
 - *Fuel oil*
 - *Natural gas*
 - *Tires and tire chips*
 - *Obsolete seeds*
 - *Wood chips.* The following materials under this category are approved without further review: chipped railroad ties and chipped utility poles.
 - *Resins*
 - *Contraband.* The following materials under this category are approved without further review: seized drugs & seized drug paraphernalia.
 - *Non-chlorinated plastics*
- B. Per 40 CFR §279.63, used oil that contains a total halogen concentration greater than 1,000 ppm is presumed to be a hazardous waste and a rebuttal demonstration is required to burning the used oil. To ensure that the used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of 40 CFR §279.10(b)(1)(ii), a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.
- C. The polychlorinated biphenyl (PCB) concentration of any used oil combusted shall be less than 50 ppm.
- D. Used oil shall only be burned while the kiln system is at normal operating temperatures and not during start-up or shutdown.
- E. A chemical analysis shall be conducted on plastic materials to be fired in the kiln and calciner to determine the chlorine content of the plastic.
- F. Materials that fit under one of the following categories may be used as secondary raw materials in the pyroprocessing system:
- *Fly & bottom ash*
 - *Foundry by-products.* The following materials under this category are approved without further review: silica and iron.
 - *Slags*
 - *Clay by-products*
 - *Iron by-products*
 - *Silica by-products*
 - *Lime containing secondary materials.* The following materials under this category are approved without further review: sugar beet lime.
 - *Synthetic gypsum (finish grinding)*
- G. Prior to use of any fuels or materials that fall under the categories listed in Conditions A or F

above, unless otherwise specified in those conditions, the owner or operator shall supply material data to the Department for review and approval. This data shall include, but is not limited to:

- A description of the alternative fuel or alternate raw material,
 - A complete chemical analysis of the material, and
 - Evaluation of the impact on air emissions.
- H. In accordance with NSPS Subpart F (Standards of Performance for Portland Cement Plants), the facility (plant number 17-01-005) shall record its daily production rates and kiln feed rates.
- I. The kiln shall be operated such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, meets the requirements of 40 CFR §63.1346 ⁽¹⁾ (Subpart LLL – National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).
- J. In accordance with 40 CFR §63.1349(b) ⁽²⁾, PM performance tests shall be repeated annually ⁽³⁾.
- K. In accordance with 40 CFR §63.1349(c) ⁽⁴⁾, D/F performance tests shall be repeated every thirty (30) months.

⁽¹⁾ DNR Construction Permit 03-A-968-P3 references 40 CFR §63.1344 which was the section of the rules that was effective prior to 40 CFR 63 Subpart LLL amendment effective November 9, 2010.

⁽²⁾ DNR Construction Permit 03-A-968-P3 references 40 CFR §63.1349(c) which was the subsection of the rules that was effective prior to 40 CFR 63 Subpart LLL amendment effective November 9, 2010.

⁽³⁾ DNR Construction Permit 03-A-968-P3 states that PM performance test shall be repeated every five years, which was effective prior to 40 CFR 63 Subpart LLL amendment effective November 9, 2010.

⁽⁴⁾ DNR Construction Permit 03-A-968-P3 references 40 CFR §63.1349(d) which was the subsection of the rules that was effective prior to 40 CFR 63 Subpart LLL amendment effective November 9, 2010.

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. The records shall show the following:

- A. The owner or operator shall maintain a record of the total halogen content concentration (in ppm) for all of the used oil burned. If the total halogen concentration is greater than or equal to 1,000 ppm, the owner or operator shall also maintain the rebuttal demonstration for the used oil showing that it does not contain hazardous waste. The owner or operator shall determine the halogen content of the used oil by:
- Testing the used oil;
 - Applying knowledge of the halogen content of the used oil in light of the materials or processes used, or
 - If the used oil has been received from a processor/re-refiner subject to regulation under subpart F of 40 CFR Part 279, using information provided by the processor/re-refiner.
- B. A record showing the PCB content meets the requirements of Operating Limits condition C. above. This record shall be either:
- Testing to determine the PCB concentration on individual samples, or in accordance with the testing procedures described in 40 CFR 761.60(g)(2), or
 - Other information documenting that the used oil fuel does not contain PCBs in a

- concentration equal to or greater than 50 ppm, including either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the used oil contains no detectable PCBs.
- C. The owner or operator shall develop written operating procedures to ensure that used oil is not burned during start-up or shutdown. The owner or operator shall document any deviations from the written operating procedures.
 - D. A copy of each plastic chemical analysis or certification that the plastic does not contain chlorine.
 - E. The daily kiln production rates and kiln feed rates.
 - F. The date and duration of use of EP 25 as a bypass.
 - G. Copies of the semiannual excess emissions reports per 40 CFR § 60.65.
 - H. A record showing the total annual NO_x emissions on a rolling twelve (12) month basis for each month of operation.
 - I. A record showing the total annual SO₂ emissions on a rolling twelve (12) month basis for each month of operation.
 - J. A copy of all PM CPMS and corresponding opacity test results if a PM CPMS is used for compliance.
 - K. Monitoring for NESHAP Subpart LLL at the facility (plant number 82-04-005) shall be done per 40 CFR §63.1350.
 - L. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 82-04-005) shall be done per 40 CFR §63.1355.

Authority for Requirement: DNR Construction Permit 03-A-968-P3

NSPS and NESHAP

This emission unit is subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL this unit is exempted from any otherwise applicable new source performance standards contained in Subpart F, to which it is also subject, that are less stringent than the Subpart LLL requirements.

An O & M plan is required by Subpart LLL for this emission unit. Relevant requirements of the O & M plan for this equipment: Particulate Matter and Opacity-**see Appendix B**, Section Raw Material Pyro-Processing to Form Clinker.

Authority for Requirements: 40 CFR 60 Subpart F
 567 IAC 23.1(2)"c"
 40 CFR 63 Subpart LLL
 567 IAC 23.1(4)"bl"

This equipment is of the source type subject to New Source Performance Standards subpart DDDD - Standards of Performance for Standards of Performance for *Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999*.

Authority for Requirements: 40 CFR 60 Subpart DDDD

Emission Point Characteristics

This emission point shall conform to the specifications listed below.

Stack Height (ft., from the ground): 268.9

Stack Opening (inches, dia.): 146

Exhaust Flow Rate (scfm): 264,800

Exhaust Temperature (°F): 130

Discharge Style: Vertical unobstructed

Authority for Requirement: DNR Construction Permit 03-A-968-P3

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Stack Testing:

Pollutant – Particulate Matter (PM)

Stack Test to be Completed by – Annually

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

Authority for Requirement – 40 CFR 63.1349(b)(1)

Pollutant - Dioxins/Furans (D/F)

Stack Tests to be Completed by – Once every thirty (30) months ^{(1) (2)}

Test Method - 40 CFR 60, Appendix A, Method 23

Authority for Requirement - DNR Construction Permit 03-A-968-P3

40 CFR 63.1349(b)(3)

567 IAC 23.1(4)"bl"

Pollutant – Mercury (Hg)

Stack Test to be Completed by – Annually ⁽⁴⁾

Test Method – 40 CFR 60, Appendix A, Method 29 or

40 CFR 60, Appendix A, Method 30B

Authority for Requirement – 40 CFR 63.1349(b)(5)

Pollutant – Total Hydrocarbons (THC)

Stack Test to be Completed by – Once every thirty (30) months ^{(1) (3)}

Test Method – 40 CFR 60, Appendix A, Method 25A

Authority for Requirement – 40 CFR 63.1349(b)(4)

Pollutant – Total Organic HAP

Stack Test to be Completed by – Once every thirty (30) months ^{(1) (3)}

Test Method - 40 CFR 60, Appendix A, Method 18, or
40 CFR 60, Appendix A, Method 320, or
ASTM D6348093,
or a combination of the above methods

Authority for Requirement – 40 CFR 63.1349(b)(7)

Pollutant – Hydrochloric Acid (HCl)

Stack Test to be Completed by – Once every thirty (30) months ⁽¹⁾

Test Method – 40 CFR 60, Appendix A, Method 321

Authority for Requirement – 40 CFR 63.1349(b)(6)

⁽¹⁾ Per 40 CFR §63.1349(c) performance testing shall be repeated every thirty (30) months.

⁽²⁾ The owner or operator shall have sixty (60) days from the initial firing of a chlorine containing material to conduct an additional Dioxin/Furan (D/F) compliance test.

⁽³⁾ Instead of conducting the performance test for THC as specified in 40 CFR 63.1349(b)(4), you may conduct a performance test to determine emissions of total organic HAP by following the procedures in 40 CFR 63.1349(b)(7).

⁽⁴⁾ Per 40 CFR §63.1350(k) if mercury emissions from the coal mill and alkali bypass are below the method detection limit for two consecutive annual performance tests, you may reduce the frequency of the performance tests of coal mills and alkali bypasses to once every 30 months. If the measured mercury concentration exceeds the method detection limit, you must revert to testing annually until two consecutive annual tests are below the method detection limit.

Continuous Emissions Monitoring:

A. The following monitoring systems are required to demonstrate compliance with the NSPS, NESHAP, and Best Available Control Technology (BACT) requirements listed in this permit:

o *Opacity:*

In order to demonstrate compliance with the applicable opacity standards the owner or operator shall either:

- 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. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 1 (PS1).

Or

- Install, calibrate, maintain, and operate a continuous parametric monitoring system for particulate matter (PM CPMS). The owner or operator shall conduct Method 9 opacity testing annually to establish a correlation between the PM CPMS milliamp (mA) output and opacity from the stack (EP 25). The PM CPMS shall provide a 4 – 20 mA output. The PM CPMS operating range must be capable of reading PM

concentrations from zero (0) to a level equivalent to three (3) times the allowable emission limit.

o *Temperature:*

In accordance with the NESHAP Subpart LLL [40 CFR §63.1350(g)], the owner or operator shall install, calibrate, maintain, and operate a continuous monitor to record the temperature of the exhaust gases from the kiln at the inlet to or upstream of the kiln particulate matter control device. Per 40 CFR §63.1350(g), the following shall be done:

- The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR §63.1349(b)(3)(iv).
- The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
- The three-hour average temperature shall be calculated as the average of 180 successive one-minute average temperatures.
- Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
- The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

o *SO₂:*

Compliance with the sulfur dioxide (SO₂) emission limits of this permit shall be continuously demonstrated by the owner/operator through the use of a CEMS. Therefore, the owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and record the output of the system, for measuring sulfur dioxide (SO₂) emissions, except as provided by 40 CFR §60.45(b).

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

o *NO_x:*

Compliance with the nitrogen oxide (NO_x) emission limits of this permit shall be continuously demonstrated by the owner/operator through the use of a CEMS. Therefore, the owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and record the output of the system, for measuring nitrogen oxide (NO_x) emissions, except as provided by 40 CFR §60.45(b).

The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 2 (PS2) and Performance Specification 6 (PS6) requirements. The

specifications of 40 CFR Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

- B. The following data requirements apply to CEMS for non-NSPS emission standards in this permit:
- (1) The CEMS required by this permit shall be operated and data recorded during all periods of operation of the emission unit except for CEM breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
 - (2) The 1-hour average SO₂ and NO_x emission rates measured by the CEMS required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.
 - (3) For each hour of missing emission data (NO_x or SO₂), the owner or operator shall substitute data by:
 - (i) If the monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
 - (a) For the missing data period less than or equal to 24 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (b) For a missing data period greater than 24 hours, substitute the greater of:
 - The 90th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (ii) If the monitor data availability is at least 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
 - (a) For a missing data period of less than or equal to 8 hours, substitute the average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (b) For the missing data period of more than 8 hours, substitute the greater of:
 - The 95th percentile hourly pollutant concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
 - The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
 - (iii) If the monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method approved by the Department.

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

Authority for Requirement - DNR Construction Permit 03-A-968-P3

Additional Continuous Emissions Monitoring

- o *Temperature:*
 - When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on or from on to off, the calculation of three-hour rolling average temperature must begin anew, without considering previous recordings.
- o *THC:*

In accordance with NESHAP Subpart LLL [40 CFR §63.1350(i)], the owner of operator shall install, calibrate, maintain, and operate a THC continuous emissions monitoring system in accordance with Performance Specification 8 (PS 8) or Performance Specification 8A (PS 8A) of appendix B to part 60 of this chapter.
- o *Mercury:*

In accordance with NESHAP Subpart LLL [40 CFR §63.1350(k)], the owner of operator shall install, calibrate, maintain, and operate a mercury continuous emissions monitoring system in accordance with Performance Specification 12A (PS 12A 8) of appendix B to part 60 of this chapter or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B (PS 12B) of appendix B to part 60 of this chapter.

Authority for Requirement – 40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP26

Associated Equipment

Associated Emission Unit ID Numbers: EU26
Emissions Control Equipment ID Number: CE26
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitor ID Number: ME26A (PM)

Emission Unit vented through this Emission Point: EU26
Emission Unit Description: Clinker Cooler
Raw Material/Fuel: Cement Clinker
Rated Capacity: 150 short 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.

BACT Emission Limits

Pollutant: Opacity
Emission Limit(s): 5% ⁽¹⁾
Authority for Requirement: DNR Construction Permit 03-A-969-P2

⁽¹⁾ One-hour average.

Pollutant: Particulate Matter (PM₁₀)
Emission Limit(s): 0.015 gr/dscf⁽²⁾
Authority for Requirement: DNR Construction Permit 03-A-969-P2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.015 gr/dscf ⁽²⁾
Authority for Requirement: DNR Construction Permit 03-A-969-P2

⁽²⁾ Standard is expressed as the average of 3 runs.

Other Emission Limits

Pollutant: Opacity
Emission Limit(s): ⁽³⁾
Authority for Requirement: DNR Construction Permit 03-A-969-P2
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

⁽³⁾ DNR Construction Permit 03-A-969-P2 contains an Opacity limit of 10%, which was effective prior to 40 CFR 64 Subpart LLL amendment effective November 8, 2010.

Pollutant: Particulate Matter (PM₁₀)
Emission Limit(s): 13.8 lb/hr ⁽⁴⁾
Authority for Requirement: DNR Construction Permit 03-A-969-P2

⁽⁴⁾Standard is expressed as the average of 3 runs.

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.07 lb/ton clinker ⁽⁵⁾
Authority for Requirement: 40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

⁽⁵⁾ DNR Construction Permit 03-A-969-P2 contains a PM limit of 0.1 lb/ton of kiln feed, which was effective prior to 40 CFR 64 Subpart LLL amendment effective November 8, 2010.

Operational Limits & Requirements

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

Operating Limits

1. The facility (plant number 17-01-005) is required to schedule a PM₁₀ compliance test within thirty (30) days if it exceeds the one (1) hour, 5% BACT opacity limit.

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. The records shall show the following:

1. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.
2. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1350.
3. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1355.
4. A log of one (1) hour opacity averages, dates & times of exceedences, and dates of PM₁₀ compliance tests.

Authority for Requirement: DNR Construction Permit 03-A-969-P2

NSPS and NESHAP

This emission unit is subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL this unit is exempted from any otherwise applicable new source performance standards contained in Subpart F, to which it is also subject, that are less stringent than the Subpart LLL requirements.

An O & M plan is required for this emission unit by Subpart LLL. Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-see **Appendix B**, Section 8 Clinker Cooling.

Authority for Requirements: 40 CFR 60 Subpart F
567 IAC 23.1(2)"c"
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 75.9
Stack Opening, (inches, dia.): 96
Exhaust Flow Rate (scfm): 104,200
Exhaust Temperature (°F): 210
Discharge Style: Vertical unobstructed
Authority for Requirement: DNR Construction Permit 03-A-969-P2

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

Stack Testing:

Pollutant – Particulate Matter (PM₁₀)
Stack Test to be Completed by – May 18, 2019
Test Method – 40 CFR 51, Appendix M, 201A with 202
Authority for Requirement – 567 IAC 22.108(3)

Pollutant – Particulate Matter (PM)
Stack Test to be Completed by – May 18, 2019
Test Method - 40 CFR 60, Appendix A, Method 5
40 CFR 51, Appendix M, Method 202
Authority for Requirement – 567 IAC 22.108(3)

Continuous Emissions Monitoring:

Pollutant - Opacity

Operational Specifications – 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1

Date of Initial System Calibration and Quality Assurance – January 1990

Ongoing System Calibration/Quality Assurance - 40 CFR 63 Subpart A and 40 CFR 60,
Appendix B PS-1

Reporting & Record keeping - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1

Authority for Requirement – DNR Construction Permit 03-A-969-P2

40 CFR 63 Subpart LLL

567 IAC 23.1(3)"bl"

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

Agency Approved Operation & Maintenance Plan Required?

Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required?

Yes ☐ No ☒

Compliance Assurance Monitoring (CAM) Plan Required?

Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP28

Associated Equipment

Associated Emission Unit ID Numbers: EU28, EU29
Emissions Control Equipment ID Number: CE28
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU28
Emission Unit Description: Kiln Dust Disposal Tank
Raw Material/Fuel: Kiln Dust
Rated Capacity: 8 tons/hr

Emission Unit vented through this Emission Point: EU29
Emission Unit Description: Kiln Dust Loadout
Raw Material/Fuel: Kiln Dust
Rated Capacity: 8 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%⁽¹⁾
Authority for Requirement: DNR Construction Permit 77-A-361-S3
567 IAC 23.3(2)"d"

⁽¹⁾ If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter (PM₁₀)
Emission Limits: 1.0 lb/hr
Authority for Requirement: DNR Construction Permit 77-A-361-S3

Pollutant: Particulate Matter (PM)
Emission Limits: 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 77-A-361-S3
567 IAC 23.3(2)"a"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (from the ground): 66'5"

Stack Opening (inches, dia.): 18

Exhaust Flow Rate (scfm): 5,800

Exhaust Temperature (°F): 70

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 77-A-361-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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

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

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

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: EP55

Associated Equipment

Associated Emission Unit ID Numbers: EU55
Emissions Control Equipment ID Number: CE55
Emissions Control Equipment Description: Air Cleaner

Emission Unit vented through this Emission Point: EU55
Emission Unit Description: Limestone Drilling
Raw Material/Fuel: Limestone
Rated Capacity: 900 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%⁽¹⁾
Authority for Requirement: DNR Construction Permit 99-A-179-S1
567 IAC 23.3(2)"d"

⁽¹⁾ An exceedence of the indicator opacity of 10% 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).

Pollutant: Particulate Matter (PM₁₀)
Emission Limits: 0.6 lb/hr
Authority for Requirement: DNR Construction Permit 99-A-179-S1

Pollutant: Particulate Matter (PM)
Emission Limits: 0.1 gr/scf
Authority for Requirement: DNR Construction Permit 99-A-179-S1
567 IAC 23.3(2)"a"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 11.5
Stack Diameter (feet): 0.5 X 0.67
Stack Exhaust Flow Rate (scfm): 3,500
Stack Temperature (°F): Ambient
Discharge Style: Downward
Authority for Requirement: DNR Construction Permit 99-A-179-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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

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

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

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP55A

Associated Equipment

Associated Emission Unit ID Numbers: EU55

Emission Unit vented through this Emission Point: EU55A

Emission Unit Description: Quarry Blasting

Raw Material/Fuel: Limestone

Rated Capacity: 900 tons/hr

Applicable Requirements

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

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

Pollutant: Fugitive Dust

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

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

Monitoring Requirements

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP62

Associated Equipment

Associated Emission Unit ID Number: EU62
Emissions Control Equipment ID Number: CE62
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU62
Emission Unit Description: Coal Mill
Raw Material/Fuel: Coal
Rated Capacity: 8.4 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): 20%⁽¹⁾
Authority for Requirement: DNR Construction Permit 87-A-089-S3
567 IAC 23.1(2)"v"
40 CFR 60.252(c)

⁽¹⁾ If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter (PM₁₀)
Emission Limits: 0.22 lb/hr
Authority for Requirement: DNR Construction Permit 87-A-089-S3

Pollutant: Particulate Matter (PM)
Emission Limits: 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 87-A-089-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.

NSPS

This unit is subject to Subpart A (General Provisions) and Subpart Y- *Standards of Performance for Coal preparation Plants of the New Source Performance Standards (NSPS)*.

Authority for Requirement: DNR Construction Permit 87-A-089-S3
40 CFR 60 Subpart Y
567 IAC 23.1(2)"v"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (from the ground): 63'2"

Stack Opening (inches, dia.): 26

Exhaust Flow Rate (scfm): 800

Exhaust Temperature (°F): 150

Discharge Style: Unobstructed vertical

Authority for Requirement: DNR Construction Permit 87-A-089-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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

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. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (>20 %) is observed, 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 ☒

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP62A

Associated Equipment

Associated Emission Unit ID Number: EU62A
Emissions Control Equipment ID Number: CE62A
Emissions Control Equipment Description: Bin Vent Filter

Emission Unit vented through this Emission Point: EU62A
Emission Unit Description: Calciner Coal Bin & Dosing Systems
Raw Material/Fuel: Coal
Rated Capacity: 50 metric tons

Applicable Requirements

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

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

Pollutant: Opacity
Emission Limit(s): 20%
Authority for Requirement: DNR Construction Permit 08-A-690
40 CFR 60.252(c)
567 IAC 23.1(2)"v"

Pollutant: Particulate Matter (PM₁₀)
Emission Limits: 0.04 lb/hr
Authority for Requirement: DNR Construction Permit 08-A-690

Pollutant: Particulate Matter (PM)
Emission Limits: 0.04 lb/hr; 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 08-A-690
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.

Operating Limits

Control equipment parameters:

1. The control equipment shall be operated and maintained per the manufacturer's instructions and 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. The records shall show the following:

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

Authority for Requirement: DNR Construction Permit 08-A-690

NSPS

This unit is subject to Subpart A (General Provisions) and Subpart Y- *Standards of Performance for Coal preparation Plants of the New Source Performance Standards (NSPS)*.

Authority for Requirement: DNR Construction Permit 08-A-690
40 CFR 60 Subpart Y
567 IAC 23.1(2)"v"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (from the ground): 63.2

Stack Opening (inches, dia.): 6.6

Exhaust Flow Rate (scfm): 415

Exhaust Temperature (°F): 215

Discharge Style: Downward

Authority for Requirement: DNR Construction Permit 08-A-690

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

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. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (>20 %) is observed, 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 ☒

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP92B

Associated Equipment

Associated Emission Unit ID Number: EU92B
Emissions Control Equipment ID Number: CE92B
Emissions Control Equipment Description: Bin Vent Filter

Emission Unit vented through this Emission Point: EU92B
Emission Unit Description: Alternate Fuel Prehopper & Dosing System
Raw Material/Fuel: Obsolete Seed
Rated Capacity: 250 ft³/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%⁽¹⁾
Authority for Requirement: DNR Construction Permit 08-A-691
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Pollutant: Particulate Matter (PM₁₀)
Emission Limits: 0.03 lb/hr
Authority for Requirement: DNR Construction Permit 08-A-691

Pollutant: Particulate Matter (PM)
Emission Limits: 0.03 lb/hr; 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 08-A-691
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.

Operating Limits

Control equipment parameters:

1. The control equipment shall be operated and maintained per the manufacturer's instructions and 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. The records shall show the following:

1. Maintain a record of all maintenance and repair to the control equipment.
2. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.
3. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1350.
4. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1355.

Authority for Requirement: DNR Construction Permit 08-A-691
40 CFR 63.Subpart LLL
567 IAC 23.1(4)"bl"

NSPS and NESHAP

This emission unit is subject to Subpart LLL (*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*; 40 CFR §63.1340 – §63.1358), but per 40 CFR §63.1356 of Subpart LLL this unit is exempted from any otherwise applicable new source performance standards contained in Subpart F, to which it is also subject, that are less stringent than the Subpart LLL requirements.

An O & M plan is required by Subpart LLL for this emission unit. Relevant requirements of the O & M plan for this equipment: Particulate Matter and Opacity-**see Appendix B**, Section 10 Material Handling Systems.

Authority for Requirements: 40 CFR 60 Subpart F
567 IAC 23.1(2)"c"
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (from the ground): 30.25

Stack Opening (inches, dia.): 6.5

Exhaust Flow Rate (scfm): 295

Exhaust Temperature (°F): Ambient

Discharge Style: Downward

Authority for Requirement: DNR Construction Permit 08-A-691

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 either the

temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

The facility shall check the opacity as described in 40 CFR 63.1350 (f).

Authority for Requirement: DNR Construction Permit 08-A-691
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

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: EP101

Associated Equipment

Associated Emission Unit ID Numbers : EU101

Emission Unit vented through this Emission Point: EU101

Emission Unit Description: Emergency Generator

Raw Material/Fuel: Diesel Fuel

Rated Capacity: 628 bhp

Applicable Requirements

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

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

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: DNR Construction Permit 10-A-117

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

Pollutant: Particulate Matter (PM₁₀)

Emission Limit(s): 0.79 lb/hr

Authority for Requirement: DNR Construction Permit 10-A-117

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.79 lb/hr

Authority for Requirement: DNR Construction Permit 10-A-117

Pollutant: Sulfur Dioxide (SO₂)

Emission Limits: 2.28 lb/hr; 2.5 lb/MMBtu

Authority for Requirement: DNR Construction Permit 10-A-117
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limits: 19.89 lb/hr

Authority for Requirement: DNR Construction Permit 10-A-117

Pollutant: Carbon Monoxide (CO)

Emission Limits: 4.80 lb/hr

Authority for Requirement: DNR Construction Permit 10-A-117

Operational Limits & Requirements

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

Operating Limits

Hours of operation:

1. The Emergency Generator EU101 shall not operate more than 500 hours per twelve-month period.

Process throughput:

1. The Emergency Generator EU101 shall be limited to using #2 diesel fuel with a maximum sulfur content of 0.5% by weight.

Work practice standards:

1. The owner or operator of the Emergency Generator EU101 must operate and maintain the generator according to the manufacture's written instructions.
2. The owner or operator shall only operate the emergency generator EU101 in emergency situations or for routine maintenance and testing according to the definition in 40 CFR§63.6675.

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. The records shall show the following:

1. Each month, the owner or operator shall record the total hours of operation for Emergency Generator EU101, and calculate and record rolling twelve-month totals.
2. The owner or operator shall maintain records of the sulfur content of the fuel oil combusted in the Emergency Generator EU101.

Authority for Requirement: DNR Construction Permit 10-A-117

NESHAP

The emergency engine is subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for *Stationary Reciprocating Internal Combustion Engines* (RICE). According to 40 CFR 63.6590(a)(1)(i) this emergency engine, located at a major source, is an existing stationary RICE as it was constructed prior to December 19, 2002.

According to 63.6590(b)(3)(iii), an existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is not subject to the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

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

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 48.7
Stack Opening, (inches, dia.): 10
Exhaust Flow Rate (scfm): 1,795
Exhaust Temperature (°F): 230
Discharge Style: Vertical unobstructed
Authority for Requirement: DNR Construction Permit 10-A-117

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 either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP102

Associated Equipment

Associated Emission Unit ID Number : EU102

Emission Unit vented through this Emission Point: EU102
Emission Unit Description: Scrubber Emergency Generator
Raw Material/Fuel: Diesel Fuel
Rated Capacity: 83 bhp

Applicable Requirements

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

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

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

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

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(b)"2"

Operational Limits & Requirements

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

Operating Limits

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

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

Compliance Date

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

Operation and Maintenance Requirements 40 CFR 63.6602, 63.6625, 63.6640 and Tables 2c and 6 to Subpart ZZZZ

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

Operating Limits 40 CFR 63.6640(f)

1. Any operation other than emergency operation, maintenance and testing and operation in non-emergency situations (*up to*) 50 hours per year is prohibited.
2. There is no time limit on the use of emergency stationary RICE in emergency situations.
3. You may operate your emergency stationary RICE up to 100 combined hours per calendar year for maintenance checks and readiness testing. See 40 CFR 63.6640(f)(2) for additional information and restrictions.
4. You may operate your emergency stationary RICE up to 50 hours per calendar year for non-emergency situations, but those 50 hours are counted toward the 100 hours of maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Recordkeeping Requirements 40 CFR 63.6655

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

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

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

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

Monitoring Requirements

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP62B

Associated Equipment

Associated Emission Unit ID Numbers : EU62B

Emission Unit vented through this Emission Point: EU62B
Emission Unit Description: Calciner Emergency Generator
Raw Material/Fuel: Diesel Fuel
Rated Capacity: 197 bhp

Applicable Requirements

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

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

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

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

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 2.5 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(b)"2"

Operational Limits & Requirements

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

Operating Limits

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

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. The records shall show the following:

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)

NSPS and NESHAP

The emergency engine is subject to 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). According to 40 CFR 63.6590(a)(1)(ii) this compression ignition emergency engine, located at a major source, is a new stationary RICE as it was constructed on or after June 12, 2006.

According to 40 CFR 63.6590(c)(6), this emergency engine must meet the requirements of subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII for compression ignition engines. No further requirements apply for this emergency engine under subpart ZZZZ.

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

Emission Standards (for engines with displacement (L/cyl) < 10):

According to 40 CFR 60.4205(b) and 4202, you must comply with the following emission standards in grams/kW-hr (grams/HP-hr):

Engine Displacement (l/cyl)	Maximum Engine Power	Model Year(s)	NMHC + NO_x	CO	PM	Opacity	Rule Ref
Disp. < 10	130 ≤ kW < 225 (175 ≤ HP < 302)	2007+	4.0 (3.0)	3.5 (2.6)	0.20 (0.15)	(1)	(2)

(1) Exhaust opacity must not exceed: 20 percent during the acceleration mode; 15 percent during the lugging mode; and 50 percent during the peaks in either the acceleration or lugging modes.

(2) 40 CFR 89.112 and 40 CFR 89.113.

Fuel Requirements:

You must use diesel fuel that has a maximum sulfur content of 15 ppm (0.0015%) by weight and a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume. 40 CFR 60.4207 and 40 CFR 80.510(b).

Compliance Requirements:

1. You must operate and maintain the engine to comply with the required emission standards over the entire life of the engine (40 CFR 60.4206) by doing all of the following (40 CFR 60.4211(a)).
 - a) Operating and maintaining the engine and control device according to the manufacturer's emission-related written instructions;
 - b) Changing only those emission-related settings that are permitted by the manufacturer; and
 - c) Meeting the requirements of 40 CFR 89, 94 and/or 1068, as they apply to you.

2. You must demonstrate compliance with the applicable emission standards by purchasing an engine certified to the applicable emission standards. The engine must be installed and configured according to the manufacturer's emission-related specifications. 40 CFR 60.4211(c).
3. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct the following performance testing in accordance with 40 CFR 60.4212 to demonstrate compliance with applicable emission standards. You are required to notify the DNR 30 days prior to the test date and are required to submit a stack test report to the DNR within 60 days after the completion of the testing. See 40 CFR 60.4211(g) for additional information.

Maximum Engine Power	Initial Test	Subsequent Test
100 ≤ HP ≤ 500	Within 1 year of engine startup, or non-permitted action ⁽¹⁾	Not required

⁽¹⁾ Non-permitted action means that you do not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer.

Operating and Recordkeeping Requirements

1. If your emergency engine does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine (40 CFR 40.4209(a)).
2. There is no time limit on the use of the emergency engine in emergency situations. 40 CFR 60.4211(f)(1).
3. The engine may be operated for the purpose of maintenance checks and readiness testing for a maximum of 100 hours/year. See 40 CFR 60.4211(f)(2) for more information.
4. The engine may be operated for up to 50 hours per year for non-emergency purposes. This operating time cannot be used for peak shaving or to generate income for the facility (e.g. supplying power to the grid) and should be included in the total of 100 hours allowed for maintenance checks and readiness testing. See 40 CFR 60.4211(f)(3) for more information.

Authority for Requirement: 40 CFR Part 60, Subpart IIII
567 IAC 23.1(2)"yyy"

Monitoring Requirements

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

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

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

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

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

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

G1. Duty to Comply

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

G2. Permit Expiration

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

G3. Certification Requirement for Title V Related Documents

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

G4. Annual Compliance Certification

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

G5. Semi-Annual Monitoring Report

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

G6. Annual Fee

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

6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

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

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

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

G8. Duty to Provide Information

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

G9. General Maintenance and Repair Duties

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

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

G10. Recordkeeping Requirements for Compliance Monitoring

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

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

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

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

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

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

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

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

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

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

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

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

G13. Hazardous Release

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

G14. Excess Emissions and Excess Emissions Reporting Requirements

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

2. Excess Emissions Reporting

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

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

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required initial reports to the department

within seven days of the onset of the upset condition, and shall include as a minimum the following:

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

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

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

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

G15. Permit Deviation Reporting Requirements

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

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

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of

performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. 567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)

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

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

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

567 IAC 22.110(1)

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

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

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

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

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

a. An administrative permit amendment is a permit revision that does any of the following:

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

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

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

2. Minor Title V Permit Modification.

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

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

- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
 - ii. The permittee's suggested draft permit;
 - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
 - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
- c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V Permit Modification.

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

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

G19. Duty to Obtain Construction Permits

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

G20. Asbestos

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

G21. Open Burning

The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. 567 IAC 23.2 *except 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

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

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

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

- a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
- b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
- c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
- d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

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

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
- d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
- e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

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

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air

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

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

G24. Permit Reopenings

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

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

a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

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

c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the

permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

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

G27. Property Rights

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

G28. Transferability

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

G29. Disclaimer

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

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

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

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

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

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

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

G31. Prevention of Air Pollution Emergency Episodes

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

567 IAC 26.1(1)

G32. Contacts List

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

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

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

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

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

Field Office 1

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

Field Office 2

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

Field Office 3

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

Field Office 4

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

Field Office 5

7900 Hickman Road, Suite #200
Windsor Heights, IA 50324
(515) 725-0268

Field Office 6

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

Polk County Public Works Dept.

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

Linn County Public Health

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

Appendix A: Administrative Consent Order No. 1999-AQ-32

IOWA DEPARTMENT OF NATURAL RESOURCES

Administrative Consent Order

ISSUED TO: Lehigh Portland Cement Company

IN THE MATTER OF:	ADMINISTRATIVE CONSENT ORDER
LEHIGH PORTLAND CEMENT COMPANY	NO. 1999-AQ-32

TO: LEHIGH PORTLAND CEMENT COMPANY

Verne Stuessy
Acting Plant Manager
700 25th Street N.W.
Mason City, Iowa 50401

LEHIGH PORTLAND CEMENT COMPANY

c/o CT Corporation System, Registered Agent
2222 Grand Avenue
Des Moines, Iowa 50312

I. SUMMARY

This Administrative Consent Order is entered into between the Iowa Department of Natural Resources (DNR) and Lehigh Portland Cement Company (Lehigh) for the purpose of addressing alleged monitored violations of the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM-10) in Mason City, Iowa. This Administrative Consent Order supersedes Administrative Order 97-AQ-18, which is hereby withdrawn.

The parties designate the following representatives for purposes of communications regarding and notices required by this Administrative Consent Order.

FOR Iowa DNR:

Doug Campbell
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Des Moines, Iowa 50322
Ph: 515/281-8930
FAX: 515/242-5094

FOR Lehigh Portland Cement Company:

Verne Stuessy, Acting Plant Manager
Lehigh Portland Cement Company
700 – 25th Street N.W.
Mason City, Iowa 50401
Ph: 515/421-3400
FAX: 515/421-3404

Either party may change its designated representative at any time by providing written notice to the other party.

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II. NO ADMISSION

While Lehigh agrees to comply with the requirements contained herein, it makes no admission as to the Statement of Facts and Conclusions of Law and hereby denies the same.

III. STATEMENT OF FACTS

DNR finds as follows:

1. The 24-hour average PM-10 NAAQS is 150 micrograms per cubic meter (ug/m^3). DNR monitored six exceedances of this standard at a DNR monitoring site located at the intersection of 17th and Quincy in Mason City, Iowa. On May 10, May 12, and December 29, 1993, this monitoring site recorded 24-hour average PM-10 concentrations of 174, 172, and 178 ug/m^3 , respectively. On February 22, 1994, the same monitoring site recorded a 24-hour average PM-10 concentration of 160 ug/m^3 . On December 18, 1995, and March 5, 1996, the same monitoring site recorded 24-hour average PM-10 concentrations of 239 and 286 ug/m^3 , respectively.

2. Lehigh is a cement manufacturer located at 700 25th Street N.W. in Mason City, Iowa, which is northwest of the 17th and Quincy PM-10 monitoring site. Air dispersion modeling of this Lehigh facility has been conducted. This modeling has established that Lehigh is a contributor to the PM-10 levels monitored.

3. Lehigh is not the sole contributor of PM-10 levels in Mason City and other contributors also are being asked to address this concern as well.

4. DNR and Lehigh and other contributors have cooperated in an effort to address the levels of PM-10 in Mason City. For that purpose, DNR and Lehigh have agreed to enter into this Administrative Consent Order.

IV. CONCLUSIONS OF LAW

DNR concludes as follows:

1. This Administrative Consent 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.

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2. The PM-10 emission sources located at Lehigh in Mason City, Iowa, include “air contaminant sources” as defined by Iowa Code section 455B.131(2), and “stationary sources” and “fugitive dust” 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 located at 40 C.F.R. Part 50, as amended through July 18, 1997.

4. According to the provisions of 40 C.F.R. 50.6(a), the primary and secondary 24-hour ambient air quality standard for PM-10 is 150 ug/m³, 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 ug/m³, as determined in accordance with 40 C.F.R. Part 50, Appendix K, is equal to or less than one. In this case, the observed number of days per calendar year with a 24-hour average concentration above 150 ug/m³, during the period 1993 through 1995, is greater than one, which constitutes a violation of this standard.

5. An exceedance of the NAAQS for PM-10 constitutes “air pollution” as defined by Iowa Code section 455B.131(3).

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

7. According to the provisions of 567 I.A.C. 22.1(1) and 567 I.A.C. 22.1(3), the owner or operator of a stationary source shall obtain a permit to install or alter equipment or control equipment unless otherwise exempt. Any modifications occurring as a result of this consent order and subject to the provisions of 567 I.A.C. chapter 22 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. According to the provisions of 567 I.A.C. 23.3(2)“c”(1), 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. “Reasonable precautions” are defined in this rule.

IOWA DEPARTMENT OF NATURAL RESOURCES
Administrative Consent Order
ISSUED TO: Lehigh Portland Cement Company

V. ORDER

THEREFORE, DNR orders and LEHIGH AGREES to the following:

1. Within 120 days of the effective date of this Administrative Consent Order, a continuous fenceline with controlled access gates or a physical barrier, specifically a vertical wall and/or embankment under a railroad trestle, shall be erected to enclose the plant area as depicted in Exhibit "A", which is attached to this Administrative Consent Order and by this reference made a part hereof. The fenceline shall be of a type designed to preclude public access to the facility property. As proposed by Lehigh, the portion of 25th Street that lies within the Lehigh facility property lines shall be vacated and included within the confines of the continuous fenceline and physical barrier, such that the general public is not allowed access.

2. Within 90 days of entering into this Administrative Consent Order, Lehigh shall submit to DNR air quality construction permit applications which include the emission rates, hours of operation, throughput rates, stack parameters, and stack configurations listed in Exhibit "B." By this reference, Exhibit "B" is made a part hereof. Any required modifications to the sources shall be completed within 60 days of the issuance of the permits (unless specifically stated otherwise in this order).

3. The emission sources listed in Exhibit "C" shall be limited to the daily and calendar year throughputs listed in Exhibit "C." By this reference, Exhibit "C" is made a part hereof. The total daily throughput and daily throughput rates for each of the sources listed in Exhibit "C" shall be entered in a daily log to demonstrate compliance with the daily and annual throughput limits. For sources 7A, 56A, 57A, 73A, 74A, and 75A, if the sources operate within the maximum hourly throughput time period indicated in Exhibit "C", then the source daily log shall be used to demonstrate compliance. If these sources operate at other times during any day, then compliance will be demonstrated for that calendar day by entering the hourly throughput and total daily throughput rates for each of these sources in daily logs to demonstrate compliance with the daily and annual throughput limits. Daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

4. The coal crusher (source ID 40) shall be operated only in an enclosed structure with all access doors and any other openings closed during normal operations, except for doors during ingress and egress.

5. Storage Piles:

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ISSUED TO: Lehigh Portland Cement Company

(i). Within 60 days of the effective date of this Administrative Consent Order, Lehigh shall locate the storage pile bases as designated in Exhibit "D" and shall limit the size of the storage piles to no greater than the acreages designated in Exhibit "D." Except as otherwise provided in this paragraph 5, the storage piles designated in Exhibit "D" shall be the only storage piles located within the facility. Exhibit "D" shall by this reference become a part hereof. Lehigh may relocate a pile specified in Exhibit "D" only after providing written notice to DNR and submitting the results of computer dispersion modeling showing that no exceedances of the PM-10 NAAQS would result. If an exceedance of the PM-10 NAAQS would result based on the computer dispersion modeling results, Lehigh shall not move the pile as proposed and the pile shall remain at the location designated in Exhibit "D".

(ii). Notwithstanding the requirements of paragraph 5(i), Lehigh may operate temporary piles of materials (not identified on Exhibit "D") that result from maintenance and other similar activities. No such temporary pile shall be maintained for more than one 72-hr period.

(iii). Notwithstanding the requirements of paragraph 5(i) and 5(ii), Lehigh may maintain temporary piles of overflow raw materials and product (not identified on Exhibit "D") that may result from unforeseen and unplanned operating conditions or problems. Lehigh shall take all reasonable measures to limit the size of any such pile and the fugitive emissions that result therefrom. No more than two such temporary piles may exist at one time. No such temporary pile shall be maintained for more than one (1) month. Lehigh shall maintain records that include the pile location, planned or actual pile size, pile material content, and the planned removal date, for each pile. 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. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

6. Within 30 days of the effective date of this Administrative Consent Order, Lehigh shall implement speed controls designed to ensure that the average speed of the haul trucks on the limestone and clay haul roads (source IDs 56 and 57) does not exceed 18.5 miles per hour. The speed controls shall consist of a combination of speed limit signs, stop signs, and governors on the accelerators of each haul road truck, or other methods approved in writing by DNR.

7. The maximum number of round trips per day and per calendar year on the limestone haul road (source ID 56) for all of the haul trucks, combined, shall be limited to 70 and 17,640 trips, respectively. The number of round trips per day on the limestone haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

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8. Fugitive emissions from the limestone haul road (source ID 56) shall be controlled by applying a chemical dust suppressant. Applications of the selected chemical dust suppressant and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. A control efficiency of 90 percent shall be maintained on the first 1.41 miles of the limestone haul road from the quarry. This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. This section of the limestone haul road is 30 feet wide and 1.41 miles long, giving it a total area of 24,816 square yards. At least 6,204 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 1,241 gallons of the selected chemical dust suppressant shall be applied every calendar month with no more than 35 days between applications, to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

A control efficiency of 95 percent shall be maintained on the remaining length of the limestone haul road from 1.41 miles from the quarry to the primary limestone crusher (source ID 2). This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. The remaining limestone haul road is 30 feet wide and 2.89 miles long, giving it a total area of 50,864 square yards. At least 12,716 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 2,543 gallons of the selected chemical dust suppressant shall be applied not less than at least once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard.

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. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals. / sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. 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.

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9. The maximum number of round trips per day and per calendar year on the clay haul road (source ID 57) for all of the haul trucks, combined, shall be limited to 130 and 1,667 trips, respectively. The number of round trips per day on the clay haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

10. Fugitive emissions from the clay haul road (source ID 57) shall be controlled to an effective control efficiency of 95 percent by applying a chemical dust suppressant. Applications of the selected chemical dust suppressant and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. A control efficiency of 95 percent will require a ground inventory of 0.25 gallons of the selected chemical dust suppressant per square yard. The clay haul road is 30 feet wide and 0.9 miles long, giving it a total area of 15,840 square yards. At least 3,960 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 792 gallons of the selected chemical dust suppressant shall be applied not less than once every other week to maintain the ground inventory. This equates to 0.05 gallons of the selected emulsion per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

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. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals. / sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. 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.

It is not uncommon for this clay haul road to go unused for periods greater than one-half month. In the event Lehigh does not use the clay haul road for a period greater than one-half month, Lehigh shall not be required to apply the chemical dust suppressant as provided in the above paragraph, on the condition that such event is noted and explained in the records required herein and that, prior to use, an application will be made, weather permitting and requiring.

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11. The maximum number of round trips per day and per calendar year on the paved haul road from the product loadout silos to US Highway 65 (source IDs 801-812) for all haul trucks, combined, shall be limited to the values listed below.

Month	Maximum Number of Trips per Day
January	80
February	69
March	200
April	250
May	250
June	250
July	203
August	250
September	250
October	250
November	250
December	250
Calendar Year	Maximum Number of Trips per Year
January through December	37,302

The number of round trips per day on this haul road shall be entered into a monthly log to demonstrate compliance with this requirement. Monthly logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

12. Fugitive emissions of the paved haul road from the product loadout silos to US Highway 65 (source IDs 801-812) shall be controlled to an effective control efficiency of 80 percent by water flushing followed by sweeping. Water flushing followed by sweeping applications and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. Using an application rate of 0.48 gallons per square yard, this haul road shall require a water flushing followed by sweeping application after every 362 vehicle passes to maintain an 80 percent control efficiency. Based on a worse-case round trip estimate of 222 trips per day, the water flushing followed by sweeping will have to be accomplished every two days. The haul road is 24 feet wide and 2072 feet long, giving it a total area of 5,525 square yards. Based on an application rate of 0.48 gallons of water per square yard, 2,652 gallons of water will be required for each application.

If water flushing followed by sweeping 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

IOWA DEPARTMENT OF NATURAL RESOURCES

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water, could create hazardous driving conditions, then the water flushing and sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated. Additionally, water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period. Records of the applications shall be maintained and shall include the dates and times of each application, the calculated application intensity, the areas treated, the operator's initials, and documentation road and weather conditions, if necessary. If the water flushing is not accomplished because ambient air temperatures are less than 35° F during the entire day, or precipitation exceeding 0.2 inches has occurred in the proceeding 24 hours, then the records should indicate this. 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.

13. Lehigh shall submit to the DNR Field Office #2 written quarterly reports detailing progress toward the completion of the requirements of Sections V.1., V.2., V.5., and V.6. of this Administrative Consent Order. The quarterly reports shall be due no later than 30 days following the close of each quarter. The first report shall be due 30 days following the end of the quarter in which the Administrative Consent Order is effective. Quarterly reporting may be terminated following submittal of a final report and written request to the DNR, and a written response from the DNR stating that all such described requirements of this Administrative Consent Order have been completed. **Record keeping required by this Administrative Consent Order shall be an on-going requirement and shall not terminate.**

VI. WAIVER OF APPEAL RIGHTS

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

VII. NONCOMPLIANCE

Failure to comply with this Administrative Consent Order may result in the imposition of administrative penalties or referral to the Attorney General's office to obtain injunctive relief and civil penalties pursuant to the provisions of Iowa Code section 455B.146. By agreeing to this Administrative Order, Lehigh is not agreeing to such action or penalties.

IOWA DEPARTMENT OF NATURAL RESOURCES

Administrative Consent Order

ISSUED TO: Lehigh Portland Cement Company

VIII. TERMINATION OF THIS ADMINISTRATIVE CONSENT ORDER

This Administrative Consent Order shall terminate upon a showing by Lehigh, acceptable to DNR and responded to in writing by the DNR, that it has complied with the obligations contained herein or as may otherwise be agreed upon by the parties.

IX. EFFECTIVE DATE

The effective date of this Administrative Consent Order is defined as the date on which the Director of the DNR signs this Administrative Consent Order. Lehigh will be notified of this date following the signature of this Administrative Consent Order by the Director, and will be provided with a signed copy.

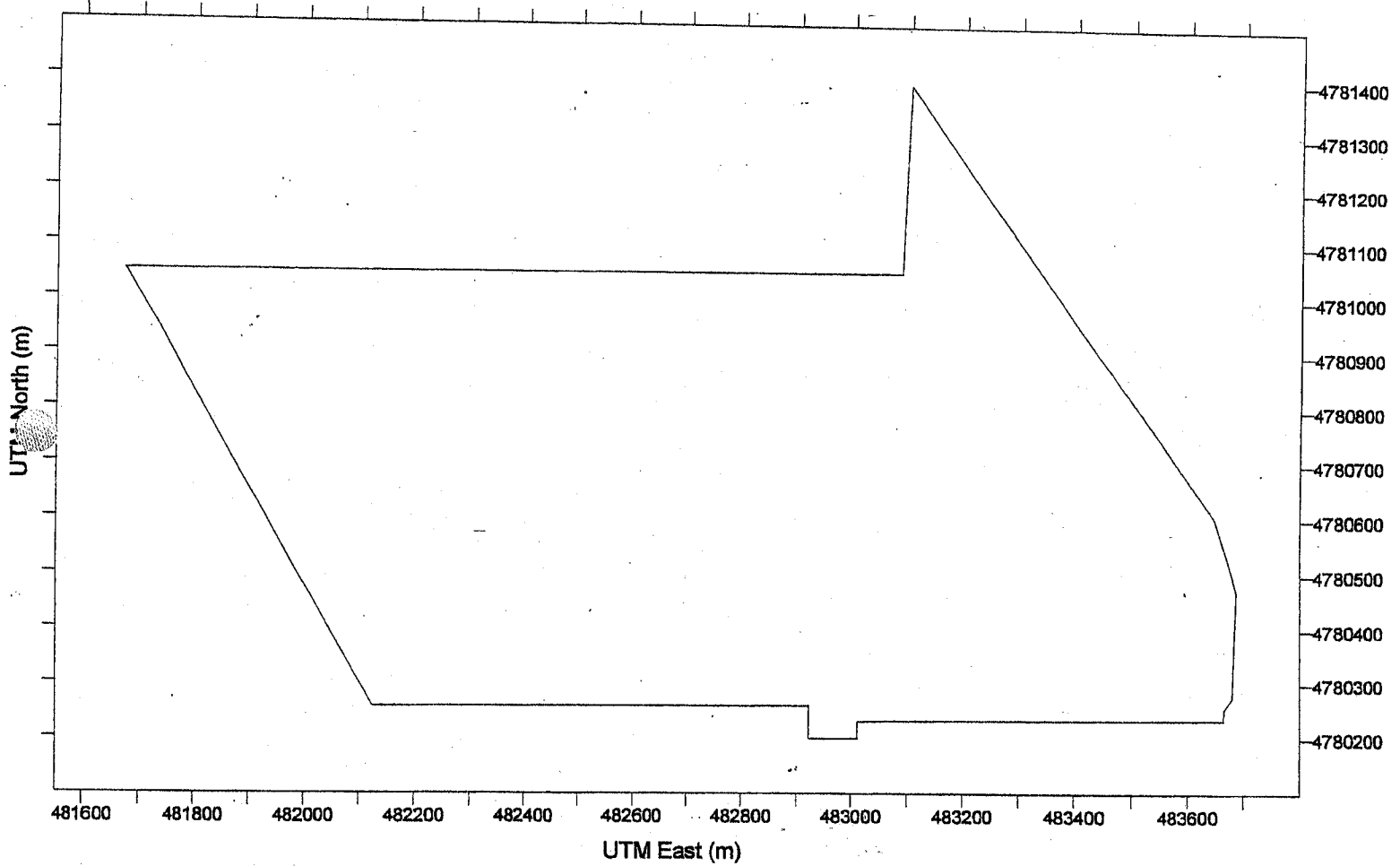
/s/ Larry Wilson
PAUL W. JOHNSON, DIRECTOR
IOWA DEPARTMENT OF NATURAL RESOURCES

Dated this 2 day of
September, 1999.

/s/ Verne Stuessy
for LEHIGH PORTLAND CEMENT COMPANY

Dated this 23 day of
August, 1999.

Exhibit "A"
Lehigh Portland Cement Company Fenceline



IOWA DEPARTMENT OF NATURAL RESOURCES

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ISSUED TO: Lehigh Portland Cement Company

EXHIBIT "B"

Point Source Emission Rates and Stack Parameters

Lehigh Portland Cement Company

Source ID	Source Description	Emission Rate (g/s)	Stack Height (m)	Exit Temp (K)	Exit Velocity (m/s)	Stack Diameter (m)	Rain Cap or Angled Vent?
2	Limestone Primary Crushing	0.30240	18.29	293.0	0.00	1.11	Yes
3	Primary Screening System	0.12960	16.76	293.0	0.00	0.77	Yes
5	Limestone Secondary Crushing	0.10260	16.76	293.0	0.00	0.46	Yes
6	Limestone Transfer Points	0.06480	16.76	293.0	0.00	0.49	Yes
8	Limestone Transfer Points	0.04536	12.19	293.0	0.00	0.31	Yes
9	Limestone Transfer Points	0.06787	24.38	293.0	0.00	0.43	Yes
10	Limestone Transfer Points	0.06804	24.38	293.0	0.00	0.41	Yes
11	Limestone Transfer Points	0.10891	24.38	293.0	0.00	0.72	Yes
12	Limestone Transfer Points	0.04536	24.38	293.0	0.00	0.41	Yes
13	Limestone Transfer Points	0.04536	12.19	293.0	0.00	0.34	Yes
15	Clay Crushing System	0.09991	14.30	293.0	0.00	0.76	Yes
18	Clay Transfer Point	0.17775	33.53	366.5	0.00	0.61	Yes
19	Raw Mix Transfer Point	0.17280	57.91	322.1	0.00	0.60	Yes
20	Raw Mix Transfer Point	0.03657	33.53	366.5	0.00	0.62	Yes
21	Raw Mix Transfer Point	0.03657	30.48	366.5	0.00	0.41	Yes
22	Raw Mix Transfer Point	0.11588	33.53	366.5	0.00	0.41	Yes
23	Raw Mix Transfer Point	0.11115	33.53	366.5	0.00	0.41	Yes
24	Raw Mix Transfer Vent	0.16846	57.91	366.5	0.00	0.61	Yes
26	Clinker Cooler	2.85	25.91	442.6	13.99	2.44	No
27	Kiln Bypass Stack	3.74	48.77	505.4	12.62	2.13	No
28	Kiln Dust Disposal Tank	0.12604	21.94	293.0	16.09	0.46	No
33	Clinker Outhaul Transfer	0.06480	30.48	293.0	0.00	0.20	Yes
34	Clinker Bin to Truck Loadout	0.02160	30.48	293.0	0.00	0.34	Yes
35	Clinker Outhaul Transfer	0.17280	54.86	293.0	0.00	0.60	Yes
36	Clinker Withdrawal Transfer	0.08640	9.14	293.0	0.00	0.42	Yes
37	Clinker Transfer Point	0.02160	9.14	293.0	0.00	0.17	Yes
38	Clinker Transfer	0.02251	16.76	293.0	0.00	0.20	Yes
39	Clinker Transfer Elevator	0.13608	24.38	293.0	29.34	1.00	No
41	No. 3 Finishing Mill West Vt.	0.14580	24.38	293.0	0.00	0.46	Yes
42	No. 3 Finishing Mill West Vt.	0.14580	24.38	293.0	0.00	0.46	Yes
43	No. 5 Finishing Mill	0.18360	24.38	366.5	0.00	0.52	Yes
44	No. 6 Finishing Mill	0.18360	24.38	366.5	0.00	0.46	Yes
45	No. 4 Finishing Mill	0.64800	28.95	366.5	24.38	1.22	No
46	No. 4 Finishing Mill Conveyor	0.09720	25.91	310.9	0.00	0.71	Yes
47	Storage Silo Vent System	0.16200	45.72	293.0	0.00	0.66	Yes
48	Finished Cement Transfer Elv	0.06480	45.72	293.0	0.00	0.31	Yes
50	Cement Bulk Loadout	0.02160	45.72	293.0	0.00	0.20	Yes
51	Finished Cement Loadout	0.02160	45.72	293.0	0.00	0.20	Yes
52	Rail/Truck Loading System	0.13608	45.72	293.0	0.00	0.53	Yes
53	Finished Cement Loadout Spout	0.13608	45.72	293.0	0.00	0.20	Yes
62	Front Coal Mill D.C.	0.02808	15.24	338.7	17.92	0.66	No

IOWA DEPARTMENT OF NATURAL RESOURCES
Administrative Consent Order
ISSUED TO: Lehigh Portland Cement Company

EXHIBIT “B”
Point Source Calendar Year Limitations
Lehigh Portland Cement Company

Source ID	Source Description	Maximum Calendar Year Hours of Operation (hours/year)
2	Limestone Primary Crushing	4380
3	Primary Screening System	4380
5	Limestone Secondary Crushing	4380
6	Limestone Transfer Points	4380
8	Limestone Transfer Points	7884
9	Limestone Transfer Points	7884
10	Limestone Transfer Points	7884
11	Limestone Transfer Points	7884
12	Limestone Transfer Points	876
13	Limestone Transfer Points	876
15	Clay Crushing System	876
18	Clay Transfer Point	7884
19	Raw Mix Transfer Point	7884
20	Raw Mix Transfer Point	7884
21	Raw Mix Transfer Point	7884
22	Raw Mix Transfer Point	7884
23	Raw Mix Transfer Point	7884
41	No. 3 Finishing Mill West Vt.	7534
42	No. 3 Finishing Mill West Vt.	7534
43	No. 5 Finishing Mill	7534
44	No. 6 Finishing Mill	7534
45	No. 4 Finishing Mill	7534
46	No. 4 Finishing Mill Conveyor	7534

Source ID	Source Description	Maximum Calendar Year Throughput (tons/year)
26	Clinker Cooler	1,850,000
27	Kiln Bypass Stack	1,850,000

IOWA DEPARTMENT OF NATURAL RESOURCES
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EXHIBIT “C”

Maximum Throughput Rates for Uncontrolled Sources
Lehigh Portland Cement Company

Source ID	Source Description	Number of Transfers	Maximum Daily Throughput- Each Transfer (tons/day)	Maximum Calendar Year Throughput- Each Transfer (tons/year)
1	Railcar Unloading	3	7,200	200,000
7A	Limestone Transfer <> Storage Pile	1	19,200 ^a	2,500,000
14A	Raw Material Transfer/Clay Storage Pile	2	12,000	200,000
14B	Raw Material Transfer/Clay Storage Pile	1	12,000	200,000
15A, 15B	Clay Crushing Fugitives	4	12,000	200,000
39-2 (239)	Gypsum/Anhydrite Bucket Transfer	2	3,600	100,000
39-3 (339)	Clinker Bucket Transfer	2	3,600	500,000
40	Coal Crusher	1	1,320	200,000
49	Rail Leg Loadout	1	300	5,000
56A	Limestone Transfer <> quarry to truck	2	16,000 ^b	1,675,800
57A	Clay Transfer <> quarry to truck	2	12,000 ^c	141,667
58A	Coal Transfer	1	7,200	200,000
59A	Sand Transfer <> delivery	2	12,000	2,190,000
59B	Sand Transfer <> to process	1	12,000	2,190,000
60A	Clay Transfer <> delivery	2	12,000	2,190,000
60B	Clay Transfer <> process	1	12,000	2,190,000
61A	Clay Transfer <> delivery	2	12,000	2,190,000
61B	Clay Transfer <> process	1	12,000	2,190,000
62-1 (162)	Coal Transfer System	4	1,320	481,800
63A	Kiln Dust Transfer	1	300	70,080
73A	Limestone Transfer <> process pile at crusher	1	19,200 ^a	500,000
74A	Limestone Transfer <> at clay crusher	1	2,000 ^d	70,000
75A	Clinker Transfer <> Craneway	1	1,200 ^e	15,000
76A	Clinker, Gypsum, Slag Transfer <> east of finish mill building	1	3,600	50,000

^aMaximum hourly throughput will be 1,200 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 750 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

^bMaximum hourly throughput will be 1,000 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 666 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

^cMaximum hourly throughput will be 1,000 ton/hour for the period 8:00 a.m. through 8:00 p.m. and 460 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

^dMaximum hourly throughput will be 250 ton/hour for the period 8:00 a.m. through 4:00 p.m. and 83.3 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

^eMaximum hourly throughput will be 100 ton/hour for the period 7:00 a.m. through 7:00 p.m. and 50 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

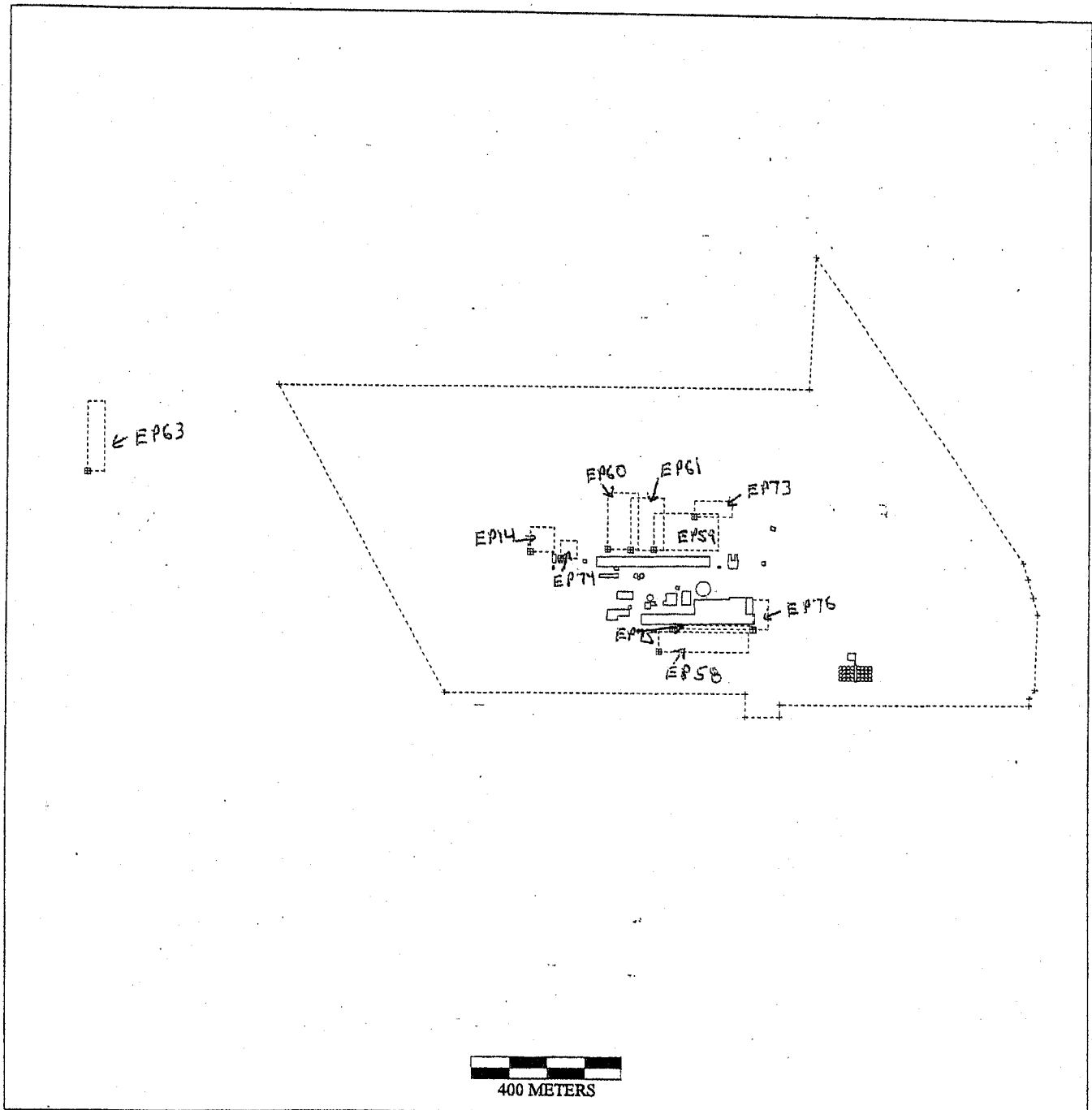
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Administrative Consent Order
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EXHIBIT “D”

Lehigh Storage Pile Data

Storage Pile ID/(Material)	Maximum Pile Size (acres)
14 (clay 1)	1
58 (coal)	3
59 (sand)	4
60 (clay 2)	3
61 (clay 3)	3
63 (kiln dust)	2
73 (quarry run limestone)	1
74 (quarry run limestone)	0.5
75 (clinker)	0.5
76 (clinker, gypsum, granulated blast furnace slag)	0.75

Exhibit "D", Page 2 of 2. Storage Pile Sizes and Locations (apprx)
Lehigh Portland Cement Company, Mason City, IA





Lehigh Cement Company LLC

Operation & Maintenance Plan

40 CFR 63, Subpart LLL

Mason City Facility
Portland Cement NESHAP

Version: **4.0**

Effective Date: **September 9, 2015**

Distribution

<u>Copy No.</u>	<u>Issued To:</u>
1	Environmental Manager
2	Plant Manager
3	Maintenance Supervisor
4	Production Supervisor
5	Kiln Control Room
6	Finish Mill Control Room

Document Version	Date	Description of Changes	Prepared By:
1.0	June 2002	Initial issue.	David M. Eckhart
2.0	10/19/2010	Removed mention of Alkali Bypass	William Bertie
3.0	8/27/2015	NESHAP regulatory update.	Rick Sterner
4.0	8/25/2016	Inclusion of open clinker storage pile section, update to regulatory applicability list and process flow diagrams	Miranda Brown (Spectrum)

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1 INTRODUCTION

This Operation and Maintenance Plan (OMP) was prepared to meet the requirement of the:

- National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry (40 CFR Part 63 Subpart LLL).

The purpose of the OMP is to ensure on-going compliance with the specific standards and requirements of 40 CFR Subpart LLL. As such, the focus of this OMP is on the operation, maintenance, and inspection of those source components, pollution control equipment, or monitoring devices that have a direct impact on the ability of affected sources to meet emission standards and requirements.

The basic structure of this OMP is based on the requirements of 40 CFR 63.1347(a). The appendices contain additional information; forms, references, and guidance intended to assist personnel with the implementation and upkeep of the OMP. The information in the appendices is not required by 40 CFR 63.1347(a) to be included as a part of the OMP and therefore should not be considered legally binding. It is the intention of Lehigh to append, modify, and/or delete anything contained in these appendices as necessary without notifying or receiving approval from the Administrator.

A list of the PC MACT affected sources has been included in this document in **Appendix A**.

2 REGULATORY OVERVIEW

As the result of a June 14, 1999 U.S. Environmental Protection Agency ("USEPA") rulemaking, and as amended on February 12, 2013; July 27, 2015; September 11, 2015; and July 25, 2016; Lehigh Cement Company LLC (Lehigh) will be subject to additional emissions standards for hazardous air pollutants. The National Emissions Standards for Hazardous Air Pollutants for Source Categories: Portland Cement Manufacturing Industry or 40 CFR 63 Subpart LLL establishes limits for emissions of filterable particulate matter (as a surrogate for HAP metals), mercury, total hydrocarbon, hydrogen chloride, and dioxins/furans (D/F) for existing Portland cement plants. The compliance date for existing facilities is September 9, 2015.

Lehigh is a major source as defined in 40 CFR 63.2. As a major source Lehigh is subject to emissions standards for all affected sources as listed in 40 CFR 63.1340; specifically: kilns; clinker coolers; raw mills; finish mills; raw material dryers; raw material, clinker or finished product storage bins, conveying system transfer points, bagging systems, bulk loading and unloading systems, and open clinker storage piles.

Per the NESHAP, the Plant is required to have established procedures for the proper operation and maintenance of all PC MACT affected sources and air pollution control devices in order to meet the emissions limits and operating limits, including fugitive dust control measures for any open clinker piles, of 40 CFR 63.1342 through 40 CFR 63.1348. The OMP must also address periods of startup and shutdown.

3 BASIC REQUIREMENTS OF THE OMP

As provided in §63.1347(a), the written OMP shall include the following information:

1. Procedures for the proper operation and maintenance of the affected source and air pollution control devices in order to meet the applicable emission limits and operating limits of the 40 CFR 63 Subparts A and LLL, including fugitive dust control measures for open clinker piles; and
2. Address periods of startup and shutdown;

3. Corrective actions to be taken when required by §63.1350(f)(3);
4. Procedures to be used during an inspection of the components for the combustion system of the kiln at least once per year.

The OMP is also required to address the procedures to be used to monitor affected sources subject to an opacity limit required by §63.1345. Such procedures must be in accordance with the requirements specified in §63.1350(f).

4 RESPONSIBILITIES

Key responsibilities are assigned for the implementation of this OMP. Although specific procedures may be performed by various plant personnel, overall responsibilities are outlined below to assist plant personnel with OMP implementation and to establish a framework through which NESHAP compliance will be maintained.

4.1 Plant Manager

The Plant Manager has overall responsibility for NESHAP regulatory compliance. The Plant Manager is responsible for oversight of the air quality control program at the plant and for ensuring that the procedures in this OMP are implemented and adhered to by plant personnel.

4.2 Production Department Managers

The Production Department Managers are responsible for day-to-day implementation of the OMP at the facility. They will report to the Plant Manager on all matters of NESHAP compliance. Their specific duties include, but are not limited to:

1. Notify the Maintenance Manager, Plant Manager, and Environmental Coordinator of potential and/or actual non-compliance with emissions or monitoring standards.
2. Oversight of training for production employees on the procedures outlined in the OMP.
3. Periodically review OMP and suggest updates to any procedures or appendices necessary to effectively implement the OMP.

4.3 Maintenance Supervisor

The Maintenance Supervisor will consult with plant personnel on inspection and maintenance needs of affected sources and associated pollution control equipment. The Maintenance Supervisor also provides guidance on the implementation and performance of this plan. Specific duties of the Maintenance Supervisor include, but are not limited to:

1. Schedule and review the inspection and preventative maintenance program included in this OMP.
2. Receive and review specific inspection and maintenance procedures conducted by plant personnel.
3. Ensure that the necessary maintenance is carried out based on inspection results.
4. Ensure spare parts for dust collectors are maintained at the plant.
5. Periodically review OMP and suggest updates to any procedures or appendices necessary to effectively implement the OMP.

4.4 Electrical Technician

The Electrical Technician is responsible for the proper operation, calibration, and maintenance of operating parameter monitoring equipment and continuous opacity monitoring equipment. Specific duties of the Electrical Technician might include:

1. Conduct or oversee the performance of quality control program of the continuous monitoring systems (CMS) at the kiln main stack and clinker cooler stack;
2. Perform necessary corrective action for the CMS;
3. Maintain files of quality control program data, including periodic checks, audits, and corrective action data; and
4. Ensure spare parts for CMS are maintained at the plant.

4.5 Control Room Operator

The Control Room Operator has the overall responsibility of monitoring the continuous opacity and temperature measurements at the inlet to the main stack ESP, bypass baghouse, and cooler vent baghouse. Specific duties of the Control Room Operator might include:

1. Monitor CMS fault warning systems and alarms;
2. Periodically check the data acquisition and management system computer to verify the system is operational;
3. Checks to ensure the kiln main stack and clinker cooler stack emissions are within applicable operating limits;
4. Reports any alarms, computer fault messages, malfunctions, process upsets, mission or erroneous data, or process problems that impair the ability of the kiln or cooler systems to meet or demonstrate compliance with applicable emission and operating parameter limits to the Production Manager.

4.6 Environmental Manager

The Environmental Coordinator has the overall responsibility of ensuring compliance with all Federal, State, and Local environmental regulations including the notification, reporting, record keeping requirements of 40 CFR Part 63 Subparts A and LLL. Specific tasks of the Environmental Manager might include, but are not limited to:

1. Ensure that appropriate plant personnel are familiar with applicable emissions standards and compliance demonstration requirements.
2. Inform the plant personnel of the content of the OMP and ensure that the OMP is effectively implemented.
3. Identify the need to update the OMP and revise the OMP as needed.

5 Affected Source Standards and Monitoring

A summary of affected sources at Lehigh and applicable standards are summarized in Table 1. The compliance date for these affected sources is September 9, 2015.

Table 1 Summary of affected sources and standards		
Affected Source	Pollutant	Emission Limit
In-Line Kiln / Raw Mill	Filterable PM	0.07 lb/ton of clinker produced
	Mercury	55 lb/million ton of clinker produced
	THC ^{1,2}	24 ppmvd, corrected to 7% Oxygen
	HCl	3 ppmvd, corrected to 7% Oxygen
	D/F ³	0.2 ng/dscm (TEQ)

Table 1 Summary of affected sources and standards		
Affected Source	Pollutant	Emission Limit
Clinker Cooler	Filterable PM	0.07 lb/ton of clinker produced
Finish Mills and Material Handling Systems	Opacity	10%
Kilns	Startup/Shutdown	Work practices [§63.1346(g)]
Clinker Coolers	Startup/Shutdown	Work practices [§63.1348(a)(9)]
Open Clinker Storage Piles	Operated in accordance with the fugitive dust emission control measures specified in this plan [[§63.1343(c)]	

¹ Measured as propane.

² Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP.

³ If the average temperature at the inlet to the first PM control device during the D/F performance test is 400 °F or less, this limit is changed to 0.40 ng/dscm (TEQ).

A summary of the compliance demonstration requirements for each affected source group at Lehigh is summarized in Table 2. The compliance date for these affected sources is September 9, 2015.

Table 2 Summary of affected sources monitoring requirements		
Affected Source	Pollutant	Monitoring Requirement
Kiln	Filterable PM	Continuous Parametric Monitor
	Mercury	Continuous Emission Monitor
	THC	Continuous Emission Monitor
	HCl	Continuous Parametric Monitor
	D/F	Temperature at Inlet to Kiln Baghouse
Clinker Cooler	Filterable PM	Continuous Parametric Monitor
Finish Mills	Opacity	Daily 6–Minute Method 22; If visible emission is observed, initiate corrective action within 1-hour, and then conduct a follow-up 6-minute Method 22 within 24 hours. If visible emission is still observed, conduct a 30-minute Method 9 within 1-hour.
Material Handling Systems	Opacity	Monthly** 10–minute Method 22; If visible emission is observed, initiate corrective action within 1- hour. If visible emission is observed, conduct a 30-minute Method 9 within 1-hour.

**Monthly monitoring is required for the first six months. If no visible emissions are observed, visible emission monitoring can be conducted semi-annually. If no visible emissions are observed following semi-annual monitoring, then annual visible emission monitoring can be conducted.

6 Startup and Shutdown Procedures

Per 40 CFR 63.1341, the PC MACT Rule defines startup and shutdown as follows:

- *Startup* means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first.
- *Shutdown* means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

Provided in the follow sections are a descriptions of startup and shutdown procedures for each affected Plant process area.

7 RAW MATERIAL PYRO-PROCESSING TO FORM CLINKER

SYSTEM: In-Line Kiln / Raw Mill

EQUIPMENT: Preheater Kiln, Ball Mill, Alkali-Bypass, and Coal Mill

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy 40 CFR 63 Subpart A and Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

7.1 Introduction

The cement kiln system is a single dry process rotary kiln equipped with a 4 stage preheater precalciner. The kiln system uses a variety of fuels to provide the thermal input necessary to convert raw materials into clinker. These fuels include fossil fuels (i.e. coal, petroleum coke, etc.) as well as natural gas. The raw materials fed to the kiln process include materials obtained from both on-site and off-site sources. Raw materials may include limestone, clay, sand, alumina, silica, iron ore, and/or other raw material additives.

Hot exhaust gases from the rotary kiln pass counter-currently through the downward-moving raw materials in the preheat tower. The hot exhaust gases exiting the preheat tower are cooled in a spray tower before being routed to the main stack ESP or to the raw mill. Exhaust gases entering the raw mill are used as a source of heat for drying raw materials and carrying the crushed materials into cyclones.

The kiln exhaust gases exiting the raw mill cyclone are then routed to the particulate matter control device (PMCD), referred to as the main stack ESP. Fines from the cyclone discharge are routed to the Raw Feed Blending and Storage System.

7.2 Regulatory Overview

Standards affecting the kiln systems include limits on filterable particulate matter (PM), mercury (Hg), total hydrocarbons (THC), hydrogen chloride (HCl), and dioxins and furans (D/F), see details in **Table 1**.

7.3 Operating Procedures

7.3.1 Dioxin / Furan and Temperature at Bag-house Inlet:

On-going compliance with the D/F limit will be achieved by operating the kiln system below the operating limits set during the most recent D/F performance test on the maximum temperature measured at the inlet to the main baghouse. The temperature at the inlet to the main baghouse is regulated by the spray tower. The spray tower cools kiln exhaust gases by introducing tiny water droplets into the air stream.

Proper operation of the spray tower in cooling kiln exhaust gases is achieved through automatic controls that regulate the water feed rate. Once the spray cooling has been started and operation has stabilized little additional operator attention is required.

The temperature of the kiln exhaust gases at the inlet to the main baghouse are continuously monitored as required by 40 CFR 63.1350(g). These readings are used as an indicator of proper operation of the spray tower.

7.3.2 Particulate Matter, Mercury, Total Hydrocarbons, and Hydrogen Chloride:

The affected source will ensure on-going compliance with the emission limits by properly operating the air pollution control devices that control HAP at all times the kiln is in operation in accordance with 40 CFR 63.1346. The main ESP operates under negative pressure. The key operating parameters of the air pollution control systems are given below.

1. Operating Temperature

The temperature of the kiln exhaust gases at the inlet to the main ESP are continuously monitored as required by 40 CFR 63.1350(g).

2. ESP Voltage

Each of the 3 ESP fields can be individually controlled by adjusting the Voltage to most effectively clean the gas passing through the field based on the dust load. The Voltage electrically charges closely spaced large plates in the ESP. The Voltage for each field is maintained at 65 KV during normal operation. This requires little or no attention once the set point is determined..

3. ESP Charged Plate Cleaning

Once the particles are attracted to the charged plates in the ESP, the plates in each field are cleaned on a timed basis. The plates are hammered by a motor driven cam on top of each field. The frequency of the plate cleaning can be adjusted and they should be timed so that they do not interfere with the cleaning time of downstream fields creating an opacity spike that corresponds with the cleaning cycle. Once the cleaning timing and frequency are set they require little or no attention when working properly.

4. Negative Pressure at ESP Inlet

Vacuum indication at the kiln baghouse inlet is monitored by the console operator during operation as an indicator of proper operation of the main ESP.

7.4 Maintenance and Inspection Procedures

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable 40 CFR 63 Subpart A and LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1347(a)(1).

7.4.1 In-Line Kiln and Preheater

1. Annual Combustion System Inspection

40 CFR 63.1347(a)(3) requires the combustion system of the kiln be inspected at least once per year. The purpose of the annual inspection is to ensure good combustion and thus limit primary formation of D/F in the kiln. Primary D/F formation in the kiln occurs as a result of insufficient oxygen, poor mixing, low temperature, and short residence time. The following inspection procedures are conducted annually to ensure that the specific components of the combustion system that control these factors are sufficient for maintaining good combustion practices.

- a. Inspect burner pipe for erosion, corrosion, plugging, or other alterations that may adversely affect performance.
- b. Check air supply and burner condition.
- c. Inspect coal conveying system.
- d. Inspect the grinding balls, grinding rings, and other coal milling system wear parts.

The results of this annual inspection must be included in the Semi-Annual Summary Report required by 40 CFR 63.10(e)(3)(VI) if the inspection was conducted during the reporting period. [40 CFR 63.1354(b)(9)(iv)]

2. Periodic Inspection Procedures

- a. During operation of the rotary kiln, the preheat tower is periodically inspected to prevent plugging to the extent possible.
- b. Preventative maintenance procedures include cleaning of the preheat tower by plant operators, as necessary, to avoid plugging.
- c. Frequency of preheat tower inspections for plugging will vary depending on maintenance and malfunction history. As a general guideline, inspections are routinely scheduled during each shift.

7.4.2 Electrostatic Precipitator (ESP)

1. Periodic Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the main ESP.

- a. Verify that the ESP and immediate ductwork are free of leaks.
- b. Verify that the following ESP components are operational: plate cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on a monthly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of the main ESP.

- a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage).
- b. Check the cleaning sequence of the ESP collection plates;
- c. Inspect plates for wear.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following:

- a. Repair/replacement of electrical components.
- b. Repair leaks in the containment structure of the ESP or immediate ductwork.

7.4.3 Spray Cooling System

1. Periodic Inspection Procedures

Continuous monitoring of the temperature of kiln exhaust gases at the inlet to the ESP serves as an indicator of proper operation of the spray tower. If temperature spikes are consistently observed, the following inspection procedures of certain components of the spray tower may be used to identify the appropriate preventative maintenance needs of the system.

- a. Verify that water supply system is functioning.
- b. Check for proper operation of water supply pumps and water line (i.e. check for blockage and leakage).
- c. Check re-circulating water system for plugging.
- d. Verify that pressure drop indicators are functioning and check pressure drop as an indicator of plugging in pipes, manifolds, and spray nozzles.

7.4.4 Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following:

- a. Repair/replace leaks, cracks, and loose fittings.
- b. Clean out plugged pipes, manifolds, spray nozzles, etc.

7.5 MONITORING PROCEDURES

The monitoring procedures outlined below are consistent with 40 CFR 63 Subpart A and LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(b), (d), (g), (i), (j), (k), (l), and (m).

7.5.1 Continuous Parametric Monitor System (CPMS) & Continuous Emissions Monitor Systems (CEMS)

1. As required by 40 CFR 63.1350(b), a PM CPMS is used as an indicator of compliance with the PM standards for the kiln systems. The PM CPMS is calibrated, operated, and maintained in accordance with the provisions of PS-11 of Appendix B to Part 60. More detail can be found in the facility's Site-Specific Monitoring Plan.
2. As required by 40 CFR 63.1350(i), a continuous emission monitor system is used as an indicator of compliance with the THC standards for the kiln systems. The THC CEMS is calibrated, operated, and maintained in accordance with the provisions of 40 CFR Part 63 Subpart A and Performance Specification 8 or 8A of Appendix B to Part 60. More detail can be found in the facility's Site-Specific Monitoring Plan.
3. As required by 40 CFR 63.1350(k), a continuous emission monitor system is used as an indicator of compliance with the Hg standards for the kiln systems. The CEMS is calibrated, operated, and maintained in accordance with the provisions of 40 CFR Part 63 Subpart A and Performance Specification 12B of Appendix B to Part 60. More detail can be found in the facility's Site-Specific Monitoring Plan.
4. As required by 40 CFR 63.1350(l), a continuous parametric monitor system for SO₂ is used as an indicator of compliance with the HCl standards for the kiln systems. The CEMS is calibrated, operated, and maintained in accordance with the requirements of 40 CFR Part 63.63(e) through (f) of part 60 subpart F of this chapter. More detail can be found in the facility's Site-Specific Monitoring Plan.

7.5.2 Temperature Monitor

1. As required by 40 CFR 63.1350(g), a continuous monitor is used to record the temperature of kiln exhaust gases at the inlet to the main baghouse dust collector. More detail can be found in the facility's Site-Specific Monitoring Plan.

7.5.3 Clinker Production

1. As required by 40 CFR 63.1350(d), the hourly clinker production rate will be monitored. The facility will install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 percent accuracy. In addition, the facility will calculate an hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. This ratio will be updated monthly. (Note that if this ratio changes at clinker reconciliation, the new ratio will be used going forward, and will not retroactively change the clinker production rates previously estimated.) More detail can be found in the facility's Site-Specific Monitoring Plan.

7.6 CORRECTIVE ACTIONS

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350. The procedures outlined below must be initiated after an exceedance is noted.

7.6.1 Response Procedures

1. For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, you must:
 - a. Within 48 hours of the exceedance, visually inspect the APCD;
 - b. If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and
 - c. Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. (Note the facility is not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the required PM emissions compliance test.)
2. If the SO₂ levels increase above the 30-day rolling average SO₂ operating limit established during the performance test:
 - a. As soon as possible but no later than 48 hours after exceedance of the established SO₂ value conduct an inspection and take corrective action to return the SO₂ emissions to within the operating limit; and
 - b. Within 60 days of the exceedance or at the time of the next compliance test, whichever comes first, conduct an HCl emissions compliance test to determine compliance with the HCl emissions limit and to verify or re-establish the SO₂ CEMS operating limit.
3. For any exceedance of an operating emission/parameter limit, except those listed above, you must:
 - a. Record the time and location of the observation;
 - b. Inform the Environmental Coordinator (or other responsible personnel) of the occurrence of an observation including time and location; and
 - c. Initiate all appropriate inspection procedures listed in Section 7.4 above.

7.7 STARTUP & SHUTDOWN PROCEDURES

Current Lehigh standard operating procedures for startup will be utilized for the kilns.

The following provides the definition, as it pertains to the PC MACT regulation, of **when startup begins** and **when startup ends and normal operation begins**.

- Startup begins when the following are met:
 1. The kiln ID fan is on; **and**
 2. There is firing of fuel in the main kiln burner.
- Startup ends and normal operation begins when the following is met:
 1. When the kiln feed is on for at least 120 minutes; **or**
 2. When the kiln feed rate exceeds 60% of the kiln design rate. For Mason City, 60% of the feed rate is 150 metric tons per hour.

The following provides the definition, as it pertains to the PC MACT regulation, of **when shutdown begins** and **when shutdown ends**.

- Shutdown begins when the following are met:
 1. When there is no feed entering the kiln.
- Shutdown ends when the following are met:
 1. When the kiln is no longer in continuous rotation or the fuel or kiln feed is turned on.

Also during periods of startup and shutdown Lehigh must meet the requirements listed in 40 CFR 63.1346(g)(1) through (4), which are as follows:

- (1) During startup you must use any one or combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) until the kiln reaches a temperature of 1200 degrees Fahrenheit.
- (2) Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200 degrees Fahrenheit.
- (3) All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream to the air pollution control device reaches 300 degrees Fahrenheit. Temperature content to be measured at the inlet of the baghouse or ESP every fifteen minutes during startup until all HAP control devices are operating, and every fifteen minutes during shutdown until any activated carbon or lime injection systems are not operating.
- (4) You must keep records as specified in 40 CFR 63.1355 during periods of startup and shutdown.

In addition, Lehigh implements good combustion practices so that emissions of regulated air pollutants should be minimized during startup procedures. Good combustion practices during startup may include: kiln temperature; carbon monoxide; and oxygen.

8 CLINKER COOLING

SYSTEM: Clinker Cooler

EQUIPMENT: Clinker Cooler

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy 40 CFR 63 Subpart A and LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

8.1 Introduction

The kiln is equipped with a clinker cooler the purpose of which is to lower the temperature of the clinker after it discharges from the kiln to a manageable level and to recuperate heat from the clinker to make the overall process more energy efficient. Ambient air is blown by means of fans through the grates on the floor of the cooler to cool the clinker. The cooler vent system draws heated air from the cooler. The heated air passes through the air to air heat exchanger and then through a baghouse before the air exits through the cooler vent stack.

8.2 Regulatory Overview

Standards affecting the clinker cooler system include limits on filterable particulate matter (PM) from the clinker cooler dust collector stacks, see details in **Table 1**.

8.3 Operating Procedures

8.3.1 Filterable Particulate Matter

The affected sources will ensure on-going compliance with the PM limit by properly operating each air pollution control device that control HAP at all times the clinker cooler is in operation. The clinker cooler baghouse operates under negative pressure with an air cleaning mechanism. The key operating parameters of fabric filter control systems affecting the emissions are given below.

1. Pressure Drop

The baghouse is operated to maintain a pressure drop across the system and within a typical operating range for the individual dust collector. The pressure drop is an indication of filter cake formation, which impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

2. Cleaning Air Pressure

The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

3. Negative Pressure at Baghouse Inlet

Vacuum indication at the kiln bag house inlet is monitored by the console operator during operation as an indicator of proper operation of cooler vent exhaust containment.

8.4 Maintenance and Inspection Procedures

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1347(a)(1).

8.4.1 Dust Collectors

1. Periodic Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the clinker cooler system dust collectors.

- a. Verify that the pressure drop indicator is functioning.
- b. Verify that the dust collector and immediate ductwork are free of leaks.
- c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on a monthly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of dust collectors that are critical to the ability of each to achieve applicable emission limits.

- a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage).
- b. Check the cleaning sequence of the dust collector.
- c. Inspect bags for leaks and wear.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following.

- a. Repair/replacement of filter bags.
- b. Repair leaks in the containment structure of the dust collector or immediate ductwork.
- c. Repair leaks in the dust return system.

8.5 Monitoring Procedures

The monitoring procedures outlined below are consistent with 40 CFR 63 Subpart A and LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(b).

8.5.1 Continuous Parametric Monitor System (CPMS)

As required by 40 CFR 63.1350(b), a PM CPMS is used as an indicator of compliance with the PM standards for the clinker cooler systems. The PM CPMS is calibrated, operated, and maintained in accordance with the provisions of PS-11 of Appendix B to Part 60. More detail can be found in the facility's Site-Specific Monitoring Plan.

8.6 Corrective Actions

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350. The procedures outlined below must be initiated after an exceedance is noted.

8.6.1 Response Procedures

For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, you must:

1. Within 48 hours of the exceedance, visually inspect the APCD;
2. If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and
3. Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. (Note the facility is not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the required PM emissions compliance test.)

8.7 Startup & Shutdown Procedures

Current Lehigh standard operating procedures for startup will be utilized for the clinker coolers. Additionally, during startup and shutdown, each air pollution control device that control HAP will be operating at all times the corresponding clinker cooler is in operation.

The following provides the definition, as it pertains to the PC MACT regulation, of ***when startup begins*** and ***when startup ends and normal operation begins***.

- Startup begins when the following are met:
 1. The kiln ID fan is on; **and**
 2. There is firing of fuel in the main kiln burner.
- Startup ends and normal operation begins when the following is met:
 1. When the kiln feed is on for at least 120 minutes; **or**
 2. When the kiln feed rate exceeds 60% of the kiln design rate. For Mason City, 60% of the feed rate is 150 metric tons per hour.

The following provides the definition, as it pertains to the PC MACT regulation, of ***when shutdown begins*** and ***when shutdown ends***.

- Shutdown begins when the following are met:
 1. When there is no feed entering the kiln.
- Shutdown ends when the following are met:
 1. When the kiln is no longer in continuous rotation or the fuel or kiln feed is turned on.

9 CLINKER GRINDING TO MANUFACTURE FINISH PRODUCT

SYSTEM: Finish Grinding Systems

EQUIPMENT: Finish Mills 3, 4, 5, and 6

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy 40 CFR 63 Subpart A and LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

9.1 Introduction

The finish mill system includes four separate milling systems that process clinker and gypsum into a finely ground mixture. The clinker and gypsum are fed to the finish mills via weigh feeders. Ground cement is then discharged from each mill into a bucket elevator that transports the material to a mechanical air separator. The separator segregates the ground cement by particle size and discharges materials meeting the size specification to the Storage and Shipping Department.

Each finish mill is equipped with a dust collector to control particulate emissions from the mill sweep and separator.

9.2 Regulatory Overview

Standards affecting the finish mill system include limits on the opacity of discharges from the mill sweep or air separator air pollution control devices, see details in **Table 1**.

9.3 Operating Procedures

9.3.1 Filterable Particulate Matter

The affected sources will ensure on-going compliance with the PM limit by properly operating each air pollution control device that control HAP at all times the finish mill systems are in operation. The finish mill systems baghouses operate under negative pressure with an air cleaning mechanism. The key operating parameters of fabric filter control systems affecting the emissions are given below.

1. Pressure Drop

The baghouse is operated to maintain a pressure drop across the system and within a typical operating range for the individual dust collector. The pressure drop is an indication of filter cake formation, which impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

2. Cleaning Air Pressure (Finish Mill 4)

The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

3. Reverse Air Bag Cleaning Systems (Finish Mills 3, 5 & 6)

The bag cleaning air is ambient air drawn into individual compartments in the reverse flow direction of the dust-laden air. The dust-laden air is closed off during this cleaning cycle so that the reverse air cleans the dust cake off of the filter bags. This cleaning cycle must be operating and timed correctly to allow for proper cleaning of the bags.

9.4 Maintenance and Inspection Procedures

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable 40 CFR Part 63 Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1347(a)(1).

9.4.1 Dust Collectors

1. Periodic Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the finish mill system dust collectors.

- a. Verify that the dust collector and immediate ductwork are free of leaks;
- b. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on a monthly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of dust collectors that are critical to the ability of each to achieve applicable emission limits.

- a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);
- b. Check the cleaning sequence of the dust collector.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following:

- a. Repair/replacement of filter bags;
- b. Repair leaks in the containment structure of the dust collector or immediate ductwork.
- c. Repair leaks in the dust return system.

9.5 Monitoring Procedures

Visual emissions observations in accordance with 40 CFR 63.1350(f)(2) is required for each affected source subject to the provisions of 40 CFR 63.1345. The visual emissions observation requirements of 40 CFR 63.1350(f)(2) are outlined below.

9.5.1 Visible Emissions Observations

1. Visual emissions observations of the mill sweep and air separator dust collectors are conducted each day that the affected source is in operation.
2. The procedures of Method 22 of Appendix A of Part 60 will be used for all visual emissions observations.
3. The duration of the Method 22 test is 6-minutes.
4. If visible emissions are observed, initiate corrective action within 1-hour. Subsequently, within 24-hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow up 6-minute Method 22 test of each stack from which visible emissions were observed during the previous 6-minute Method 22 test.
5. If visible emissions are observed during the follow-up Method 22 test, conduct a Method 9 test within 1-hour. The duration of the Method 9 test is 30-minutes.
6. The appropriate corrective actions outlined in Section 9.6 below will be initiated within 1-hour after any visual emissions observation.

9.6 Corrective Actions

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1347(a)(2). The procedures outlined below must be initiated within 1-hour of observing visual emissions as outlined in 40 CFR 63.1350(f)(3).

9.6.1 Immediate Response Procedures

The following actions will be taken within one-hour of observing visual emissions following the Method 22 procedures.

1. Record the time and location of the visual emissions observation;

2. Inform the Environmental Coordinator (or other responsible personnel) of the occurrence of a visual emissions observation including time and location;
3. Initiate all appropriate inspection procedures listed in Section 9.4 above.

9.6.2 Subsequent Response Procedures

The following response procedures will be initiated if the Method 9 test conducted as a result of a visual emissions observation indicates an exceedance of the opacity limit.

1. Based on the results of the inspection, initiate maintenance as appropriate;
2. Record duration of visual emissions event and maintenance performed on the dust collector as required by 40 CFR 63.10(b)(2).

9.7 Startup & Shutdown Procedures

Current Lehigh standard operating procedures for startup will be utilized for the finish mills. These procedures were reviewed by Lehigh, prior to the MACT compliance date, to ensure that HAP emissions are minimized during periods of unit startup. Additionally, during startup and shutdown, each air pollution control device that control HAP will be operating at all times the corresponding mill is in operation.

10 MATERIAL HANDLING SYSTEMS

SYSTEM: Storage and Material Handling Systems

EQUIPMENT: Raw Material, Clinker, Finished Product Storage Silos; Conveying System Transfer Points; Bagging Systems; and Bulk Loading and Unloading Systems

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy 40 CFR 63 Subpart A and LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

10.1 Introduction

The raw material, clinker, and finished product storage systems consist of both storage silos and surge bins. Affected sources include only those raw material, clinker, and finished product storage bins that meet the EPA definition of a bin. EPA has defined a bin as "a man-made enclosure for storage of kiln feed, clinker, or finished product prior to further processing."

Emissions from storage bins occur as a result of bin loading and unloading as well as entrainment of dust particles from air circulation in the bin. Stack emissions from raw material, clinker, and finished product storage bins are controlled with fabric filter dust collectors. Fugitive emissions from raw material and clinker storage are controlled with containment structures that provide an enclosure.

Conveying systems are used to transfer raw materials, solid fuels, clinker, and finished product from one piece of equipment or location to another location within the facility. Affected sources that comprise these systems include feeders, belt conveyors, bucket elevators, and pneumatic systems.

Stack emissions from conveying system transfer points are controlled with fabric filter dust collectors. Dust suppression of fugitive sources is sometimes accomplished through the use of enclosures and drop chutes at transfer points.

Affected sources that are located within buildings that provide a total enclosure are monitored at the extent of the building .

The bulk loading and unloading systems include bulk load out via railcar and truck and the rail car unloading system.

Dust generated during bulk loading and unloading is collected and vented to dust collectors. Fugitive emissions from bulk loading are contained via loading spouts, which are vented by dust collectors.

All dust collectors are closed circuit and recovered particulates are returned back to the process.

10.2 Regulatory Overview

Standards affecting the storage and material handling systems include limits on the opacity of discharges from conveyor system transfer points; raw material, clinker, and finished product storage bins; bulk loading and unloading systems; and dust collectors controlling these sources, see details in Table 1..

10.3 Operating Procedures

10.3.1 Opacity

Each affected source with uncontrolled emissions that have the potential to exceed the 10 percent opacity limit is equipped with fabric filter control equipment, dust collector, to ensure compliance with the NESHAP standard. As such, affected sources will ensure on-going compliance with the opacity limit by properly operating each air pollution control device that control HAP at all times the corresponding affected source is in operation. A variety of fabric filter dust collectors are utilized depending on the characteristic of the system and emissions being controlled. In each case, however, the key operating parameters of fabric filter control systems affecting the opacity of emissions are the same.

1. Pressure Drop

The baghouse is operated to maintain a pressure drop across the system and within a typical operating range for the individual dust collector. The pressure drop is an indication of filter cake formation, which impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

2. Cleaning Air Pressure

The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

10.4 Maintenance and Inspection Procedures

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1347(a)(1).

10.4.1 Dust Collectors

1. Periodic Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of affected material handling sources.

- a. Verify that all housings and skirting are properly enclosing the affected source.
- b. Verify that the dust collector and immediate ductwork are free of leaks.
- c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above will be performed monthly.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of affected dust collectors that are critical to the ability of each to achieve applicable emission limits.

- a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage).
- b. Check the cleaning sequence of the dust collector.
- c. Inspect bags for leaks and wear.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the inspection procedures listed above will be performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventive maintenance may be necessary. The specific preventive maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

- a. Repair/replacement of filter bags.
- b. Repair leaks in the containment structure of the dust collector or immediate ductwork.

10.5 Monitoring Procedures

Periodic visual emissions observations in accordance with 40 CFR 63.1350(f)(1) are required for each affected source subject to the provisions of 40 CFR 63.1345. Refer to Table 1 for a list of affected sources and associated control equipment subject to this requirement. The periodic visual emissions observation requirements of 40 CFR 63.1350(f)(1) are outlined below. Note that this requirement does not apply to totally enclosed conveying system transfer points.

10.5.1 Visible Emissions Observations Frequency

Visual emissions observations are conducted periodically while the affected source is in operation. The frequency for visual emissions varies according to the following:

1. Initially, visual emissions observations must be conducted on each affected source on a monthly basis.

2. If no visible emissions are observed in six consecutive monthly tests for any affected source, the frequency of visible emissions observations may be decreased from monthly to semi-annually for that affected source.
3. If no visible emissions are observed during the semi-annual test for any affected source, the frequency of visible emissions observations may be decreased from semi-annually to annually for that affected source.
4. If visible emissions are observed during any semi-annual or annual test, visible emissions observations of that affected source must resume on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

10.5.2 Visible Emissions Observations

1. The procedures of Method 22 of Appendix A of Part 60 will be used for all visual emissions observations.
2. The duration of the Method 22 test is 10-minutes.
3. If visible emissions are observed during a Method 22, must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The Method 9 performance test, of appendix A-4 to part 60 of this chapter, must begin within 1-hour of any observation of visible emissions.
4. If visible emissions are observed during a Method 22, the appropriate corrective actions outlined in Section 10.6 below will be initiated within 1-hour after any visual emissions are observed.

10.6 Corrective Actions

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1347(a)(2). The procedures outlined below must be initiated within 1-hour of observing visual emissions as outlined in 40 CFR 63.1350(f)(3).

10.6.1 Immediate Response Procedures

The following actions will be taken within one-hour of observing visual emissions following the Method 22 procedures.

1. Record the time and location of the visual emissions observation;
2. Inform the Environmental Coordinator (or other responsible personnel) of the occurrence of a visual emissions observation including time and location;
3. Initiate the Method 9 mentioned in Section 10.5.2 above.

10.6.2 Subsequent Response Procedures

The following response procedures will be initiated if the Method 9 test conducted as a result of a visual emissions observation indicates an exceedance of the opacity limit.

1. Based on the results of the inspection, initiate maintenance as appropriate;
2. Record duration of visual emissions event and maintenance performed on the dust collector as required by 40 CFR 63.10(b)(2).

10.7 Startup & Shutdown Procedures

Current Lehigh standard operating procedures for startup will be utilized for the material handling systems. These procedures were reviewed by Lehigh, prior to the MACT compliance date, to ensure that HAP emissions are minimized during periods of unit startup. Additionally, during startup and shutdown, each air pollution control device that control HAP will be operating at all times the corresponding system is in operation.

11 OPEN CLINKER STORAGE PILES

SYSTEM: Open Clinker Storage Piles

EQUIPMENT: Open Clinker Storage Piles

PURPOSE: The purpose of this procedure is to provide fugitive dust control measures for open clinker storage piles to satisfy 40 CFR 63 Subpart A and LLL requirements, specifically 40 CFR 63.1343(c).

11.1 Introduction

Per 40 CFR 63.1341, an open clinker storage pile is defined as "a clinker storage pile on the ground for more than three days that is not completely enclosed in a building or structure."

Per 40 CFR 63.1343(c), the Operations and Maintenance Plan must include the following:

- Identify and describe the location of each open clinker storage pile.
- Describe the fugitive dust control measures the Plant will use to minimize fugitive dust emissions from each open clinker storage pile. These measures must include one or more of the following measures: locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents, use of a wind barrier, compaction, use of tarpaulin or other equally effective cover or use of a vegetative cover.
- An explanation as to how the measure or measures selected are applicable and appropriate for site conditions.
- An explanation of how temporary piles of clinker will be addressed

11.2 Identification and Description of Open Clinker Storage Piles

The Plant currently has two emission sources that meet the definition of an open clinker storage pile.

EP75 – Clinker Storage Pile
EP76 – Raw Materials Storage Pile

EP75 is located within the Craneway Building at the south end. EP76 is located at the east end of the Finish Mills Building.

11.3 Fugitive Dust Control Measures

EP75 is controlled by a partial enclosure consisting of one full wall and roof along with water sprays as needed for dust suppression. EP76 is controlled using compaction. These control measures are deemed appropriate for the Plant to use based upon the location of each of the storage piles and site conditions associated with each storage pile's use.

11.4 Temporary Clinker Storage Pile Procedures

Temporary piles of clinker that result from accidental spillage or clinker storage cleaning operations will be cleaned up within 3 days. Best management practices will be employed by the Plant until the temporary piles of clinker are reclaimed. Temporary clinker storage piles that remain after 3 days will be considered open clinker storage piles and will immediately be managed through the use of one of the control measures as outlined in 40 CFR 63.1343(c)(2).

The fugitive dust control measure(s) that is deemed most appropriate based on the location of the new open clinker storage pile and the existing site conditions will be utilized.

The Iowa Department of Natural Resources will be notified via email of the existence of any new open clinker storage piles within 7 days of it being considered a new open clinker storage pile. The email communication will specify the location of the new open clinker storage pile, the reason the pile was not able to be reclaimed within 3 days, the fugitive dust suppression control measures being utilized, and the plan for remediation of the open clinker storage pile.

APPENDICES

Appendix A

Masc. - Plant
Regulatory Emission Source Applicability List

EP ID	EU ID	Control Equipment No.	Emission Point Description	Emission Unit Description	Federal Regulatory Determination
Group A - Material Transfer Fugitive Emission Sources Subject to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule.					
1	1	None	Transfer Point	Railcar Unloading	Coal unloading - not an affected source under NSPS Subpart Y
7	7A	None	Limestone Storage Building	Limestone Transfer	Constructed prior to 1983, so exempt from NSPS Subpart 000
14	14A	None	Clay Storage Pile (Pile #1)	Clay Delivery and Distribution	Constructed prior to 1983, so exempt from NSPS Subpart 000
14	14B	None	Clay Storage Pile (Pile #1)	Clay Transfer to Process	Constructed prior to 1983, so exempt from NSPS Subpart 000
15	15A	None	Clay Crushing System	Raw Material Transfer - Clay Crushing System	Constructed prior to 1983, so exempt from NSPS Subpart 000
15	15B	None	Clay Crushing System	Raw Material Transfer - Clay Crushing System	Constructed prior to 1983, so exempt from NSPS Subpart 000
40	40	None	Coal Crusher	Coal Crusher	Was built before 1974 so exempt from Subpart Y
56	56A	None	Limestone Crushing	Truck Loading - Limestone	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
57	57A	None	Clay Quarry Haul Road	Truck Loading - Clay	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
58	58A	None	Coal Storage Pile	Coal Transfer	Was built before 1974 so exempt from Subpart Y
59	59A	None	Sand Storage Pile	Sand Delivery & Unloading	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
59	59B	None	Sand Storage Pile	Sand Transfer to Process	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
60	60A	None	Clay Storage Pile #2 (Missouri clay)	Clay Delivery & Unloading	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
60	60B	None	Clay Storage Pile #2 (Missouri clay)	Clay Transfer to Process	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
61	61A	None	Clay Storage Pile #3 (blue clay)	Clay Delivery & Unloading	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
61	61B	None	Clay Storage Pile #3 (blue clay)	Clay Transfer to Process	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
62-1	62-1	None	Transfer System	Coal Transfer	Coal conveying transfer point built after 1974, so subject to Subpart Y requirements.
63A	63A	None	Pneumatic Kiln Dust Transfer	Kiln Dust Unloading	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
73A	73A	None	Limestone transfer - Pile to Primary Crusher	Limestone Transfer to Process Pile	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
74A	74A	None	Limestone Transfer - Pile to Clay Crusher	Limestone Transfer to Process Pile	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
75A	75A	None	Clinker Transfer to Craneway	Clinker Transfer to Craneway	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
76A	76A	None	Transfer of Pile - East of Finish Mills	Pile Transfer - East End of Finish Mills	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
Group B - Storage Piles					
7	7	None	Limestone Storage Building	Storage Pile Fugitives	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
14	14	None	Clay Storage Pile (Pile #1)	Clay Storage Pile No. 1	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
58	58	None	Coal Storage Pile	Coal Storage Pile	Not an affected source under NSPS Subpart Y
59	59	None	Sand Storage Pile	Sand Storage Pile	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
60	60	None	Clay Storage Pile #2 (Missouri clay)	Clay Storage Pile No. 2	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
61	61	None	Clay Storage Pile #3 (blue clay)	Clay Storage Pile No. 3	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
63	63	None	Landfill Area	Kiln Dust Storage Pile	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
73	73	None	Limestone Storage Pile - Primary Crusher	Quarry Run Limestone Storage Pile	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL

EP ID	EU ID	Control Equipment No.	Emission Point Description	Emission Unit Description	Federal Regulatory Determination
74	74	None	Limestone Storage Pile - Clay Crusher	Quarry Run Limestone Storage Pile	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
75	75	None	Storage Pile - Craneway - Clinker	Clinker Storage Pile	Per revised NESHAP Subpart LLL - now an affected source under Subpart LLL as a clinker storage pile.
76	76	None	Storage Pile - East End of Finish Mills	Raw Materials Storage Pile	Per revised NESHAP Subpart LLL - now an affected source under Subpart LLL as a clinker storage pile.
Group C - Haulroads					
56	56	None	Limestone Crushing	Limestone Quarry Haulroad	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
57	57	None	Clay Quarry Haul Road	Clay Quarry Haulroad	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
63B	63B	None	Kiln Dust Haul Road	Kiln Dust Haulroad	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
80	80	None	Paved Cement Silos Haul Road to US65	Cement Haulroad - Cement Loadout to U.S. 65	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL
Group D - Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL					
8	8	CE8	Raw Material Transfer - Belt D-49 to D-01	Raw Material Transfer - Belt D-49 to D-01	Per revised NESHAP Subpart LLL, now an affected source under NESHAP Subpart LLL as a conveying system transfer point.
9	9	CE9	Raw Material Transfer - Belt D-01 to D-02	Raw Material Transfer - Belt D-01 to D-02	Per revised NESHAP Subpart LLL, now an affected source under NESHAP Subpart LLL as a conveying system transfer point.
10	10	CE10	Raw Material Transfer Point	Raw Material Transfer - Belt D-02 to Stone Bin	Per revised NESHAP Subpart LLL, now an affected source under NESHAP Subpart LLL as a conveying system transfer point.
11	11	CE11	Raw Material Transfer Point - Apron Feeder	Raw Material TP - Apron Feeder to Belt	Affected source under NESHAP Subpart LLL - conveying system transfer point (TP)
12	12	CE12	Transfer Point	Raw Material TP Reclaim Belt 2 to Stone Belt 2	Per revised NESHAP Subpart LLL, now an affected source under NESHAP Subpart LLL as a conveying system transfer point.
18	18	CE18	#2 Clay Crusher Transfer Point	Raw Material Transfer- Grinding Circuit	Affected source under NESHAP Subpart LLL - conveying system TP
19	19	CE19	Homogenizing Silos	Raw Material Transfer to Homogenizing Silo	Affected source under NESHAP Subpart LLL - conveying system TP
20	20	CE20	IBAU Bin Bottom Elevator	Raw Material Transfer - IBAU Bin Bottom Elevator	Affected source under NESHAP Subpart LLL - conveying system TP
21	21	CE21	IBAU Bin Top West Elevator Vent	IBAU Elevator West to Top Silo Conveyor	Affected source under NESHAP Subpart LLL - conveying system TP
22	22	CE22	IBAU Bin Top North Elevator Vent	IBAU Elevator S to Top Silo Conveyor	Affected source under NESHAP Subpart LLL - conveying system TP
23	23	CE23	IBAU Bin Top Elevator Vent	IBAU Bin South Top Elevator	Affected source under NESHAP Subpart LLL - conveying system TP
24	24	CE24	Raw Material Transfer Vent	Raw Material Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
28	28	CE28	Waste Kiln Dust Tanks	Kiln Dust Disposal Tank	Per revised NESHAP Subpart LLL, now an affected source under NESHAP Subpart LLL as a finished product bin.
	29			Kiln Dust Loadout	Per revised NESHAP Subpart LLL, now an affected source under NESHAP Subpart LLL as an unloading system.
33	33	CE33	#1 Clinker Outhaul Bucket	Outhaul Conveyor Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
34	34	CE34	Truck Loadout Transfer	Clinker Truck Loadout	Affected source under NESHAP Subpart LLL - Unloading System
35	35	CE35	Clinker Transfer	Outhaul Conveyor Transfer to Clinker Silo	Affected source under NESHAP Subpart LLL - conveying system TP
36	36	CE36	Withdrawal Conveyor Transfer	Clinker Withdrawal Conveyor Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
37	37	CE37	Clinker Transfer Belt	Clinker Belt 206 to 208 Transfer	Affected source under NESHAP Subpart LLL - conveying system TP

Massey Plant
Regulatory Emission Source Applicability List

EP ID	EU ID	Control Equipment No.	Emission Point Description	Emission Unit Description	Federal Regulatory Determination
39	39	CE39	Clinker Transfer	Clinker Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
39-1	39-1	CE39-1	Clinker Transfer	Clinker Ladder	Affected source under NESHAP Subpart LLL - conveying system TP
	38			Clinker Belt 208 to Belt 211 Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
39-2	39-2	None	Transfer Point	Gypsum/Anhydrite Bucket Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
39-3	39-3	None	Transfer Point - Clinker Bucket	Clinker Bucket Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
41 & 42	41	CE41 & CE42	41 - Finish Mill #3	No. 3 Finish Mill	Affected source under NESHAP Subpart LLL - Finish Mill
	41A			Vibrating Conveyor Transfer	Affected source under NESHAP Subpart LLL - Finish Mill
	41B		42 - #3 Finish Mill East Vent	Air Separator	Affected source under NESHAP Subpart LLL - Finish Mill
43	43	CE43	No. 5 Finishing Mill	No. 5 Finish Mill	Affected source under NESHAP Subpart LLL - Finish Mill
	43A			Vibrating Conveyor Transfer	Affected source under NESHAP Subpart LLL - Finish Mill
	43B			Air Separator	Affected source under NESHAP Subpart LLL - Finish Mill
	44			No. 6 Finish Mill	Affected source under NESHAP Subpart LLL - Finish Mill
44	44A	CE44	No. 6 Finishing Mill	Vibrating Conveyor Transfer	Affected source under NESHAP Subpart LLL - Finish Mill
	44B			Air Separator	Affected source under NESHAP Subpart LLL - Finish Mill
	45			No. 4 Finish Mill	Affected source under NESHAP Subpart LLL - Finish Mill
45	45A	CE45		Vibrating Conveyor Transfer	Affected source under NESHAP Subpart LLL - Finish Mill
	45B		No. 4 Finish Mill	Air Separator	Affected source under NESHAP Subpart LLL - Finish Mill
	46			Clinker Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
46	46A	CE46	No. 4 Finishing Mill Conveyor	Clinker Transfer	Affected source under NESHAP Subpart LLL - conveying system TP
	47			Storage Silo	Affected source under NESHAP Subpart LLL - Product Bin
47	47	CE47	Storage Silo Venting System	Transfer Bucket Elevator	Affected source under NESHAP Subpart LLL - conveying system TP
48	48	CE48	Transfer Bucket Elevator		
49	49	None	Direct Loadout to Truck or Rail	Cement Loadout (Emergency Use Only)	Affected source under NESHAP Subpart LLL - Unloading System
50	50	CE50	Silo Row 40 Loadout Spout	Silo Row 40 Cement Bulk Loadout	Affected source under NESHAP Subpart LLL - Unloading System
51	51	CE51	Finished Cement Loadout Row 30	Silo Row 30 Cement Loadout	Affected source under NESHAP Subpart LLL - Unloading System
52	52	CE52	Finished Cement Loadout Row 50	Silo Row 50 Rail/Truck Loading System	Affected source under NESHAP Subpart LLL - Unloading System
53	53	CE53	Finished Cement Loadout Row 50	Silo Row 50 Cement Loadout Spout	Affected source under NESHAP Subpart LLL - Unloading System
92B	92B	CE92B	Alternate Fuel Prehopper & Dosing Systems	Alternate Fuel Prehopper & Dosing Systems	Affected source under NESHAP Subpart LLL - conveying system TP
Group E - BACT Affected Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL					
87	87	CE87	Reagent Bin #1	Reagent Bin #1 (South)	Affected source under NESHAP Subpart LLL - Product Bin
88	88	CE88	Reagent Bin #2	Reagent Bin #2 (North)	Affected source under NESHAP Subpart LLL - Product Bin
92	92	CE92	Storage Bin Unloading System	Secondary Fuel Receiving	Affected source under NESHAP Subpart LLL - conveying system TP
92A	92A	CE92A	Storage Bin Discharge System	Storage Bin Discharge System	Affected source under NESHAP Subpart LLL - conveying system TP
94	94	CE94	Rotochopper	Rotochopper	Affected source under NESHAP Subpart LLL - conveying system TP

EP ID	EU ID	Control Equipment No.	Emission Point Description	Emission Unit Description	Federal Regulatory Determination	
Group G - Crushers and Raw Material Transfers						
2	2	CE2	Primary Crushing System	Primary Crusher	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	2A			Raw Material Transfer	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	3	CE3	Primary Screening System	Screening	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	3A			Raw Material TP - Belt 2 to Screen	Constructed prior to 1983, so exempt from NSPS Subpart 000	
3B	Raw Material TP - Screen to Belt 3			Constructed prior to 1983, so exempt from NSPS Subpart 000		
3	3B	CE3	Primary Screening System	Raw Material TP - Screen to Belt 3	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	3C			Raw Material TP - Screen to Belt 4	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	5			CE5	Secondary Crusher	Constructed prior to 1983, so exempt from NSPS Subpart 000
	5A				Raw Material Transfer-Stone 5 to 6	Constructed prior to 1983, so exempt from NSPS Subpart 000
5	5A	CE5	Secondary Crushing System	Raw Material Transfer	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	5B			Raw Material Transfer	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	6A	CE6	Raw Material Transfer Point	Raw Material Transfer	Constructed prior to 1983, so exempt from NSPS Subpart 000	
	6B			Raw Material Transfer	Constructed prior to 1983, so exempt from NSPS Subpart 000	
15	15	CE15	Clay Crushing System	Clay Crushing	Constructed prior to 1983, so exempt from NSPS Subpart 000 Per revised NESHAP Subpart LLL - Crushers are exempt from NESHAP Subpart LLL	
Group H - Miscellaneous Sources						
25	25	CE25	Kiln/Calcliner/Preheater	Kiln/Calcliner/Preheater	Affected source under NESHAP Subpart LLL - Kiln	
		CE27				
		CE25A				
		CE25B				
26	26	CE26	Clinker Cooler	Cooling of Cement Clinker	Affected source under NESHAP Subpart LLL - Clinker cooler	
55	55	CE55	Blasthole Drill	Limestone Drilling	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL	
55	55A		Quarry Blasting	Quarry Blasting	Not an affected source under NSPS Subpart 000 or NESHAP Subpart LLL	
62	62	CE62	Coal Mill	Coal Mill	Coal processing equipment constructed after 1974 and subject to NSPS Subpart Y	
101	101		Emergency Generator	Emergency Generator	Affected source under 40 CFR Part 63 Subpart ZZZZ	
62A	62A	CE62A	Calcliner Coal Bin & Dosing System	Calcliner Coal Bin & Dosing System	Coal processing equipment constructed after 1974 and subject to NSPS Subpart Y	
102	102		Scrubber Emergency Generator	Scrubber Emergency Generator	Affected source under 40 CFR Part 63 Subpart ZZZZ	
62B	62B		Calcliner Emergency Generator	Calcliner Emergency Generator	Affected source under 40 CFR Part 63 Subpart ZZZZ	

Appendix B

Inspection Forms

Lehigh Cement Company
700 25th Street NW
Mason City, IA 50401

LEHIGH
HEIDELBERGCEMENT Group

Method 22 Visible Emission Inspection Form

Emission Unit: _____

Observer: _____ Date: _____

Location (Circle One) Indoor Outdoor

Weather (not applicable if observing an indoor location)

Sky Conditions (Circle One) Clear 0-10% Cloud Cover Scattered 10-50% Cloud Cover Broken 50-90% Cloud Cover Overcast 90-100% Cloud Cover	Precipitation (Circle One) None Mist Sprinkle Rain
Wind Speed: _____	Wind Direction: _____

Sketch process unit: Indicate observers position relative to source, indicate potential and/or actual emission points

Draw North Arrow 	Observer  Observation Pt.  Sun  Wind 

Observation Time:

Beginning _____ Ending _____ Total _____

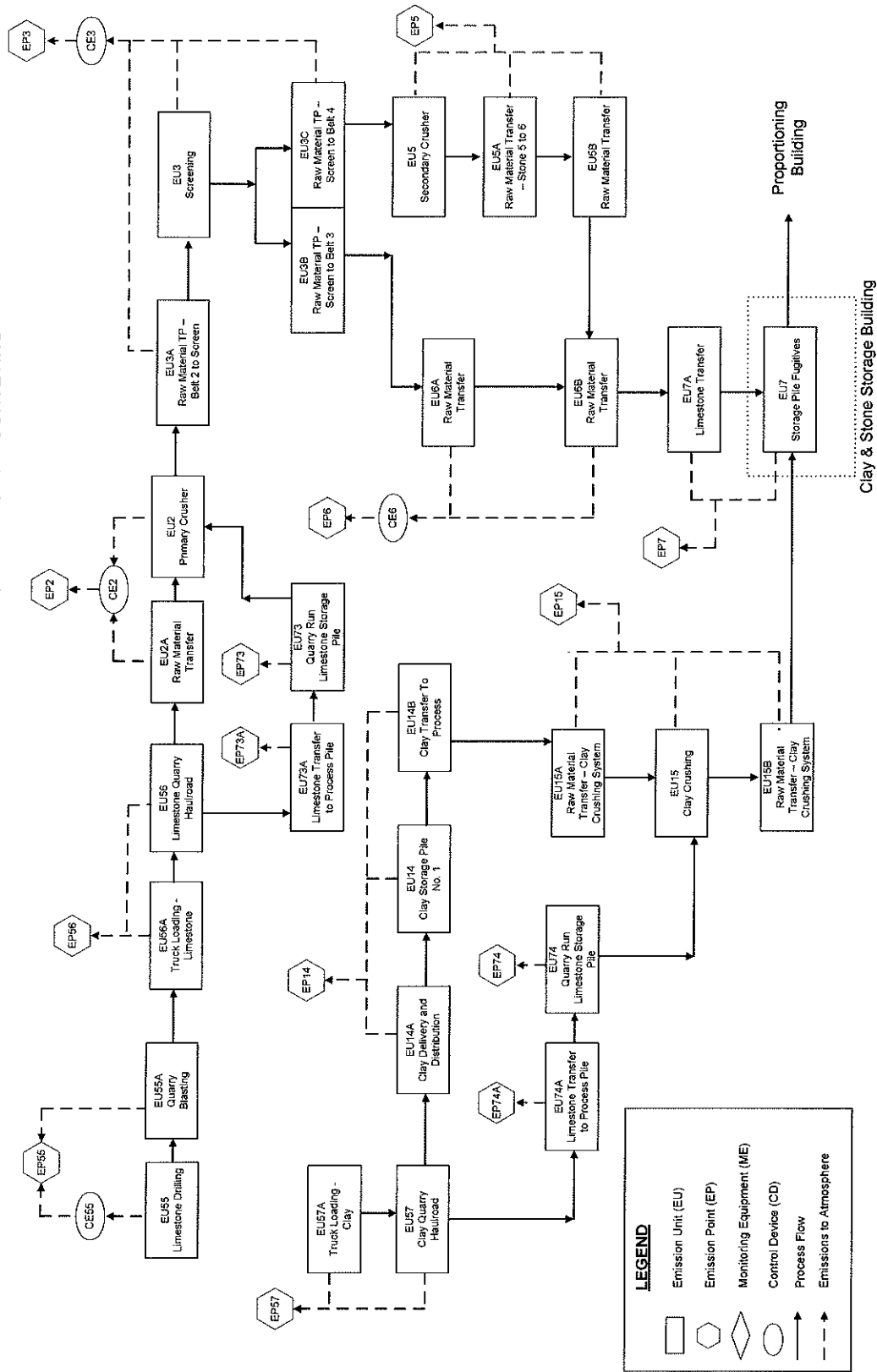
Visual Emissions Observed during the Observation Period (Circle One)

YES NO

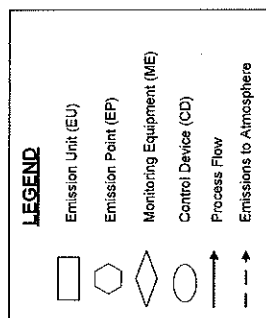
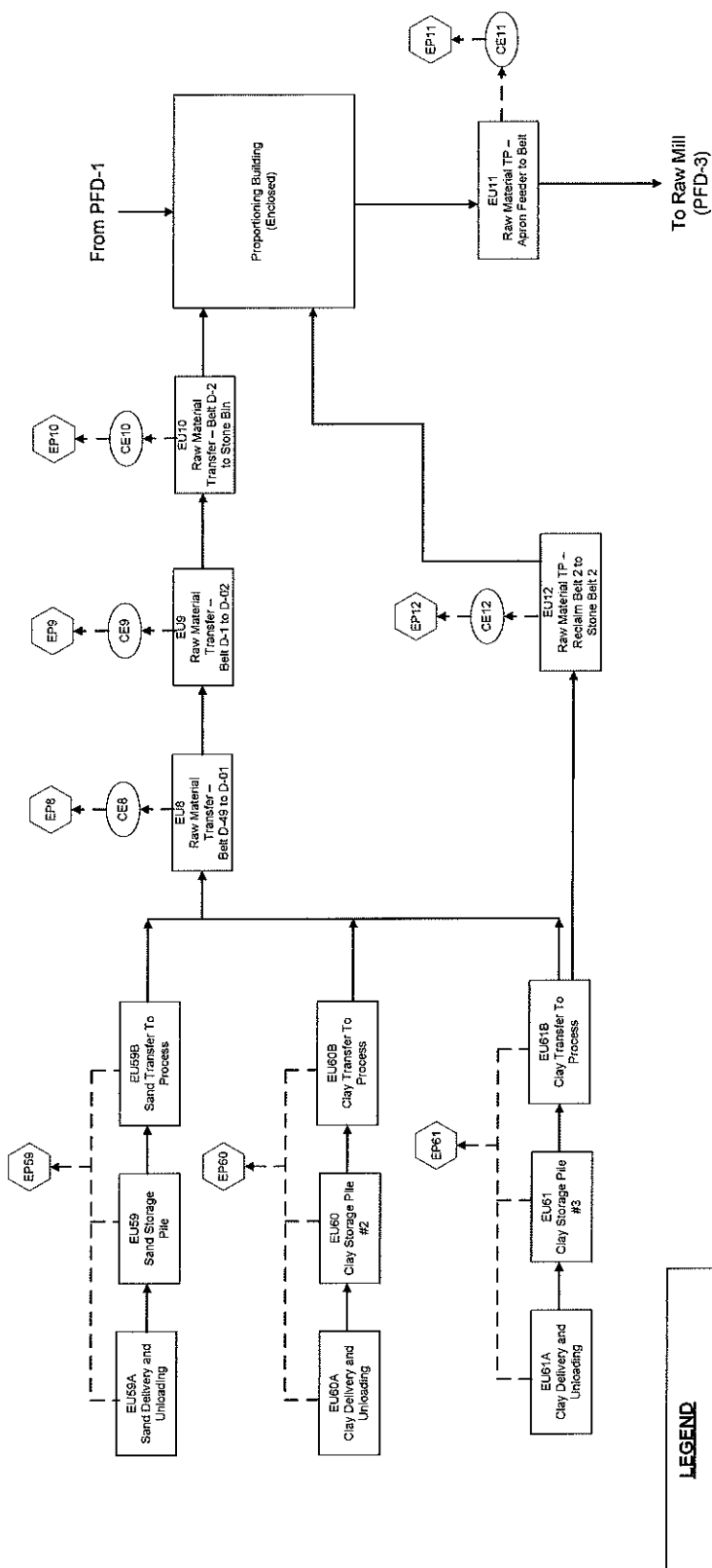
Observers Signature _____

Appendix C
Site Diagrams

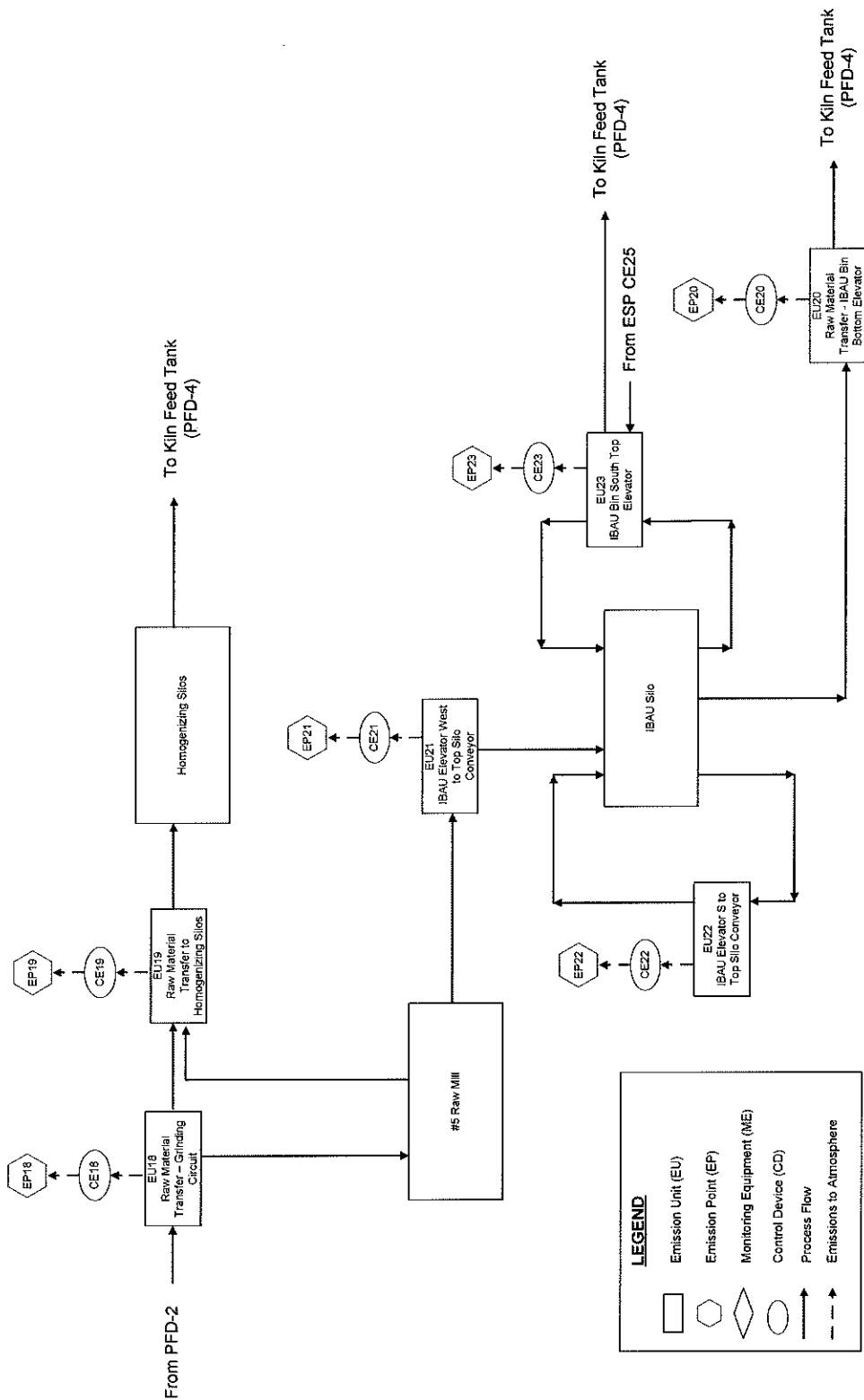
LEHIGH CEMENT COMPANY – MASON CITY PLANT PROCESS FLOW DIAGRAM 1 - RAW MATERIAL QUARRYING AND CONVEYING

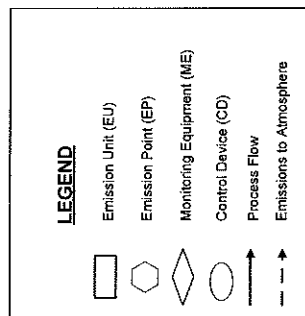


LEHIGH CEMENT COMPANY – MASON CITY PLANT PROCESS FLOW DIAGRAM 2 - RAW MATERIAL PROPORTIONING



LEHIGH CEMENT COMPANY – MASON CITY PLANT
PROCESS FLOW DIAGRAM 3 - RAW MATERIAL GRINDING



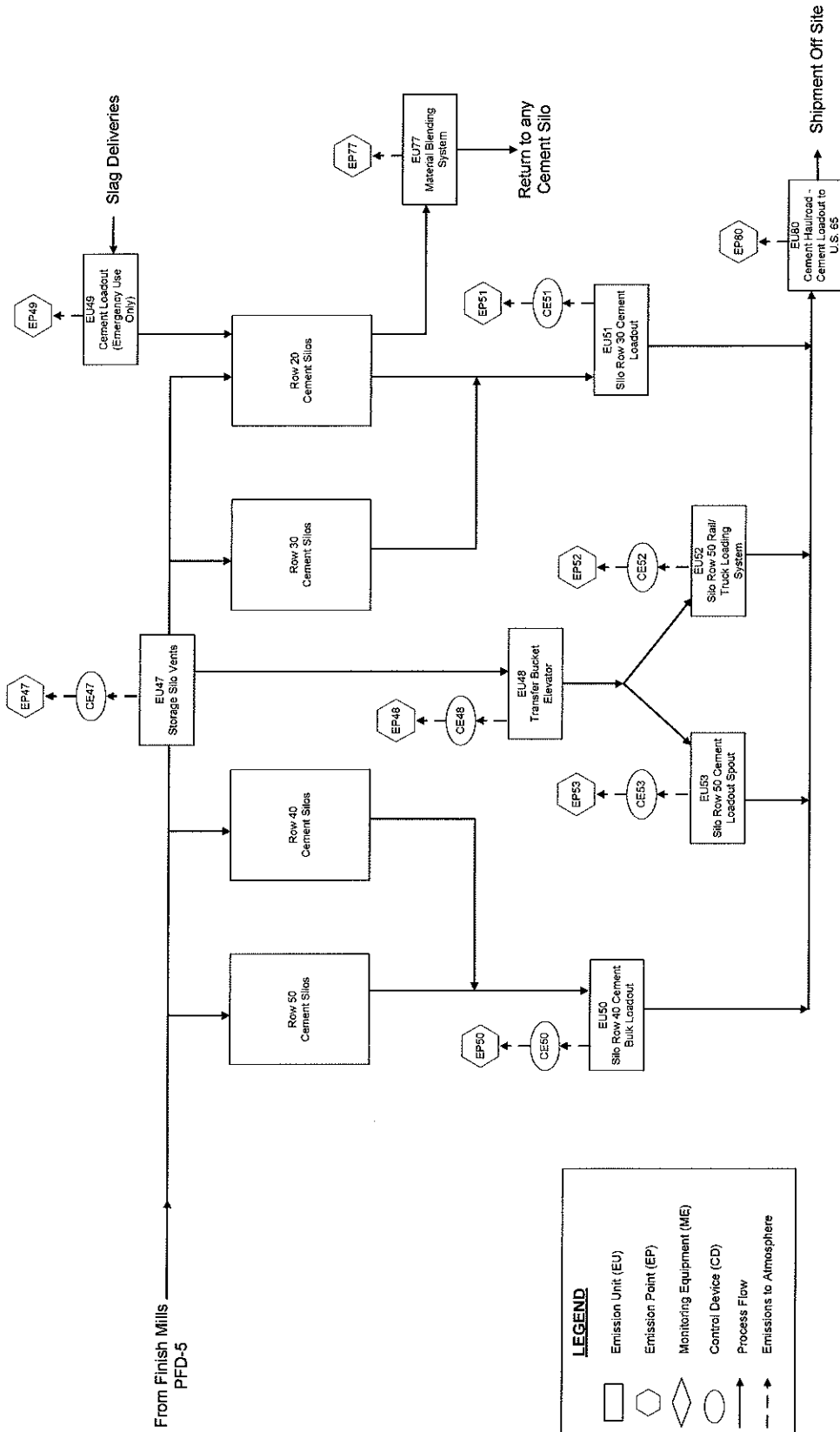
[illegible]

LEHIGH CEMENT COMPANY – MASON CITY PLANT
PROCESS FLOW DIAGRAM 5 – CEMENT GRINDING

LEGEND

- Emission Unit (EU)
- Emission Point (EP)
- Monitoring Equipment (ME)
- Control Device (CD)
- Process Flow
- Emissions to Atmosphere

LEHIGH CEMENT COMPANY – MASON CITY PLANT
PROCESS FLOW DIAGRAM 6 - CEMENT SHIPPING



Appendix C: CAM Plans

COMPLIANCE ASSURANCE MONITORING PLAN

**For
EP2, EP3, EP5, EP6, EP15**

Prepared by:

**LEHIGH CEMENT COMPANY
MASON CITY PORTLAND CEMENT PLANT**

June 2016

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1.0 Introduction

The Lehigh Cement Company (Lehigh) Mason City Plant (Plant) has developed this Compliance Assurance Monitoring (CAM) Plan to meet the requirements of the CAM Rule. The CAM Rule was signed on October 3, 1997 and published in the Federal Register on October 22, 1997 as 40 CFR Part 64. The U. S. Environmental Protection Agency (EPA) developed the CAM Rule to focus on monitoring for "reasonable assurance of compliance" of applicable requirements stipulated in the Clean Air Act (CAA).

CAM applicability applies to only the Plant Emission Units (EU's) which are listed in Table A. Table A also depicts for each CAM Rule applicable EU, the corresponding Control Device (CD) Number and the Emission Point (EP) Number.

Table 1
CAM Applicable Sources

Name	EU No.	Control Equip. No.	Emission Point No.
Baghouse	EU2/EU2A	CE2	EP2
Baghouse	EU3/EU3A/ EU3B/EU3C	CE3	EP3
Baghouse	EU5/EU5A/EU5B	CE5	EP5
Baghouse	EU6/EU6A	CE6	EP6
Baghouse	EU15	CE15	EP15

The PM and PM10 emission limits for which this CAM Plan is designed to protect are presented in Table B.

Table 2
PM and PM10 Emission Limits for CAM Applicable Sources

Emission Point No.	Opacity Limits %	PM Emission Limits gr/scf	PM10 Emission Limits lb/hr
EP2	40	0.1	2.4
EP3	40	0.1	1.03
EP5	40	0.1	0.81
EP6	40	0.1	0.51
EP15	10	0.1	0.79

2.0 CAM Plan Requirements

Per 40 CFR 64, a CAM Plan must satisfy the monitoring design requirements in 40 CFR 64.4:

1. Describe the indicators to be monitored;
2. Describe the ranges or the process to set indicator ranges;
3. Describe the performance criteria for the monitoring; and
4. Provide a justification for the use of parameters, ranges, and monitoring approach.

3.0 CAM Plan Content

3.1 Indicators to Be Monitored

Differential pressure measured across the baghouse will be recorded once per day when the baghouse is operating. When a baghouse is operating properly, the differential pressure reading will be within the acceptable range for the specific baghouse. Any reading outside the acceptable range indicates reduced performance of the control device.

Visible emissions from the baghouse exhaust will be monitored once per week using a EPA Reference Method 22 like procedure (visible emission observation). When a baghouse is operating properly, no visible emissions should be observed. Any increase in visible emissions indicates reduced performance of the control device; therefore, the presence of visible emissions is used as the performance indicator.

3.2 Indicators Range

The selected indicator ranges are differential pressure drop across the baghouse and visible emissions. This approach identifies a change in control performance indicated by:

1. any differential pressure reading across the baghouse outside the acceptable range of 2" – 10"; and
2. any visible emissions.

3.3 Performance Criteria

The differential pressure is measured across the baghouse.

1. The pressure gauge will be calibrated, operated, and maintained according to the manufacturer's specifications.

2. The differential pressure will be inspected a minimum of once per day when the baghouse is operating. Corrective action will be taken upon observation of pressure out of the indicator range.
3. Corrective action may include an investigation for the abnormal condition/excursion, evaluation of the situation, and follow up action to return the operation to within the indicator range.
4. Corrective action will be implemented within one day of the observation of the abnormal condition/excursion.
5. Results of baghouse differential pressure checks will be recorded in a designated log. The logs will be maintained for a minimum of 5 years.

Visible emissions observations will be made at the emission point.

1. Visual emissions observations are conducted weekly while the affected source is in operation. The frequency for visual emissions varies according to the following:
2. The visual emissions observations shall be conducted in accordance with Method 22 of Appendix A to 40CFR 60.
3. The duration of the Method 22 test is 1-minute.
4. If visible emissions are observed during a Method 22, initiate corrective action within 1-hour. Subsequently, within 24-hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow up 1-minute Method 22 test of each stack from which visible emissions were observed during the previous 1-minute Method 22 test.
 - a. If visible emissions are present again after the follow up Method 22, must conduct a Method 9 test within 1-hour;
 - b. The duration of the Method 9 test is 6-minutes.
5. Results of visible emissions observations will be recorded on the designated form. The forms will be maintained for a minimum of 5 years.

4.0 CAM Plan Justification

For PM, the preceding was selected as the performance indicators because they are indicative of good operation and maintenance of the control device. Additionally, routine inspection and preventative maintenance activities that are performed will provide routine surveillance of the control device to ensure compliance with the PM emission limits presented in Table B.

Appendix D. Weblinks to Standards

- A. 40 CFR Part 60 Subpart A-*General Provisions*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.7.60.a>
- B. 40 CFR Part 60 Subpart F-*Standards of Performance for Portland Cement Plants*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.7.60.f>
- C. 40 CFR Part 60 Subpart Y-*Standards of Performance for Coal Preparation Plants*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.7.60.y>
- D. 40 CFR Part 60 Subpart DDDD-*Standards of Performance for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.7.60.dddd>
- E. 40 CFR Part 60 Subpart IIII-*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.7.60.iiii>
- F. 40 CFR Part 63 Subpart A-*General Provisions*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.10.63.a>
- G. 40 CFR Part 63 Subpart LLL-*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.12.63.lll>
- H. 40 CFR Part 63 Subpart ZZZZ-*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*
<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&r=SUBPART&n=sp40.14.63.zzzz>