

## **Enclosure 1**

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This enclosure requests information about the cement production facility, facility equipment and processes regulated under 40 CFR part 63 subpart LLL, facility processing rates and air pollution control devices used, and information on control device performance.

### **Portland Cement 114 Request Form**

**National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry (40 CFR part 63, subpart LLL)**

## Portland Cement 114 Request Form

National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry (40 CFR part 63, subpart LLL)

### General Instructions

1. Please complete one copy of this workbook for each portland cement manufacturing plant owned or operated by your company.
2. If any of the data requested is considered confidential business information (CBI), please prepare an additional version of this work book containing only non-confidential information.
3. Please direct any questions to Brian Storey at (919) 541-1103 or [storey.brian@epa.gov](mailto:storey.brian@epa.gov)

This survey contains the following tabs after the cover sheet:

Instructions (this tab). Instructions for completing this survey.

Terms. Definitions and acronyms of certain technical terms that are mentioned throughout this survey.

Part A (01-14). Facility Information

Part B (01). Facility Equipment Regulated under Subpart LLL

Part C (01-04). Processing Rates and Controls Used for Kilns Regulated under Subpart LLL

Part D (01-03). Detailed Control Device and Emission Release Information for Sources Regulated under Subpart LLL

To submit your survey, the following instructions are referenced from the Section 114 transmittal letter.

**All required non-confidential business information (non-CBI) must be sent electronically to:**

Brian Storey  
Office of Air Quality Planning and Standards  
Sector Policies and Programs Division  
Research Triangle Park, NC 27711  
[storey.brian@epa.gov](mailto:storey.brian@epa.gov)

**For confidential business information (CBI)**, remove those portions from your response and submit them separately to the appropriate email address below. For any confidential information, the CBI may be sent in either of the following two manners:

1. **Preferred method to receive CBI:** transmitted to OAQPS CBI Office electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services (e.g., Dropbox, OneDrive, Google Drive) using the email address, [oaqpscibi@epa.gov](mailto:oaqpscibi@epa.gov), and should include clear CBI markings. If assistance is needed with submitting large electronic files, please email [oaqpscibi@epa.gov](mailto:oaqpscibi@epa.gov) to request a file transfer link.
2. Sent to the OAQPS Document Control Officer through a postal service (U.S. Mail, United Parcel Service (UPS), Federal Express (FedEx)). CBI material should be double wrapped and clearly marked. CBI markings should not show through the outer envelope.

Please use the street address below for U.S. Postal Service Express Mail, registered mail, or private courier for submitting your CBI:

Ms. Tiffany Purifoy, OAQPS DCO  
ATTN: Portland Cement NESHAP  
U.S. Environmental Protection Agency  
Mail Code C404-02  
109 T.W. Alexander Drive  
Research Triangle Park, NC 27711

Please use the street address below for commercial package carriers, such as FedEx and UPS for submitting your CBI:

Ms. Tiffany Purifoy, OAQPS DCO  
ATTN: Portland Cement NESHAP  
U.S. Environmental Protection Agency  
Mail Code C404-02  
109 T.W. Alexander Drive

Research Triangle Park, NC 27711

## Portland Cement 114 Request Form

National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry (40 CFR part 63, subpart LLL)

Please copy this Microsoft Excel workbook as needed, and complete one file for each Portland Cement Manufacturing facility operated by your company.

Definitions	
Term	Definition
Alkali bypass	A duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excessive buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the "kiln exhaust gas bypass".
Bypass stack	The stack that vents exhaust gases to the atmosphere from the bypass control device.
Clinker cooler	Equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.
Conveyor transfer point	A point where any material including but not limited to feed material, fuel, clinker or product, is transferred to or from a conveying system, or between separate parts of a conveying system.
Finish mill	A roll crusher, ball and tube mill, or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.
In-line coal mills	A coal mill using kiln exhaust gases in their process. A coal mill with a heat source other than the kiln or a coal mill using exhaust gases from the clinker cooler is not an in-line coal mill.
Kiln	A device, including any associated preheater or precalciner devices, inline raw mills, inline coal mills or alkali bypasses that produces clinker by heating limestone and other materials for subsequent production of portland cement. Because the inline raw mill and inline coal mill are considered an integral part of the kiln, for purposes of determining the appropriate emissions limit, the term kiln also applies to the exhaust of the inline raw mill and the inline coal mill.
Monovent	An exhaust configuration of a building or emission control device (e.g., positive-pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i.e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.
Open clinker pile	A clinker storage pile on the ground for more than three days that is not completely enclosed in a building or structure.
Raw material dryer	An impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed or other materials.
Raw mill	A ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an inline kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.
Sorbent	Activated carbon, lime, or any other type of material injected into kiln exhaust for the purposes of capturing and removing any hazardous air pollutant.

Acronyms	
Acronym	Term
APCD	add-on air pollution control device
CBI	Confidential Business Information
ID	identifier
NAICS	North American Industrial Classification System
OPC	ordinary portland cement
PLC	portland-limestone cement
SCFM	standard cubic feet per minute

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National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry (40 CFR part 63, subpart LLL)

Please copy this Microsoft Excel workbook as needed, and complete one file for each Portland Cement Manufacturing facility operated by your company.

**Part A. Facility Information**

A-01. Name and address of legal OWNER of the facility (if more than one owner, provide the name, address, and percent ownership for each owner using the additional columns to right):

Name	Ash Grove Cement Company		
Address	11011 Cody Street, Suite 300		
City	Overland Park		
State	KS		
Zip	66210		
Percent Ownership	100%		

A-02. Name and address of legal OPERATOR of the facility, if different than the legal OWNER:

Name	
Address	
City	
State	
Zip	

A-03. Name and complete street address of facility (physical location):

Facility Name	Ash Grove Cement Company Leamington Cement Plant
Address	Hwy 132
City	Leamington
State	Utah
Zip	84638
County	Juab

A-04. Provide mailing address of the facility if different than physical location:

Address	
City	
State	
Zip	
County	

A-05. Facility contact able to answer technical questions about the completed survey:

Name (first name, last name)	Cody Watkins
Title	Environmental Engineer
Telephone number and extension	(435) 857-1283
E-mail	<a href="mailto:cody.watkins@ashgrove.com">cody.watkins@ashgrove.com</a>

A-06. What is the facility size classification for hazardous air pollutant (HAP) emissions? (Enter "Yes" or "No")

EPA Major Source of Hazardous Air Pollutants (HAP)	Yes
EPA Area source (based on potential to emit) of HAP	No
EPA Area source (Synthetic Minor) of HAP	No

A-07. Facility NAICS codes. Note: The primary NAICS code represents the line of business that generates the most income for the facility.

Primary NAICS code	327310
Other facility NAICS codes	

**A-08. Company Size** (Enter "Yes" for all that apply) *Note: Approximate number of all employees (worldwide) of the business enterprise that owns this facility, including where applicable, the parent company and all subsidiaries, branches, and unrelated establishments owned by the parent company.*

< 1,000 employees	
≥ 1,000 employees	Yes

**A-09 Parent Company Annual Revenue**

*Please provide the estimated annual revenue (\$) generated by the parent company (identified in A-01) in FY2021.*

FY2021 Annual Revenue of Parent Company	N/A
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**A-10. Federal and State rule/permit coverage.** (Enter "Yes" for all that apply to this facility).

Subpart LLL (Portland Cement Manufacturing)	Yes	40 CFR 63 Subpart LLL 40 CFR 63 Subpart ZZZZ - RICE MACT
Other NESHAP (SPECIFY rule name and subpart)	Yes	
Other (SPECIFY rule name and subpart)		
New Source Performance Standards (NSPS):		
40 CFR 60 subpart F (Portland Cement Plants)	Yes	
Other NSPS (SPECIFY rule name and subpart)	Yes	
Other NSPS (SPECIFY rule name and subpart)	Yes	
Other NSPS (SPECIFY rule name and subpart)	Yes	
Other NSPS (SPECIFY rule name and subpart)	Yes	
Other NSPS (SPECIFY rule name and subpart)	Yes	
Title V:		40 CFR 60 Subpart Y - Coal Preparation Plants 40 CFR 60 Subpart OOO - Nonmetallic Mineral Processing Plants  40 CFR 60 Subpart IIII - Stationary Compression Ignition Internal Combustion Engines  40 CFR Part 70, Major Source Requirements
(SPECIFY rule that led to title V permit requirement)	Yes	
State Air Toxics:		
(SPECIFY rule name and subpart)	No	
(SPECIFY rule name and subpart)		
Other: (SPECIFY emission unit and rule)		
Other: (SPECIFY emission unit and rule)		
Other: (SPECIFY emission unit and rule)		
Other: (SPECIFY emission unit and rule)		
Other: (SPECIFY emission unit and rule)		

**A-11. Normal Facility Production Hours**

Hours/day:	24
Shifts/day:	3
Days/week:	7
Weeks/year:	52

**A-12. Clinker Production.** Amount of clinker produced the most recent year of normal operation. Total capacity of clinker production.

Tons of clinker produced in last normal operating year:	
Maximum tons of clinker able to be produced in one year (plant capacity):	962,265

**A-13. Please provide a copy of a schematic or process flow diagram of the plant portland cement manufacturing operations. Include identifying labels for equipment to be used for the remainder of this questionnaire.**

Schematic or Process Flow Diagram File Name*	Exhibit A
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\*Please include Unit ID No., APCD ID No., Controlled Emissions Point ID No., and Un-controlled Emissions Point ID No. where applicable in the Schematic or Process Flow Diagram (PFD). It is assumed the PFD will be submitted electronically, as a separate file.

**A-14. Please provide all of the pertinent information listed below.**

**Please provide electronic copies, if available, and indicate items provided below.** (Enter "Yes" for all that apply).

Title V Permit or State Air Operating Permit*	Yes	Exhibit B
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\*If the permit is available online, please provide the URL for the file location.

National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry (40 CFR part 63, subpart LLL). Please copy this Microsoft Excel workbook as needed, and complete one file for each Portland Cement Manufacturing facility operated by your company.

Please enter information for units subject to Subpart LLL, excluding any fugitive dust sources, material handling/conveying sources of emissions, or the emissions controls associated with these sources. See "Terms" Tab for an explanation of terms.  
Please insert Rows as needed.

[illegible]

Part C: Processing Rates and Controls Used for Kilns Regulated under Subpart LL

Please provide information below for all kilns/clinker coolers at your facility, provide information for 2021 if available, or other year (please specify):  
Please insert rows as needed.  
Please use the Notes/Comments column for any additional clarification, or APCDs if sufficient columns are not available. Additionally, Tab E provides space for additional comments.

Calendar Year (CY) 2021

C-01: For Kiln/Clinker Cooler With Common Exhaust

Unit ID No. (Use Same ID as Provided in Section B-01, Column A)	Maximum Capacity of Unit (tons/yr)	Actual Production of Unit (tons/yr)	Actual Unit Operating Hours (should be no more than 8,760) (hr/yr)	Primary Fuel	Additional Fuels	Process Modifications* (list all applicable)	APCD Control Device Type No. 1	APCD Control Device ID No. 1	APCD Control Device Type No. 2 (where applicable)	APCD Control Device ID No. 2 (where applicable)	APCD Control Device Type No. 3 (where applicable)	APCD Control Device ID No. 3 (where applicable)	APCD Control Device Type No. 4 (where applicable)	APCD Control Device ID No. 4 (where applicable)	Controlled Emissions Point ID No. (Details provided in Section D)	Un-controlled Emissions Point ID No. (Details provided in Section D)	Additional Notes/Comments

\* For example, dust shutting, P/LC, overfire air, etc. For P/LC, indicate what percentage of production is P/LC vs. GPC. Use Part E tab of this workbook to provide the information if additional space is needed.

C-01.1 Common Exhaust Kilns: Additional Fuels List

Unit ID No. (from C-01)	Additional Fuels

C-02: For Each Kiln With Separate Exhaust

Unit ID No. (Use Same ID as Provided in Section B-01, Column A)	Maximum Capacity of Unit (tons/yr)	Actual Production of Unit (tons/yr)	Actual Unit Operating Hours (should be no more than 8,760) (hr/yr)	Primary Fuel	Additional Fuels	Process Modifications* (list all applicable)	APCD Control Device Type No. 1	APCD Control Device ID No. 1	APCD Control Device Type No. 2 (where applicable)	APCD Control Device ID No. 2 (where applicable)	APCD Control Device Type No. 3 (where applicable)	APCD Control Device ID No. 3 (where applicable)	APCD Control Device Type No. 4 (where applicable)	APCD Control Device ID No. 4 (where applicable)	Controlled Emissions Point ID No. (Details provided in Section D)	Un-controlled Emissions Point ID No. (Details provided in Section D)	Additional Notes/Comments
317-BF3	162,285			Coal	See List Below	N/A	Baghouse	317-BF3	Carbon Injection System	413-FD3	SNCR	43H			038 (317-BF3)		Kiln & Pre-Calciner and Raw Mill
43B-BF2	N/A	N/A		N/A		N/A	Baghouse	43B-BF2							4340 (43B-BF2)		In-line Cool Mill with Separate Stack

\* For example, dust shutting, P/LC, overfire air, etc. For P/LC, indicate what percentage of production is P/LC vs. GPC. Use Part E tab of this workbook to provide the information if additional space is needed.

C-03.1 Separate Exhaust Kilns: Additional Fuels List

Unit ID No. (from C-03)	Additional Fuels
317-BF3	
	Slagger Derived Fuel
	Wood
	Tire Derived Fuel
	Cherry Pits
	Refractory Gas
	Thermally Cracked Fuel
	Calder
	Plastic Resin Waste Product
	Fuel Oil
	Coal Additives
	Unlaid Fuel Oil
	Synthetic Fuel

C-03: For Each Idled Kiln, Not in Operation

Unit ID No. (Use Same ID as Provided in Section B-01, Column A)	Maximum Capacity of Unit (tons/yr)	Actual Production of Unit (tons/yr)	Current Idle Period (days/month/year)	Primary Fuel	Additional Fuels	Process Modifications* (list all applicable)	APCD Control Device Type No. 1	APCD Control Device ID No. 1	APCD Control Device Type No. 2 (where applicable)	APCD Control Device ID No. 2 (where applicable)	APCD Control Device Type No. 3 (where applicable)	APCD Control Device ID No. 3 (where applicable)	APCD Control Device Type No. 4 (where applicable)	APCD Control Device ID No. 4 (where applicable)	Controlled Emissions Point ID No. (Details provided in Section D)	Un-controlled Emissions Point ID No. (Details provided in Section D)	Additional Notes/Comments
					Use the space in C-03.1 to list any additional fuels, permitted or otherwise, burned by the Unit identified in this table.												

\* For example, dust shutting, P/LC, overfire air, etc. For P/LC, indicate what percentage of production is P/LC vs. GPC. Use Part E tab of this workbook to provide the information if additional space is needed.

C-03.1 Separate Exhaust Kilns: Additional Fuels List

Unit ID No. (from C-03)	Additional Fuels



C-04. For Each Clinker Cooler with Separate Exhaust														
Unit ID No. <small>(Use Same ID as Provided in Section B-02, Column A)</small>	Maximum Capacity of Unit	Actual Production of Unit	Actual Unit Operating Hours <small>(Should be no more than 8,760 per yr)</small>	APCD Control Device Type No. 1	APCD Control Device ID No. 1	APCD Control Device Type No. 2 <small>(where applicable)</small>	APCD Control Device ID No. 2 <small>(where applicable)</small>	APCD Control Device Type No. 3 <small>(where applicable)</small>	APCD Control Device ID No. 3 <small>(where applicable)</small>	APCD Control Device Type No. 4 <small>(where applicable)</small>	APCD Control Device ID No. 4 <small>(where applicable)</small>	Controlled Emissions Point ID No. <small>(Details provided in Section D)</small>	Un-controlled Emissions Point ID No. <small>(Details provided in Section D)</small>	Additional Notes/Comments
419.BF1	962.285	0	0	Baghouse	419.BF1							FF1 (419.BF1)		Clinker Cooler

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Please copy this Microsoft Excel workbook as needed, and complete one file for each Portland Cement Manufacturing facility operated by your company.

Part D. Detailed Control Device and Emission Release Information for Sources Regulated under Subpart LLL

Please provide information below for all air pollution control devices at your facility; provide information for 2021 if available, or other year (please specify):

CY 2021

Please insert Rows as needed.

D-01. Add-on air pollution control devices (APCD)

APCD ID No. (This should match the ID's provided in Section C)	Device Type*	Pollutant Controlled (separate pollutants with comma)	Capture Efficiency, if known (percent)	Control Device Efficiency, if known (percent)	Methods Used for Determining Capture & Control Efficiencies**	What process units are vented through this point?  Unit ID No. (Use Same IDs as Provided in Section B-01 (column A), and Section C) (separate IDs with comma)
317.BF3	Baghouse	PM-FIL, PM10-FIL, PM2.5-FIL	100		b	Kiln System
413.FD1	Carbon Injection System	Hg	N/A			Kiln System
41H	SNCR	NOx	N/A			Kiln System
428.DA1	Baghouse	PM-FIL, PM10-FIL, PM2.5-FIL	100		b	Kiln System/Coal Mill
419.BF1	Baghouse	PM-FIL, PM10-FIL, PM2.5-FIL	100		b	Clinker Cooler

\* For example, fabric filter, wet scrubber etc.

\*\* Control & Capture Efficiency; a = Testing (specify method); b = Manufacturer's Specifications; c = Engineering Estimate

Please provide any additional information concerning the Control Devices identified in D-01, as needed, using the Part E tab of this workbook.

D-02. For each exhaust point/stack with a control device, please provide the following information, if known.

Controlled Emissions Point ID No. (This should match the ID's provided in Section C)	What control devices are vented at this point? (APCD ID No. from Section D-01)	Latitude*	Longitude*	Flow Rate (SCFM)	
D38 (317.BF1)	317.BF1, 413.FD1, 41H	39.563003°	-112.197113°	196990	6/17/2021 Stack Test (Mill On)
R140 (41B.BF2)	41B.BF2	39.563769°	-112.197102°	79088	6/15/2021 Stack Test
F31 (419.BF1)	419.BF1	39.564058°	-112.196199°	12128	6/17/2021 Stack Test (Mill On)

\* Longitude and Latitude should be specified to 6 decimal places. If coordinates are not known, please provide a scaled site diagram, with a latitude/longitude reference point, indicating stack locations.

D-03. For each exhaust point/stack not associated with a control device, please provide the following information, if known.

Un-controlled Emissions Point ID No. (This should match the ID's provided in Section C)	What process units are vented though this point? Unit ID No. (Use Same IDs as Provided in Section B-01 (column A), and Section C) (separate IDs with comma)	Latitude*	Longitude*	Flow Rate, if known (SCFM)

\* Longitude and Latitude should be specified to 6 decimal places. If coordinates are not known, please provide a scaled site diagram, with a latitude/longitude reference point, indicating stack locations.

Part E. Additional Information

E-01. Provide any additional information in the space below as needed. Please identify the associated part of the workbook (e.g., C-01), as applicable.

Identify Questionnaire Part Associated with the Information Provided (e.g., C-01)	Identify Information Being Requested (e.g., "Process Modification")	Additional Information

Validation  
This sheets provides the names and values that should be used when filling out the sheet.

POLLUTANT CODE	POLLUTANT CODE DESC	HAP CATEGORY NAME1
<b>Particulate Matter</b>		
PM10-FIL	Primary PM10, Filterable Portion Only	
PM10-PH	Primary PM10 (Includes Filterables + Condensibles)	
PM2.5-FIL	Primary PM2.5, Filterable Portion Only	
PM2.5-PH	Primary PM2.5 (Includes Filterables + Condensibles)	
PM-COND	Primary PM Condensible Portion Only (All Less Than 4 Microns)	
PM-FIL	Primary PM, Filterable Portion Only	
PM-PH	Primary PM (Includes Filterables + Condensibles)	
<b>Other Air Pollutants and VOCs</b>		
CO	Carbon Monoxide	
195	Lead & Compounds	Lead Compounds
NOX	Nitrogen Oxides	
SO2	Sulfur Dioxide	
VOC	Volatile Organic Compounds	
<b>HAP Metals</b>		
7440360	Antimony	Antimony Compounds
7440382	Arsenic	Arsenic Compounds
7440417	Beryllium	Beryllium Compounds
7440459	Cadmium	Cadmium Compounds
7440473	Chromium (Total)	Chromium Compounds
1	Chromium (III)	Chromium Compounds
3	Chromium (VI)	Chromium Compounds
7440484	Cobalt	Cobalt Compounds
7439921	Lead	Lead Compounds
7439965	Manganese	Manganese Compounds
7440203	Nickel	Nickel Compounds
7782492	Selenium	Selenium Compounds
7439976	Mercury (Total)	Mercury Compounds
2	Elemental Gaseous Mercury	Mercury Compounds
1	Gaseous Dissolved Mercury	Mercury Compounds
2	Particulate Dissolved Mercury	Mercury Compounds
<b>Dioxin/Furan</b>		
600	2,3,7,8-TCDD TEQ (Total)	Dioxins/Furans as 2,3,7,8-TCDD TEQs
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
55822469	1,2,3,4,6,7,8-Heptachlorodibenzop-dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
56421897	1,2,3,4,7,8,9-Heptachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
39217286	1,2,3,4,7,8-Hexachlorodibenzop-dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
67117449	1,2,3,6,7,8-Hexachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
57653857	1,2,3,6,7,8-Hexachlorodibenzop-p-Dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
72958219	1,2,3,7,8,9-Hexachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
19408743	1,2,3,7,8,9-Hexachlorodibenzop-p-Dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
57112426	1,2,3,7,8-Pentachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
40213184	1,2,3,7,8-Pentachlorodibenzop-dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
60851345	1,2,3,6,7,8-Hexachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
57117314	1,2,3,6,7-Pentachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
51207219	1,2,3,6,8-Tetrachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
17460516	1,2,3,7,8-Tetrachlorodibenzop-p-Dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
39003020	Oxachlorodibenzofuran	Dioxins/Furans as 2,3,7,8-TCDD TEQs
17488779	Oxachlorodibenzop-p-Dioxin	Dioxins/Furans as 2,3,7,8-TCDD TEQs
<b>Dynamic HAP and Acid Gases</b>		
6184119	125-101-2-Ethoxyethane	1,1,2,2-Tetrachloroethane
79345	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane
79005	1,1,2-Trichloroethane	1,1,2-Trichloroethane
57127	1,1-Dimethyl Hydrazine	1,1-Dimethylhydrazine
5124303	1,1-Methylethylene bis(isocyanatocyclohexane)	1,1-Dimethylhydrazine
26447405	1,1'-Methylenedi(phenyl) Diisocyanate	1,1,3,3,4,4,6-Hexamethoxycyclohexane (All Stereo)
18899	1,2,3,4,5,6-Hexamethoxycyclohexane	1,2,3,4,5,6-Hexamethoxycyclohexane (All Stereo)
120821	1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene
95636	1,2,4-Trimethylbenzene	
59052	1,2-Butadiene	
96128	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-3-Chloropropane
54058	1,2-Dibromomethylene	
54059	1,2-Dichloromethylene	
110724	1,2-Dimethoxyethane	Glycol Ethers
122667	1,2-Diphenylhydrazine	1,2-Diphenylhydrazine
106887	1,2-Epoxybutane	1,2-Epoxybutane
75518	1,2-Propylenimine	1,2-Propylenimine (2-Methylaziridine)
646060	1,3-Dioxolane	Glycol Ethers
108678	1,3,3,3-Triethylbenzene	
106980	1,3-Butadiene	1,3-Butadiene
542766	1,3-Dichloropropene	1,3-Dichloropropene
520667	1,3-Diphenylisocyanide	
2004708	1,3-Pentadiene, (E)	
1574410	1,3-Pentadiene, (Z)	
108453	1,3-Phenyldisocyanide	
1120774	1,3-Propylenesulfone	1,3-Propane Sulfone
106467	1,4-Dichlorobenzene	1,4-Dichlorobenzene
591295	1,4-Pentadiene	
43397648	1,6-Dinitrocyrene	Polycyclic Organic Matter
42397659	1,8-Dinitrocyrene	Polycyclic Organic Matter
1421799	11-Methylbenzobiphenylene	Polycyclic Organic Matter
71363	1-Butanol	
106889	1-Butene	
106498	1-Chloro-2,3-Epoxypropane	Bis(chloroethyl) (1-Chloro-2,3-Epoxypropane)
88586	1-Chloro-4-(Trifluoromethyl)Benzene	
234516193	1-Isobutyl-2-Propanol	Glycol Ethers
95110	1-Methoxyanthracene	Polycyclic Organic Matter
832699	1-Methylphenanthrene	Polycyclic Organic Matter
2382117	1-Methylpyrene	Polycyclic Organic Matter
5524500	1-Nitropropane	Polycyclic Organic Matter
124118	1-Nonene	
71238	1-Propanol	
1560113	1-Propano-2-propanol	
27310210	2-(2,4-Hexamethyloxy)Ethanol	Glycol Ethers
112724	2-MethoxyEthanol	Glycol Ethers
540841	2,2,4-Trimethylpentane	2,2,4-Trimethylpentane
75832	2,2-Dimethylbutane	
3965329	2,3,4,4,4,5,5-Hexachlorobiphenyl (PCB-189)	Polychlorinated Biphenyls (Aroclors)
8830084	2,3,4,4,4,5,5,6,6,6-Nonachlorobiphenyl (PCBs156/157)	Polychlorinated Biphenyls (Aroclors)
32588144	2,3,3',4,4'-Pentachlorobiphenyl (PCB-205)	Polychlorinated Biphenyls (Aroclors)
72863726	2,3,4,4,4,4'-Hexachlorobiphenyl (PCB-167)	Polychlorinated Biphenyls (Aroclors)
4427270	2,3,4,4,4,5-Pentachlorobiphenyl (PCB-154)	Polychlorinated Biphenyls (Aroclors)
31508006	2,3',4,4',5-Pentachlorobiphenyl (PCB181)	Polychlorinated Biphenyls (Aroclors)
65510463	2,3',4,4',5-Pentachlorobiphenyl (PCB-133)	Polychlorinated Biphenyls (Aroclors)
79288	2,3-Dimethylbutane	
591968	2,3-Pentadiene	
7012373	2,4,4'-Trichlorobiphenyl (PCB-28)	Polychlorinated Biphenyls (Aroclors)
95954	2,4,5-Trichlorophenol	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol	2,4,6-Trichlorophenol
90722	2,4,6-Tri(2-Methylamino)ethoxy(Phenol	
120832	2,4-Dichlorophenol	2,4-D (2,4-Dichlorophenoxyacetic Acid)(Including
94757	2,4-Dichlorophenoxy Acetic Acid	
109887	2,4-Dimethylpentane	
105679	2,4-Dimethylphenol	
11285	2,4-Dinitrophenol	2,4-Dinitrophenol
121142	2,4-Dinitropropane	2,4-Dinitropropane
584849	2,4-Toluene Diisocyanate	
5775942	2,5-Dimethyl Benzaldehyde	
638028	2,5-Dimethyl Thiophene	
53963	2-Acetylaminofluorene	
78922	2-Butanol	
107017	2-Butene	
112072	2-Butoxyethyl Acetate	Glycol Ethers
532724	2-Chloroacetophenone	2-Chloroacetophenone
2051407	2-Chlorobiphenyl (PCB-1)	Polychlorinated Biphenyls (Aroclors)
91587	2-Chloronaphthalene	Polycyclic Organic Matter
872509	2-Ethyl Thiophene	
1245192	2-Ethylhexyl Diethyl Phosphate	
75854	2-Methyl-2-Butanol	
78754	2-Methyl-2-Butene	
992178	2-Methylheptane	
593764	2-Methylhexane	
91126	2-Methoxyanthracene	Polycyclic Organic Matter
78820	2-Methoxy-Propylenimine	Cyanide Compounds
607578	2-Nitrofluorene	Polycyclic Organic Matter
98715	2-Nitrophenol	
79469	2-Nitropropane	
107879	2-Pentanone	
20726216	2-Propanoethyl Acetate	Glycol Ethers
10343952	3-(1-(Acetylcarbamoyl)-2-oxopropyl)azo-2-hydroxy-5-nitrobenzene	Chromium Compounds
3130818	3-(Trimethoxyvinyl)Propyl Glycidyl Ether	
21774566	3,3',4,4',5,5'-Hexachlorobiphenyl (PCB-169)	Polychlorinated Biphenyls (Aroclors)
57465288	3,3',4,4',5-Pentachlorobiphenyl (PCB-126)	Polychlorinated Biphenyls (Aroclors)
32588133	3,3',4,4'-Tetrachlorobiphenyl (PCB-77)	Polychlorinated Biphenyls (Aroclors)
14827177	3,3',5,5'-Tetramethylbenzidine	
91941	3,3'-Dichlorobenzidine	3,3'-Dichlorobenzidine
111904	3,3'-Dimethoxybenzidine	3,3'-Dimethoxybenzidine
119597	3,3'-Dimethylbenzidine	3,3'-Dimethylbenzidine
20362504	3,4,4',5-Tetrachlorobiphenyl 3,4,4',5-TCB (PCB-83)	Polychlorinated Biphenyls (Aroclors)
10215355	3-Butoxy-1-Propanol	Glycol Ethers
13461789	3-Carene	
1589497	3-Methoxy-1-Propanol	Glycol Ethers
1332730	3-Methoxypropylamine	
56495	3-Methylcyclohexene	Polycyclic Organic Matter

SCC Code	Units	SCC Level One	SCC Level Two	SCC Level Three	SCC Level Four	Description	Short Name	Category	Fuel	SI Sector	Last Inventory Year Value	Map To	Usage Notes
30500606	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Kilns	CEMENT	Cement			Industrial			
30500607	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Material Unloading	CEMENT	Cement			Industrial			
30500608	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Material Piles	CEMENT	Cement			Industrial			
30500609	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Primary Crushing	CEMENT	Cement			Industrial			
30500610	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Secondary Crushing	CEMENT	Cement			Industrial			
30500611	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Screening	MINERAL	Cement			Industrial			
30500612	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Material Transfer	CEMENT	Cement			Industrial			
30500613	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Material Grinding and Drying	MINERAL	Cement			Industrial			
30500614	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Clinker Cooler	MINERAL	Cement			Industrial			
30500615	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Clinker Piles	MINERAL	Cement			Industrial			
30500616	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Clinker Transfer	MINERAL	Cement			Industrial			
30500617	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Clinker Grinding	MINERAL	Cement			Industrial			
30500618	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Cement Silos	MINERAL	Cement			Industrial			
30500619	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Cement Load Out	CEMENT	Cement			Industrial			
30500620	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Predryer	Cement	Cement			Industrial			
30500621	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Pulverized Coal Kiln Feed Units	Cement	Cement			Industrial			
30500622	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Preheater Kiln	Cement	Cement			Industrial			
30500623	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Preheater/Preclinker Kiln	Cement	Cement			Industrial			
30500624	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Mill Feed Belt	Cement	Cement			Industrial			
30500625	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Mill Weigh Hopper	Cement	Cement			Industrial			
30500626	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Raw Mill Air Separator	Cement	Cement			Industrial			
30500627	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Finish Grinding Mill Feed Belt	Cement	Cement			Industrial			
30500628	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Finish Grinding Mill Weigh Hopper	Cement	Cement			Industrial			
30500629	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Finish Grinding Mill Air Separator	Cement	Cement			Industrial			
30500699	TON	Industrial	Mineral	Cement Manufacturing (Dry Process)	Other Not Classified	MINERAL	Cement			Industrial			
30500706	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Kilns	CEMENT	Cement			Industrial			
30500707	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Raw Material Unloading	CEMENT	Cement			Industrial			
30500708	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Raw Material Piles	CEMENT	Cement			Industrial			
30500709	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Primary Crushing	CEMENT	Cement			Industrial			
30500710	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Secondary Crushing	CEMENT	Cement			Industrial			
30500711	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Screening	MINERAL	Cement			Industrial			
30500712	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Raw Material Transfer	MINERAL	Cement			Industrial			
30500714	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Clinker Cooler	MINERAL	Cement			Industrial			
30500715	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Clinker Piles	MINERAL	Cement			Industrial			
30500716	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Clinker Transfer	MINERAL	Cement			Industrial			
30500717	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Clinker Grinding	MINERAL	Cement			Industrial			
30500718	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Cement Silos	MINERAL	Cement			Industrial			
30500719	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Cement Load Out	CEMENT	Cement			Industrial			
30500727	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Finish Grinding Mill Feed Belt	Cement	Cement			Industrial			
30500728	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Finish Grinding Mill Weigh Hopper	Cement	Cement			Industrial			
30500729	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Finish Grinding Mill Air Separator	Cement	Cement			Industrial			
30500799	TON	Industrial	Mineral	Cement Manufacturing (Wet Process)	Other Not Classified	MINERAL	Cement			Industrial			

	Equipment Type (40 CFR 63.1340 (b))	
New	Kiln (incl. alkali bypass and inline coal mill)	Yes
Existing	Clinker Cooler	No
Deconstructed	Raw Mill	
	Trash Mill	
	Raw Material Driver	
	Raw Material Storage Bin	
	Clinker Storage Bin	
	Finished Product Storage Bin	
	Conveyor Transfer Point	
	Baggage/Bulk Loading	
	Open Clinker Pile	
	Other (specify in notes/comments column)	

503344	2-Methylhexane	
86180	3-Methylpentane	
5026744	4-Diethylamino(phenyl glycidyl ether	
320684	4,4'-Dichlorobiphenyl (PCB-15)	Polychlorinated Biphenyls (Aroclors)
1348938	4,4'-Methylenbis(2,6-dimethylbenzamine)	
101144	4,4'-Methylenbis(2-Chloraniline)	4,4'-Methylenbis(2-Chloroaniline)
50293397	4,4'-Methylenbis(2-Methyl-6-(1-Methylethyl)benzamine)	
176173	4,4'-Methylenbis(cyclohexanamine)	
101779	4,4'-Methylenedianiline	4,4'-Methylenedianiline
101488	4,4'-Methylenedianiline Disuccinate	4,4'-Methylenedianiline Disuccinate (MDI)
534523	4,6-Dimino- $\alpha$ -Cresol	4,6-Dimino- $\alpha$ -Cresol (Including Salts)
924771	4-Aminobiphenyl	4-Aminobiphenyl
60117	4-Dimethylaminooxazobenzene	4-Dimethylaminooxazobenzene
123422	4-Hydroxy-4-Methyl-2-Pentanone	
20553	4-Methyl-Benzenesulfonamide	4-Nitrobiphenyl
97933	4-Nitrobiphenyl	4-Nitrophenol
100027	4-Nitrophenol	Polycyclic Organic Matter
3697243	5-Methylbiphenyl	Polycyclic Organic Matter
1495026	5-Nitrobiphenyl	Polycyclic Organic Matter
57876	7,12-Dimethylbenz[a]anthracene	Polycyclic Organic Matter
773022	9-Methyl Anthracene	Polycyclic Organic Matter
2381160	9-Methylbenz[a]anthracene	Polycyclic Organic Matter
83329	Acanaphthene	Polycyclic Organic Matter
308968	Acanaphthylene	Polycyclic Organic Matter
75070	Acetalddehyde	Acetalddehyde
60355	Acetamide	Acetamide
64197	Acetic Acid	
67461	Acetone	Acetonitrile
75058	Acetonitrile	Acetophenone
98862	Acetophenone	
74862	Acetylene	Acrylonitrile
107028	Acrolein	Acrylonitrile
75061	Acrylamide	Acrylonitrile
79107	Acrylic Acid	Acrylic Acid
107131	Acrylonitrile	Acrylonitrile
88	Allylacet Lead	Lead Compounds
107051	Allyl Chloride	Allyl Chloride
28470782	Allyl Chloride Formaldehyde Phenol Polymer	
C1111110M	Alpha Cellulose Filler	
80568	Alpha-Pinene	
98165	Alpha-Terpinol	
7429905	Aluminum	
1344281	Aluminum Dioxide	
9816	Ammonia	
1341497	Ammonium Difluoride	
7788989	Ammonium Chromate	Chromium Compounds
7788993	Ammonium Dichromate	Chromium Compounds
1336216	Ammonium Hydroxide	
624544	Amyl Propionate	Aniline
62553	Aniline	Polycyclic Organic Matter
130327	Anthraxene	Antimony Compounds
92	Antimony & Compounds	Antimony Compounds
1327739	Antimony Oxide	Antimony Compounds
7783702	Antimony Pentfluoride	Antimony Compounds
1314609	Antimony Peroxide	Antimony Compounds
10002939	Antimony Trichloride	Antimony Compounds
1308644	Antimony Trioxide	Antimony Compounds
13874483	Antimony tris(1,1,1-trichloro-2,2,2-trifluoroethyl phosphite)	Antimony Compounds
1345040	Antimony Trioxide	Antimony Compounds
ANTISTAT	Anti-Static Agent Cal Stat 600	
99	Arsenic & Compounds (Inorganic Including Arsenic)	Arsenic Compounds
7778394	Arsenic Acid	Arsenic Compounds
1303282	Arsenic Pentoxide	Arsenic Compounds
1327232	Arsenic Trioxide	Arsenic Compounds
8141101	Arsenous Acid	Arsenic Compounds
7784423	Arsine	Arsenic Compounds
1332214	Asbestos	Asbestos
44548878	Asphaltene (gibsonite)	
205823	Bi(2)fluoranthene	Polycyclic Organic Matter
7447093	Barium	Chromium Compounds
10784603	Barium Chromate	Chromium Compounds
7727437	Barium Sulfate	Polycyclic Organic Matter
101	Benz[a]anthracene/Chrysene	Polycyclic Organic Matter
56553	Benz[a]anthracene	Polycyclic Organic Matter
100527	Benzaldehyde	Benzene (Including Benzene From Gasoline)
71423	Benzene	Coal Dust Emissions
141	Benzene Soluble Organics (BSO)	
92875	Benzidine	Benzidine
103138	Benzol[a]fluoranthene	Polycyclic Organic Matter
195197	Benzol[a]phenanthrene	Polycyclic Organic Matter
203123	Benzol[a,b]fluoranthene	Polycyclic Organic Matter
5029	Benzol[a]pyrene	Polycyclic Organic Matter
203992	Benzol[b]fluoranthene	Polycyclic Organic Matter
102	Benzol[b]fluoranthene	Polycyclic Organic Matter
192972	Benzol[b]pyrene	Polycyclic Organic Matter
191242	Benzol[g,h,i]perylene	Polycyclic Organic Matter
207089	Benzol[h]fluoranthene	Polycyclic Organic Matter
5682726	Benzofluoranthene	Polycyclic Organic Matter
65850	Benzoic Acid	Benzoic Acid
98077	Benzoic Chloride	Benzoic Chloride
84360	Benzyl Peroxide	
16883833	Benzyl 2,2-Dimethyl-1-isopropyl-3-(2-Methyl-1-Chloropropyl)Propyl	
100516	Benzyl Alcohol	Benzyl Chloride
100447	Benzyl Chloride	Cyanide Compounds
140794	Benzyl Cyanide	Beryllium Compounds
395	Beryllium & Compounds	Beryllium Compounds
7787475	Beryllium Chloride	Beryllium Compounds
7787497	Beryllium Fluoride	Beryllium Compounds
1302798	Beryllium Nitrate	Beryllium Compounds
1304665	Beryllium Oxide	Beryllium Compounds
13510491	Beryllium Sulfate	Beryllium Compounds
127813	Beta-Pinene	Beta-Propiolactone
17578	Beta-Propiolactone	Biphenyl
92524	Biphenyl	Bis(2-Ethylhexyl)Phthalate (DEHP)
108601	Bis(2-chloro-1-methylethyl) ether	Bis(Chloromethyl) Ether
117817	Bis(2-Ethylhexyl)Phthalate	
542881	Bis(Chloromethyl) Ether	
7440699	Bismuth	
80097	BisPhenol A	
1675543	Bisphenol A Diglycidyl Ether	
10068386	Bisphenol A Epichlorohydrin Polymer	
37312337	Bisphenol A Epichlorohydrin Polymer with Toluene Diisocyanate	
2095016	Bisphenol F Diglycidyl Ether	
7445429	Boron	
75274	Bromodichloromethane	Bromocloroform
75252	Bromocloroform	
190978	Butane	Lead Compounds
816682	Butanedioic Acid, Hydroxy-Lead (2+1) Salt	
35296721	Butanol	Glycol Ethers
85687	Butyl Benzyl Phthalate	
124174	Butyl Carbitol Acetate	
142961	Butyl Ether	
121778	Butyraldehyde	Chromium Compounds
88186914	C.I. Pigment Black 28	Chromium Compounds
71811137	C.I. Pigment Black 10	
147148	C.I. Pigment Blue 15	
1103384	C.I. Pigment Red 49, Barium Salt (7-1)	
125	Cadmium & Compounds	Cadmium Compounds
141808	Cadmium Acetate	Cadmium Compounds
7789426	Cadmium Bromide	Cadmium Compounds
1018064	Cadmium Chloride	Cadmium Compounds
8418648	Cadmium Chloride Monohydrate	Cadmium Compounds
14486192	Cadmium Fluoroborate	Cadmium Compounds
7720809	Cadmium Iodide	Cadmium Compounds
10135947	Cadmium Nitrate	Cadmium Compounds
1306190	Cadmium Oxide	Cadmium Compounds
13083421	Cadmium Selenide	Cadmium Compounds
12626367	Cadmium Selenide Sulfide	Cadmium Compounds
2222930	Cadmium Stearate	Cadmium Compounds
10124364	Cadmium Sulfate	Cadmium Compounds
1306236	Cadmium Sulfide	Cadmium Compounds
7440702	Calcium	Chromium Compounds
12651530	Calcium Chromate	Calcium Cyanamide
156827	Calcium Cyanamide	
1305620	Calcium Hydroxide	
79925	Camphene	
76222	Camphor	
105602	Caprolactam	Caplan
133962	Caplan	Carbaryl
63252	Carbaryl	Polycyclic Organic Matter
80748	Carbazole	Glycol Ethers
112129	Carbitol Acetate	
102	Carbon Dioxide	Carbon Disulfide
75350	Carbon Disulfide	Carbon Tetrachloride
10	Carbon Monoxide	
56235	Carbon Tetrachloride	
463786	Carbonyl Acid	Carbonyl Sulfide
463581	Carbonyl Sulfide	Catechol
120809	Catechol	Glycol Ethers
111159	Cellulose Acetate	Glycol Ethers
110805	Cellulose Solvent	Glycol Ethers
8004346	Cellulose	Fine Mineral Fibers
808	Ceramic Fibers (Man-Made)	Chloramben
133904	Chloramben	

57749	Chlorane	Chlorane
1088706	Chloride	Chloride
7782505	Chlorine	Chlorine
1084944	Chlorine Dioxide	
107200	Chloroacetaldehyde	
79118	Chloroacetic Acid	Chloroacetic Acid
108807	Chlorobenzene	Chlorobenzene
510356	Chlorobenzonitrile	Chlorobenzonitrile
124481	Chlorodibromomethane	
674	Chlorofluoromethane	
67663	Chloroform	Chloroform
107302	Chloromethyl Methyl Ether	Chloromethyl Methyl Ether
134998	Chloroprene	Chloroprene
68186903	Chrom-Antimony-Titanium Buff	Chromium Compounds
34307336	Chromic Acid (H2Cr2O7), Calcium Salt (1:1)	Chromium Compounds
7780120	Chromic Acid (H2Cr2O7), Oxidum Salt, Dihydrate	Chromium Compounds
14018952	Chromic Acid (H2Cr2O7), Zinc Salt (1:1.1)	Chromium Compounds
7738945	Chromic Acid (VI)	Chromium Compounds
24613896	Chromic Acid Chromium (+3) Salt	Chromium Compounds
1308389	Chromic Oxide	Chromium Compounds
10301538	Chromic Sulfate	Chromium Compounds
13436047	Chromic Sulfuric Acid	Chromium Compounds
7440473	Chromium	Chromium Compounds
136	Chromium & Compounds	Chromium Compounds
12012350	Chromium (I) Carbide	Chromium Compounds
100292747	Chromium (III) Chloride	Chromium Compounds
10060125	Chromium Chloride, Hexahydrate	Chromium Compounds
13018018	Chromium Dioxide	Chromium Compounds
1308141	Chromium Hydroxide	Chromium Compounds
1338870	Chromium Trioxide	Chromium Compounds
12018158	Chromium Zinc Oxide	Chromium Compounds
21679312	Chromium(III) acetylacetonate	Chromium Compounds
14577618	Chromyl Chloride	Chromium Compounds
7789161	Chromyl Fluoride	Chromium Compounds
218019	Chrysene	Polycyclic Organic Matter
8007612	Cis-1,2	Polycyclic Organic Matter
135	Cobalt & Compounds	Cobalt Compounds
1345160	Cobalt Aluminate	Cobalt Compounds
68186867	Cobalt Aluminate Spinel (C.I. Pigment Blue 28)	Cobalt Compounds
7943098	Cobalt Carbamate	Cobalt Compounds
68187495	Cobalt Chromite Green Spinel	Chromium Compounds
10843038	Cobalt Hydroxysulfate	Cobalt Compounds
61789513	Cobalt Naphthoate	Cobalt Compounds
27253112	Cobalt Nondecanoate	Cobalt Compounds
10026129	Cobalt Nitrate Hexahydrate	Cobalt Compounds
1307966	Cobalt Oxide	Cobalt Compounds
1308093	Cobalt Oxide (III)	Cobalt Compounds
10134433	Cobalt Sulfate	Cobalt Compounds
1317426	Cobalt Sulfide	Cobalt Compounds
48180836	Cobalt Titanate Green Spinel	Nickel Compounds
10141056	Cobalt(II) Nitrate	Cobalt Compounds
10284506	Cobalt(II) Phosphate Octahydrate	Cobalt Compounds
140	Coke Oven Emissions	Coke Oven Emissions
7440108	Copper	
544923	Copper Cyanide	Cyanide Compounds
191071	Coumestrol	Polycyclic Organic Matter
1319773	Cresol	Cresol/Cresylic Acid (Mixed Isomers)
14464461	Crisoballite	
98828	Cumene	Cumene
80139	Cumene Hydroperoxide	
57125	Cyanide	Cyanide Compounds
144	Cyanide & Compounds	Cyanide Compounds
108918	Cyclohexanamine	
110817	Cyclohexane	
5380020	Cyclohexane, 1-Isocyanato-1-(Isocyanatomethyl)-3,4,5-Trimethyl-	
108941	Cyclohexanone	
542927	Cyclopentadiene	
397923	Cyclopentadiene	
72559	DBP (1,1-Dichloro-2,2-Bis(p-Chlorophenyl) Ethylene)	DBP (1,1-Dichloro-2,2-Bis(p-Chlorophenyl) Ethylene)
2051243	Deacetylchlorophenyl (PCR-209)	Polychlorinated Biphenyls (Aroclors)
15672392	Diethylene Glycol Monobutyl Ether Phthalate	Glycol Ethers
6855549	Dibromomaleic Anhydride, Flux-Excluded	
344883	Diacetone	Diacetone
9548162	Dibasic Lead	
15845520	Dibasic Lead Phosphate	Lead Compounds
192654	Dibenzodiphenyl	Polycyclic Organic Matter
53763	Dibenzodiphenyl	Polycyclic Organic Matter
189640	Dibenzodiphenyl	Polycyclic Organic Matter
189559	Dibenzodiphenyl	Polycyclic Organic Matter
244430	Dibenzodiphenyl	Polycyclic Organic Matter
191300	Dibenzodiphenyl	Polycyclic Organic Matter
132649	Dibenzofuran	Dibenzofuran
84742	Dibenzyl Phthalate	Dibenzyl Phthalate
111844	Dichloroethyl Ether (Bis(2-Chloroethyl) Ether)	Dichloroethyl Ether (Bis(2-Chloroethyl) Ether)
62737	Dichlorovinyl	Dichlorovinyl
77736	Dichloroamine	Dichloroamine
113422	Dichloroamine	Dichloroamine
110816	Dithyl Disulfide	
84662	Dithyl Phthalate	
44675	Dithyl Sulfate	Dithyl Sulfate
352922	Dithyl Sulfide	
111446	Dithylene Glycol	
4246519	Dithylene Glycol Diamine Propyl Ether	Glycol Ethers
120538	Dithylene Glycol Diamine	Glycol Ethers
112387	Dithylene Glycol Diethyl Ether	Glycol Ethers
4206611	Dithylene Glycol Diethyl Ether	Glycol Ethers
111506	Dithylene Glycol Dimethyl Ether	Glycol Ethers
403110	Dithylene Glycol Dinitrate	Glycol Ethers
764998	Dithylene Glycol Divinyl Ether	Glycol Ethers
1054674	Dithylene Glycol Ethyl Methyl Ether	Glycol Ethers
40143530	Dithylene Glycol Ethylmethyl Ether	Glycol Ethers
10143841	Dithylene Glycol Mono-2-Cyanoethyl Ether	Glycol Ethers
112345	Dithylene Glycol Monobutyl Ether	Glycol Ethers
111300	Dithylene Glycol Monomethyl Ether	Glycol Ethers
18912806	Dithylene Glycol Monoisobutyl Ether	Glycol Ethers
111173	Dithylene Glycol Monomethyl Ether	Glycol Ethers
929373	Dithylene Glycol Monovinyl Ether	Glycol Ethers
10143663	Dithyleneglycol Mono-2-Methyl-Pentyl Ether	Glycol Ethers
28053545	Dioxyacetone	
624930	Dimethyl Disulfide	
115106	Dimethyl Ether	
131113	Dimethyl Phthalate	Dimethyl Phthalate
77781	Dimethyl Sulfate	Dimethyl Sulfate
75183	Dimethyl Sulfate	
79447	Dimethylcarbamoyl Chloride	Dimethylcarbamoyl Chloride
117840	Dip-n-ethyl phthalate	
29511282	Dipropylene Glycol Butyl Ether	
8590048	Dipropylene Glycol Methyl Ether	
6474525	Distillates (petroleum), Hydrotreated Heavy Naphthenic	
44742478	Distillates (petroleum), Hydrotreated Light	
5985275	(E)-limonene	
77176870	Dodecylbenzenesulfonic Acid	
1900005	Epoxy Resins	
74840	Ethane	
64175	Ethanol	
141435	Ethanethiol	
112505	Ethoxyethoxy	Glycol Ethers
7085850	Ethyl 2-Cyanoacrylate	
141786	Ethyl Acrylate	Ethyl Acrylate
140885	Ethyl Acrylate	
100414	Ethyl Benzenes	Ethylbenzene
31726	Ethyl Chloromethyl Chloride	Ethyl Chloromethyl Chloride (Chloroethanol)
7609	Ethyl Chloride	Ethyl Chloride
75081	Ethyl Mercaptan	
624956	Ethyl Methyl Sulfide	
74851	Ethylene	
106934	Ethylene Dibromide	Ethylene Dibromide (Dibromomethane)
107262	Ethylene Dichloride	Ethylene Dichloride (1,2-Dichloroethane)
107211	Ethylene Glycol	Ethylene Glycol
15539359	Ethylene Glycol 2-Ethylhexyl Ether	Glycol Ethers
9775857	Ethylene Glycol Bis(2-Epoxy-2-Methylpropyl) Ether	Glycol Ethers
7529273	Ethylene Glycol Butyl Ether	Glycol Ethers
629141	Ethylene Glycol Diethyl Ether	Glycol Ethers
109464	Ethylene Glycol Methyl Ether	Glycol Ethers
623082	Ethylene Glycol Monobenzyl Ether	Glycol Ethers
111762	Ethylene Glycol Monobutyl Ether	Glycol Ethers
110496	Ethylene Glycol Monomethyl Ether Acetate	Glycol Ethers
7785917	Ethylene Glycol Mono-Sec-Butyl Ether	Glycol Ethers
764487	Ethylene Glycol Monovinyl Ether	Glycol Ethers
75218	Ethylene Oxide	Ethylene Oxide
86457	Ethylene Thiourea	Ethylene Thiourea
17429	Ethylenebis(2-ethylmercapto) Tetraacetic Acid	Glycol Ethers
10137969	Ethylenebis(2-Mono-2-Methylpentyl) Ether	Glycol Ethers
23495127	Ethylenebis(2-Monophenyl) Ether Propionate	Glycol Ethers
10137981	Ethylenebis(2-Mono-2,6,8-Trimethyl-4-Nonyl) Ether	Glycol Ethers
151344	Ethylenebis(2-Mono-2,6,8-Trimethyl-4-Nonyl) Ether	Ethylenebis(2-Mono-2,6,8-Trimethyl-4-Nonyl) Ether
75343	Ethylenebis(2-Mono-2,6,8-Trimethyl-4-Nonyl) Ether	Ethylenebis(2-Mono-2,6,8-Trimethyl-4-Nonyl) Ether
48400814	Fatty Acids, C14-15, branched, cobalt (I-1) salts	Cobalt Compounds
13408823	Ferrocene	Cerium Compounds
1308312	Ferrocene	Cerium Compounds
383	Fine Mineral Fibers	Fine Mineral Fibers
10872110	Fluorobenzene	Polycyclic Organic Matter
206440	Fluorobenzene	Polycyclic Organic Matter
80237	Fluorine	Fluorine
7782414	Fluorine	Fluorine

50000	Formaldehyde	Formaldehyde
110009	Furan	
99854	gamma-Terpinene	
6097173	Glass, Oiled	
611	Glasswool (Man-Made Fibers)	Fine Mineral Fibers
171	Glycol Ethers	Glycol Ethers
5386765	Gold (I) Potassium Cyanide	Cyanide Compounds
37187647	Gold Cyanide	Cyanide Compounds
64742945	Heavy Aromatic Solvent Naphtha (Petroleum)	
76448	Heptachlor	Heptachlor
28655712	Heptachlorobiphenyl	polychlorinated Biphenyls (Aroclors)
147825	Heptane	
118743	Heptachlorobenzene	Heptachlorobenzene
26601649	Heptachlorobiphenyl	polychlorinated Biphenyls (Aroclors)
97683	Heptachlorobutadiene	Heptachlorobutadiene
77474	Heptachlorocyclopentadiene	Heptachlorocyclopentadiene
67721	Heptachloroethane	Heptachloroethane
46251	Heptaldehyde	
672960	Hexamethylene Dithiocyanate	Hexamethylene Dithiocyanate
28182812	Hexamethylene Dithiocyanate Homopolymer	
480319	Hexamethylphosphoramide	Hexamethylphosphoramide
110343	Hexane	Hexane
107835	Hexane isomers (except n-Hexane)	
13586828	Hexanoic acid, 2-ethyl-, cobalt salt	Cobalt Compounds
136527	Hexanoic acid, 2-ethyl-, cobalt(2+), salt	Cobalt Compounds
302012	Hydrazine	Hydrazine
46	Hydrocarbons	
7647010	Hydrochloric Acid (Hydrogen Chloride (Gas Only))	Hydrochloric Acid (Hydrogen Chloride (Gas Only))
7664393	Hydrogen Fluoride	Hydrogen Fluoride (Hydrofluoric Acid)
484	Hydrofluorocarbons	
12021953	Hydrofluoroacetic Acid	
74908	Hydrogen Cyanide	Cyanide Compounds
778075	Hydrogen Selenide	Selenium Compounds
778064	Hydrogen Sulfide	
61788327	Hydrogenated Terphenyl	
173178	Hydroquinone	Hydroquinone
95136	Indene	Polycyclic Organic Matter
193395	Indene(1,2,3,4-c-dP)rene	Polycyclic Organic Matter
20045666	Indene(1,3,4-c-dP)rene	Polycyclic Organic Matter
743886	Iron	Iron
68187097	Iron Chromite Brown Spinel (C.I. Pigment Brown 35)	Chromium Compounds
17454897	Iron Manganese Iron Oxide	Manganese Compounds
14038438	Iron(III) Ferronitrate	Cyanide Compounds
75285	Isobutane	
78821	Isobutene	
115117	Isobutene	
110190	Isobutyl Acetate	
4493143	Isobutyl Cellulosate	Glycol Ethers
513440	Isobutyl Mercaptan	
78847	Isobutyraldehyde	
SCC74N	Isooctane	
78581	Isothorane	Isothorane
4098715	Isothorane Dithiocyanate	
78795	Isoxane	
67690	Isoxopropanol	
75332	Isoxopropyl Mercaptan	
590683	Isonitrosobenzene	
8008206	Kerosene	
1302767	Kyanite	
1317768	Lead (II) Oxide	Lead Compounds
1314416	Lead (II, IV) Oxide	Lead Compounds
803402	Lead Acetate	Lead Compounds
7784495	Lead Arsenate	Lead Compounds
10031117	Lead Arsenite	Lead Compounds
55971864	Lead Bisulfate (PbSO4)	Lead Compounds
998130	Lead Carbonate	Lead Compounds
7759576	Lead Chromate	Lead Compounds
12656838	Lead Chromate Monohydrate Sulfate (C.I. Pigment Red 104)	Lead Compounds
8454111	Lead Chromate Oxide	Lead Compounds
602	Lead Compounds (Inorganic)	Lead Compounds
603	Lead Compounds (Other Than Inorganic)	Lead Compounds
1309600	Lead Dioxide	Lead Compounds
13814965	Lead Fluoroborate	Lead Compounds
6120149	Lead Naphthalenolate	Lead Compounds
27253287	Lead Nephelenate	Lead Compounds
10009748	Lead Nitrate	Lead Compounds
1335257	Lead Oxide	Lead Compounds
12141207	Lead Oxide Phosphonate	Lead Compounds
7446277	Lead Phosphate	Lead Compounds
7424800	Lead Selenate	Lead Compounds
1335326	Lead Subacetate	Lead Compounds
7446142	Lead Sulfate	Lead Compounds
12060003	Lead Triacetate	Lead Compounds
12626812	Lead Triacetate Zircon	Lead Compounds
64742898	Light Aliphatic Solvent Naphtha (Petroleum)	
7439932	Lithium	Lithium
14307358	Lithium Chromate	Chromium Compounds
1334787	m-Tolaldehyde	
7439544	Magnesium	
13423615	Magnesium Chromate	Chromium Compounds
13404859	Magnesium Dichromate	Chromium Compounds
1335388	Magnesium Peroxide	
108316	Maleic Anhydride	Maleic Anhydride
198	Manganese & Compounds	Manganese Compounds
598629	Manganese Carbonate	Manganese Compounds
1313139	Manganese Dioxide	Manganese Compounds
48168497	Manganese Ferrite Black Spinel (C.I. Pigment Black 26)	Manganese Compounds
1316931	Manganese Naphthalenolate	Manganese Compounds
10377669	Manganese Nitrate	Manganese Compounds
743677	Manganese Sulfite	Manganese Compounds
603705	Manganese Telluride	Manganese Compounds
1317352	Manganese Tetraoxide	Manganese Compounds
5317346	Manganese Trioxide	Manganese Compounds
7783166	Manganomethyl Hypophosphite Monohydrate	Manganese Compounds
12078651	Manganone, Tricarbonyl ( eta 5-2,4-cyclopentadien-1-yl)	Manganese Compounds
108364	m-Cresol	Cresol (Cresylic Acid Mixture Isomers)
64742887	Medium Aliphatic Solvent Naphtha (Petroleum)	
149304	Mercaptobenzothiazole	
7407847	Mercuric Chloride	Mercury Compounds
21908532	Mercuric Oxide	Mercury Compounds
1995	Mercury & Compounds	Mercury Compounds
27967936	Mercury (Organic)	Mercury Compounds
62384	Mercury Acetate Phen	Mercury Compounds
514	Methane	
75718	Methane, Dichlorodifluoro-	
67581	Methanol	Methanol
72435	Methoxychlor	Methoxychlor
111108	Methoxyethyl Oxetane	Glycol Ethers
112356	Methoxytriethylol	Glycol Ethers
117053	Methyl 2-Cyanoacrylate	
110430	Methyl Amyl Ketone	
74839	Methyl Bromide	Methyl Bromide (Bromomethane)
140058	Methyl Cellulosate Acetylacrylate	Glycol Ethers
13161617	Methyl Cellulosate Acrylate	Glycol Ethers
74873	Methyl Chloride	Methyl Chloride (Chloromethane)
71356	Methyl Chloroform	Methyl Chloroform (1,1,1-Trichloroethane)
78933	Methyl Ethyl Ketone	
74884	Methyl Iodide	Methyl Iodide (Iodomethane)
108401	Methyl Isobutyl Ketone	Methyl Isobutyl Ketone (Isopent)
624839	Methyl Isocyanate	Methyl Isocyanate
593759	Methyl Isocyanide	Cyanide Compounds
74061	Methyl Mercaptan	
693748	Methyl Mercury	Mercury Compounds
80626	Methyl Methacrylate	Methyl Methacrylate
1634844	Methyl Tert-Butyl Ether	Methyl Tert-Butyl Ether
616444	Methyl Thiophene	
26914181	Methylanthracene	Polycyclic Organic Matter
61617689	Methylanthracene	Polycyclic Organic Matter
41637905	Methylchrysene	Polycyclic Organic Matter
108872	Methylcyclohexane	
86277	Methylcyclopentane	
74953	Methylene Bromide	
75092	Methylene Chloride	Methylene Chloride (Dichloromethane)
142	Methylene Chloride Soluble Organics (MCSO)	
60344	Methylhydrazine	Methylhydrazine
743987	Molybdenum	
151275	Molybdenum Oxide	
27321188	Monochlorobiphenyl	
MCND	Monoterpenes	
108383	m-Xylene	Xylenes (Mixed Isomers)
123697	N,N-Dimethylaniline	N,N-Dimethylaniline
48122	N,N-Dimethylformamide	N,N-Dimethylformamide
8036386	Naphtha	
91203	Naphthalene	Naphthalene
123864	n-Butyl Acetate	
1434886	n-Butyl Oxethyl Ether	
109795	n-Butyl Mercaptan	
17448865	Naphthalene Isynine	
2201152	N-Ethyl-5-Phenylcyclohexanamine	
112594	N-Hexyl Carbitol	Glycol Ethers
226	Nickel & Compounds	Nickel Compounds
10101970	Nickel (II) Sulfate Hexahydrate	Nickel Compounds
14336700	Nickel S8	Nickel Compounds
778024	Nickel Acetate	Nickel Compounds
6007185	Nickel Arsenopy Titanium Oxide (C.I. Pigment Yellow 53)	Nickel Compounds



12462889	Nickel Bromide	Nickel Compounds
12710380	Nickel Carbide	Nickel Compounds
3333673	Nickel Carbonate	Nickel Compounds
11361359	Nickel Carbonyl	Nickel Compounds
7718461	Nickel Chloride	Nickel Compounds
6018899	Nickel Disulfate TET	Nickel Compounds
27054487	Nickel Hydroxide	Nickel Compounds
13138459	Nickel Nitrate	Nickel Compounds
604	Nickel Refinery Dust	Nickel Compounds
17032722	Nickel Sulfide	Nickel Compounds
13770863	Nickel Sulfamate	Nickel Compounds
7786814	Nickel Sulfate	Nickel Compounds
15751005	Nickel(2+), hexakis[1H-imidazole-kappa-N2], dichloride, (OC-6-13)	Nickel Compounds
13133991	Nickel(III) Oxide	Nickel Compounds
1314063	Nickel(III) Oxide	Nickel Compounds
13711289	Nickelocene	Nickel Compounds
	Nitrate	Nitrate Compounds
	Nitrate	Nitrate Compounds
7697372	Nitric Acid	Nitrobenzene
98953	Nitrobenzene	Nitrobenzene
10102449	Nitrogen Peroxide	
NOX	Nitrogen Oxides	
NO2	Nitrogen Oxide	
872504	N-Methyl-2-Pyrrolidone	
62759	N-Nitrosodimethylamine	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine	N-Nitrosomorpholine
684935	N-Nitroso-N-Methylurea	N-Nitroso-N-Methylurea
13742077	Nonachlorobiphenyl	Polychlorinated Biphenyls (Aroclors)
111843	Nonane	
106945	n-Propyl Bromide	
107039	n-Propyl Mercaptan	
103651	n-Propylbenzene	o-Anisidine
80080	o-Anisidine	
95578	o-Chlorophenol	Caprol/Caprylic Acid (Mixed Isomers)
94487	o-Cresol	Polychlorinated Biphenyls (Aroclors)
55722264	Octachlorobiphenyl	
111808	Octene	
121893	Oct-1-ene	
529204	o-Tolualdehyde	o-Toluidine
95534	o-Toluidine	
2768123	Octylammoniumamine, N,N'-(methylenebis(4,1-phenylenebis(2,2,2,2-tetrafluoroethyl)))	
95476	o-Xylene	Xylenes (Mixed Isomers)
130498292	Para, total	Polycyclic Organic Matter
56382	Parathion	Parathion
106445	p-Cresol	Cresol/Caprylic Acid (Mixed Isomers)
99916	p-Cumene	
105055	p-Diethylbenzene	p-Dioxane
122911	p-Dioxane	Polychlorinated Biphenyls (Aroclors)
16429282	Pentachlorobiphenyl	Polychlorinated Biphenyls (Aroclors)
82688	Pentachloronitrobenzene	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol	Pentachlorophenol
109560	Pentane	
590352	Pentane, 2,2-dimethyl-	
562492	Pentane, 3,3-dimethyl-	
PTC	Perfluorooctanoic acid	
10301505	Permanganic acid	Manganese Compounds
198550	Perylene	Polycyclic Organic Matter
85018	Phenanthrene	Polycyclic Organic Matter
108952	Phenol	Phenol
491634953	Phenol Formaldehyde Resin with Hexamethylenetetramine	
3804144	Phenol, Polymer with Formaldehyde, Glycidic Ether	Glycidic Ether
122996	Phenyl Cellulosolve	
103719	Phenyl Isocyanate	Phosgene
75445	Phosgene	Phosphine
7803512	Phosphine	Phosphine
778940	Phosphoric Acid Chromium (1-2) Salt	Chromium Compounds
14615382	Phosphoric acid, cobalt(2+ salt (2-3))	Cobalt Compounds
13011546	Phosphoric acid, monoammonium monosodium salt	Chromium Compounds
3220826	Phosphoric Acid, Reaction Products, with Aluminum Hydroxide and	Phosphorus
7231461	Phosphorus	
398	Phosphorus & Compounds	Phthalic Anhydride
85469	Phthalic Anhydride	Polychlorinated Biphenyls (Aroclors)
1316363	Polychlorinated Biphenyls	Polychlorinated Biphenyls (Aroclors)
246	Polycyclic Organic Matter	Polycyclic Organic Matter
910000000	Polylactone Resin-Aminophenyl/Ethanol Carboxylate	
27252875	Polyethylene Glycol Allyl Ether Acetate	
25824275	Polyglycol Dimethylacrylates	
50070499	Polyisocyanates	
9018679	Polymeric Diphenylmethane Diisocyanate	
9003081	Polymerized Melamine Molding Compound	
1440091	Potassium	Chromium Compounds
7789006	Potassium Chromate	Cyanide Compounds
151108	Potassium Cyanide	Cyanide Compounds
7774509	Potassium Dichromate	Chromium Compounds
13746662	Potassium Ferriocyanide	Cyanide Compounds
13943583	Potassium Ferrocyanide	Cyanide Compounds
1313081	Potassium Hydroxide	Nickel Compounds
14220178	Potassium Nickel Cyanide	Manganese Compounds
7727447	Potassium permanganate	Cyanide Compounds
596316	Potassium Silver Cyanide	p-Phenylenediamine
106503	p-Phenylenediamine	Propadiene
463459	Propadiene	Propionaldehyde
74986	Propane	Propionaldehyde
123386	Propionaldehyde	Propionaldehyde
114591	Propionitrile	Propionitrile (Monomer)
2807395	Propyl Cellulosolve	Glycidic Ether
115071	Propylene	Propylene Dichloride (1,2-dichloropropane)
78875	Propylene Dichloride	
107397	Propylene Glycol 1-Methyl Ether	
108656	Propylene Glycol Monomethyl Ether Acetate (1-Methoxy-2-Propyl	
5121668	Propylene Glycol n-Butyl Ether	
27018527	Propylene Glycol Tri-Butyl Ether	Propylene Oxide
75569	Propylene Oxide	Xylenes (Mixed Isomers)
256473	p-Xylene	Polycyclic Organic Matter
1250009	Pyrene	
110861	Pyridine	
14898607	Quercetin	Quinoline
91225	Quinoline	Quinone (p-Benzoquinone)
106514	Quinone	Radionuclides (Including Radium)
405	Radionuclides	Radionuclides (Including Radium)
400	Radionuclides (Including Radium)	Radionuclides (Including Radium)
406	Radon And Its Decay Products	Radionuclides (Including Radium)
142844006	Reflexionless Ceramic Filter	
483658	Retene	Polycyclic Organic Matter
1314289	Rhenium Oxide	Fine Mineral Fibers
617	Rochowal (Man-Made Fibers)	
81072	Saccharin	Selenium Compounds
253	Selenium & Compounds	Selenium Compounds
1446084	Selenium Dioxide	Selenium Compounds
7488564	Selenium Disulfide	Selenium Compounds
7781791	Selenium Hexafluoride	Selenium Compounds
7445345	Selenium Monosulfide	Selenium Compounds
12640890	Selenium Oxide	Selenium Compounds
7783008	Selenous Acid	Selenium Compounds
7631869	Silica	
7440213	Silicon	
112845325	Silicon Dioxide	
7440224	Silver	Cyanide Compounds
506649	Silver Cyanide	Fine Mineral Fibers
616	Silver(I) Chloride (Man-Made Fibers)	
7440231	Sodium	Sodium Bifluoride
1333883	Sodium Bifluoride	Chromium Compounds
7771113	Sodium Chromate	Chromium Compounds
10014829	Sodium Chromate(VI)	Cyanide Compounds
143339	Sodium Cyanide	Chromium Compounds
25280219	Sodium Dichromate	Antimony Compounds
16923230	Sodium Hexafluoroantimonate	
1310732	Sodium Hydroxide	
7631994	Sodium Nitrate	
571176	Stearic Acid	
8052413	Stoddard Solvent	
7440246	Strontium	Chromium Compounds
7789062	Strontium Chromate	
100425	Styrene	Styrene Oxide
98093	Styrene Oxide	
14808798	Sulfate	
18496258	Sulfide	
1704349	Sulfur	
502	Sulfur Dioxide	
595	Sulfur Hexafluoride	
7964393	Sulfuric Acid	
26340603	Terphenyl	
994008	tert-Amyl Methyl Ether	
75650	tert-Butanol (2-Propanol, 2-Methyl-)	
140885	tert-Butyl Acetate	
75861	tert-Butyl Mercaptan	Polychlorinated Biphenyls (Aroclors)
39514330	Tetrachlorobiphenyl	Tetrachloroethylene (Perchloroethylene)
127184	Tetrachloroethylene	Lead Compounds
78007	Tetraethyl Lead	
110010	Tetrahydrothiophene	Radionuclides (Including Radium)
7440280	Thallium	Thiophene
110011	Thiophene	Radionuclides (Including Radium)
7440291	Thorium-232	
7440315	Tin	
7440363	Titanium	
1346967	Titanium Dioxide	

7558450	Titanium Tetrachloride	Titanium Tetrachloride
108883	Toluene	Toluene
26471625	Toluene Diisocyanates (mixture)	
85867	Toluene 2,4-Diamine	Toluene 2,4-Diamine
16	Total Phosphides	
185	Total Reduced Sulfur	
175 40251	Total Reduced Sulfur (as H2S)	
185 as S	Total Reduced Sulfur (as S)	
8001352	Toxaphene	Toxaphene (Chlorinated Camphene)
111279	Trans-Cyclooctadecyne	
37680685	Trichlorobiphenyl	Polychlorinated Biphenyls (Aroclors)
29016	Trichloroethylene	Trichloroethylene
25694	Trichloroethylenesulfane	
121148	Triethylamine	Triethylamine
112276	Triethylene glycol	Glycol Ethers
112483	Triethylene Glycol Dimethyl Ether	Glycol Ethers
1582098	Trifluralin	Trifluralin
143226	Triglycol Monobutyl Ether	Glycol Ethers
7756947	Triisobutylene	
25151137	Triisobutylene	
15625895	Trimethylolpropane Triacrylate	
1465611	Uranium	Radionuclides (Including Radium)
1344576	Uranium Dioxide	Radionuclides (Including Radium)
7781815	Uranium Hexafluoride	Radionuclides (Including Radium)
1344588	Uranium Oxide	Radionuclides (Including Radium)
141093	Uranyl Acetate	Radionuclides (Including Radium)
110623	Valeraldehyde	
1465612	Vanadium	
108054	Vinyl Acetate	Vinyl Acetate
39302	Vinyl Bromide	Vinyl Bromide
25014	Vinyl Chloride	Vinyl Chloride
75314	Vinylidene Chloride	Vinylidene Chloride (1,1-Dichloroethylene)
105	Volatiles Organic Compounds	
1130207	Xylenes (Mixture of o, m, and p isomers)	Xylenes (Mixed Isomers)
7440655	Yttrium	
7440666	Zinc	
13530659	Zinc Chromate	Chromium Compounds
40922287	Zinc Chromite	Chromium Compounds
552311	Zinc Cyanide	Cyanide Compounds
68186889	Zinc Iron Chromite Brown Sinter (C.I. Pigment Brown 33)	Chromium Compounds
7779900	Zinc Phosphate	
17214529	Zinc Potassium Chromate	Chromium Compounds
11103869	Zinc Potassium Chromate Hydrate	Chromium Compounds
14940682	Zircon	

102	Carbon Dioxide
104	Methane
1020	Nitrous Oxide

## EXHIBIT A



State of Utah

SPENCER J. COX  
*Governor*

DEIDRE HENDERSON  
*Lieutenant Governor*

Department of  
Environmental Quality

Kimberly D. Shelley  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

10303

**Title V Operating Permit**

**PERMIT NUMBER:** 2300015004

**DATE OF PERMIT:** September 26, 2018

Date of Last Revision: August 29, 2022

This Operating Permit is issued to, and applies to the following:

**Name of Permittee:**

Ash Grove Cement Company  
11011 Cody Street  
Overland Park, KS 66210

**Permitted Location:**

Leamington Cement Plant  
Hwy 132  
Leamington, UT 84638

UTM coordinates: 397,040 m Easting, 4,379,850 m Northing  
SIC code: 3241 (Cement, Hydraulic)

By:

Bryce C. Bird, Director

Prepared By:

Brandy Cannon  
bcannon@utah.gov

## **ENFORCEABLE DATES AND TIMELINES**

The following dates or timeframes are referenced in  
Section I: General Provisions of this permit.

Annual Certification Due: January 30 of every calendar year that this permit is in force.

Renewal application due: March 26, 2023

Permit expiration date: September 26, 2023

Definition of “prompt”: written notification within 14 days.

## **ABSTRACT**

Ash Grove Cement Company operates the Leamington cement manufacturing plant in Juab County, Utah. This plant has been in operation since 1981. At the Leamington cement plant, cement is produced when inorganic raw materials, primarily limestone (quarried on site), are correctly proportioned, ground and mixed, and then fed into a rotating kiln. The kiln alters the materials and recombines them into small stones called cement clinker. The clinker is cooled and ground with gypsum and additional limestone into a fine powdered cement. The final product is stored on site for later shipping. The major sources of air emissions are from the combustion of fuels for the kiln operation, from the kiln, and from the clinker cooling process. The Leamington cement plant is a major source for emissions of PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, and HAPs. The Leamington cement plant is subject to 40 CFR 60 Subpart A-General Provisions, 40 CFR 60 Subpart Y-Standards of Performance for Coal Preparation and Processing Plants, 40 CFR 60 Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60 Subpart IIII-Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 63 Subpart A-General Provisions, 40 CFR 63 Subpart LLL-National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry, and 40 CFR 63 Subpart ZZZZ-National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

## **OPERATING PERMIT HISTORY**

<b>Permit/Activity</b>	<b>Date Issued</b>	<b>Recorded Changes</b>
Title V significant modification (Project #OPP0103030018)	08/29/2022	Changes: Incorporates DAQE-AN103030030-22, dated April 20, 2022, to add a new 762 hp diesel emergency engine for the kiln, add a portable crusher to crush limestone, replace the opacity for all mining operations with a source-wide fugitive dust opacity, and increase the processed material limit on the limestone bypass system; revision also includes new requirements from 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ and typographical corrections.
Title V administrative amendment - enhanced AO (Project #OPP0103030017)	11/18/2019	Changes: Incorporates DAQE-AN103030029-19, dated September 20, 2019, to add two dust collectors and a new truck loadout bay in the shipping area.
Title V administrative amendment by DAQ (Project #OPP0103030016)	01/15/2019	Changes: Incorporates DAQE-AN103030028-18, dated December 14, 2018, to reference 40 CFR 63 Subpart LLL for determination of clinker production.
Title V renewal application (Project #OPP0103030015)	09/26/2018	Changes: Incorporate changes approved in DAQE-AN103030026-18, January 17, 2018, that removed opacity conditions on the kiln and clinker cooler, updated monitoring, and made editorial/typographical changes.
Title V administrative amendment - enhanced AO (Project #OPP0103030014)	08/04/2016	Changes: Incorporate DAQE-AN103030024-16, February 3, 2016, to add a dust shuttle and carbon injection system and include consent decree requirements. The permit also contains updates to language from 40 CFR 63 Subpart LLL.
Title V renewal application (Project #OPP0103030013)	07/08/2013	Changes: Updates to language from 40 CFR 60 Subpart Y, 40 CFR 60 Subpart OOO, and 40 CFR 63 Subpart LLL; correction to emission unit description list to include emergency generators and the associated condition.
Title V administrative amendment - enhanced AO (Project #OPP0103030009)	10/01/2007	Changes: Incorporate DAQE-AN0103030015-07, July 23, 2007, for replacement of three baghouses (419.BF3,4,5) with one larger baghouse (514.BF3) and correction to some of the equipment unit numbers and descriptions.
Title V renewal application (Project #OPP0103030004)	12/01/2006	Changes: Action initiated by a renewal of an operating permit.
Title V administrative amendment by DAQ (Project #OPP0103030005)	07/29/2005	Changes: to incorporate changes approved in DAQE-AN0303011-05, dated May 20, 2005, including the following: installation of a limestone bypass system to incorporate additional limestone into the clinker and gypsum prior to the finish mill, addition of two new baghouses associated with the limestone bypass system

		located at the new limestone silo and conveyor, and replacement of two baghouses (419.BF4, 419.BF5) controlling discharge from the east and west clinker belts into the clinker storage silos. Additional permit changes include: correction of typographical errors, update of emission unit identification numbers, and revision of the SSMP and O&M plan conditions to more closely reflect MACT language.
Title V administrative amendment by source (Project #OPP0103030002)	12/24/2003	Changes: To add the cross-belt analyzer approved in DAQE-AN0303009-03 and incorporate limit changes from DAQE-AN0303006-03. In addition, a number of small changes or corrections were made. These result from minor changes in previously listed equipment and to correct typographical errors.
Title V initial application (Project #OPP0103030001)	01/05/2000	

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**Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.**

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

## **SECTION I: GENERAL PROVISIONS**

### **I.A Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

### **I.B Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

### **I.C Duty to Comply.**

- I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))
- I.C.2 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 this permit. (R307-415-6a(6)(b))
- I.C.3 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 this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(c))
- I.C.4 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 shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

### **I.D Permit Expiration and Renewal.**

I.D.1 This permit is issued for a fixed term of five years and expires on the date shown under "Enforceable Dates and Timelines" at the front of this permit. (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due on or before the date shown under "Enforceable Dates and Timelines" at the front of this permit. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Director takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Director any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Director consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I **Revision Exception.**

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. (R307-415-6a(8))

I.J **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director or an authorized representative to perform any of the following:

- I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))
- I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))
- I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))
- I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L **Compliance Certification.**

I.L.1 Permittee shall submit to the Director an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than the date shown under "Enforceable Dates and Timelines" at the front of this permit, and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

- I.L.1.d Such other facts as the Director may require to determine the compliance status.
- I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Director: (R307-415-6c(5)(d))

Environmental Protection Agency, Region VIII  
Office of Enforcement, Compliance and Environmental Justice  
(mail code 8ENF)  
1595 Wynkoop Street  
Denver, CO 80202-1129

I.M **Permit Shield.**

- I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:
- I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))
- I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))
- I.M.2 Nothing in this permit shall alter or affect any of the following:
- I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))
- I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(a)(xiii) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))
- I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))
- I.M.2.d The ability of the Director to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N **Emergency Provision.**

- I.N.1 An "emergency" is 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 this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))
- I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

- I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))
- I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))
- I.N.2.d The permittee submitted notice of the emergency to the Director within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))
- I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))
- I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

- I.S.1.b.3 The company or entity that performed the analyses.
- I.S.1.b.4 The analytical techniques or methods used.
- I.S.1.b.5 The results of such analyses.
- I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.
- I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

- I.S.2.a Monitoring reports shall be submitted to the Director every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))
- I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i))
- I.S.2.c The Director shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. Prompt, as used in this condition, shall be defined as written notification within the number of days shown under "Enforceable Dates and Timelines" at the front of this permit. Deviations from permit requirements due to breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

- I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Director are to be sent to the following address or to such other address as may be required by the Director:

Utah Division of Air Quality  
P.O. Box 144820  
Salt Lake City, UT 84114-4820  
Phone: 801-536-4000

- I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Director:

For annual compliance certifications:

Environmental Protection Agency, Region VIII  
Office of Enforcement, Compliance and Environmental Justice  
(mail code 8ENF)  
1595 Wynkoop Street  
Denver, CO 80202-1129

For reports, notifications, or other correspondence related to permit modifications,

applications, etc.:

Environmental Protection Agency, Region VIII  
Air Permitting and Monitoring Branch (mail code 8ARD-PM)  
1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone: 303-312-6927

I.T **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Director or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Director determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the Acid Rain Program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into this permit. (R307-415-7g(1)(b))

I.T.3 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U **Inventory Requirements.**

An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.V **Title IV and Other, More Stringent Requirements**

Where an applicable requirement is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, Acid Deposition Control, both provisions shall be incorporated into this permit. (R307-415-6a(1)(b))

## **SECTION II: SPECIAL PROVISIONS**

- II.A **Emission Unit(s) Permitted to Discharge Air Contaminants.**  
(R307-415-4(3)(a) and R307-415-4(4))
- II.A.1 **Permitted Source**  
Source-wide
- II.A.2 **Quarry: Quarry Operations**  
Rock drilling operations, truck hauling, and storage piles.
- II.A.3 **211.BF1: Stationary Crusher**  
Stationary crusher with an approximate production rate of 1,000 tons per hour, for reduction of quarried material to 3 inch minus sized material. The crusher is equipped with a baghouse and with water sprays on the feed hopper. (pre-1983)
- II.A.4 **211.BF2: Raw Material Transfer**  
Crushed material is transported to raw material storage by belt B8. The raw material transfers at the end of conveyor B8 prior to loading into raw material reclaim area. The conveyor transfer point is equipped with a baghouse & water sprays. (pre-1983)
- II.A.5 **315.SX1 thru 4: Raw Material Silos**  
Raw materials such as limestone, silica, iron, and shale are stored in one of four silos. The four silos are controlled by one common baghouse (stack C125).
- II.A.6 **315.BF2: Fifth Component Silo**  
Raw materials are stored in a silo. This silo is equipped with a baghouse.
- II.A.7 **317.BF3: Kiln & Pre-Calcliner and Raw Mill**  
Kiln burning process, calciner, and preheater tower off gases are directed through the bottom of the raw mill where finely ground raw material is picked up. Combustion gases and fine raw materials are then vented to a baghouse on the main stack (D38). The following equipment is installed: selective non-catalytic reduction (SNCR) for NO<sub>x</sub> control; NO<sub>x</sub>, CO, total hydrocarbons, and oxygen (O<sub>2</sub>) CEMS; mercury (Hg) CEMS or integrated sorbent trap monitoring system; PM continuous parametric monitoring system (CPMS). A carbon injection system is installed at the raw mill bypass duct for mercury adsorption capacity. The carbon injection system is not an emission point as it is in an enclosed building.
- II.A.8 **412.BF1 and 2: Blending Silo Elevators (2)**  
Blended kiln feed is transferred to the kiln by bucket elevators. The elevators are equipped with a baghouse.
- II.A.9 **411.BF1 and 2: Kiln Feed Blending Silos (2)**  
Raw material is blended in one of two blending silos prior to feeding the kiln. The blending silos are controlled by one common baghouse.
- II.A.10 **414.BF1: Kiln Feed Alleviator**  
A baghouse controls particulate from the central material silo between the blending silos and the preheater. Raw feed is removed from the system near the top of the preheater tower.
- II.A.11 **419.BF1: Clinker Cooler**  
Grate type cooler used for cooling clinker from the kiln prior to transfer to clinker storage. The clinker cooler vent air is controlled by a baghouse on the clinker cooler stack (F31). A PM CPMS is installed.
- II.A.12 **419.BF8 and 419.BF10: Clinker Belt Transfer**  
Clinker is removed from the clinker cooler by drag chains and dropped onto one of two clinker conveyor



belts. One baghouse (419.BF10) controls particulate from the outside clinker belt. The other conveyor and transfer points are controlled by a second baghouse (419.BF8).

- II.A.13      **419.BF9: Clinker Silos**  
Clinker from the clinker cooler is transferred to one of three storage silos. Emissions generated when loading the east and west clinker silos and the out-of-spec silo are controlled by a baghouse.
- II.A.14      **419.BF9: East Clinker Belt**  
Clinker from the clinker cooler is transferred into the East clinker silo by conveyor belt. The discharge from the belt is controlled by a baghouse.
- II.A.15      **419.BF9: West Clinker Belt**  
Clinker from the clinker cooler is transferred into the West clinker silo by conveyor belt. The discharge from the belt is controlled by a baghouse.
- II.A.16      **511.BF3: Clinker Reclaim Hopper**  
Imported clinker is fed to the clinker tunnel conveyor belt by the outside clinker hopper. Emissions during transfer of clinker to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.
- II.A.17      **511.BF1: East Clinker Silo Discharge**  
Produced clinker is fed to the clinker tunnel conveyor belt from the East clinker storage silo. Emissions during transfer of clinker to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.
- II.A.18      **511.BF2: West Clinker Silo Discharge**  
Produced clinker is fed to the clinker tunnel conveyor belt from the West clinker storage silo. Emissions during transfer of clinker to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.
- II.A.19      **511.BF4: Gypsum Silo Discharge**  
Gypsum is fed to the clinker tunnel conveyor belt from the gypsum storage silo. Emissions during transfer of gypsum to the conveyor are controlled by a baghouse that discharges into the clinker tunnel.
- II.A.20      **512.SX1: Gypsum Silo**  
Gypsum is stored in the gypsum storage silo. A baghouse is installed on the gypsum storage silo to control dust during loading.
- II.A.21      **514.BF2: Finish Mill**  
The finish mill (ball mill) grinds clinker and gypsum to produce finished cement product. Dust generated during milling is controlled by a baghouse (stack G105).
- II.A.22      **514.BF1: Finish Mill Separator**  
After clinker and gypsum are ground into cement product, a separator returns the oversized cement particles to the finish mill. Dust generated by the finish mill separator is controlled by a baghouse (stack G55).
- II.A.23      **611.BF1: Finish Cement Storage Silos**  
There are six storage and two interstice silos where the finished cement product is stored. A single common baghouse is located on top of the silos (stack H7) and is used to control emissions during loading and unloading operations.
- II.A.24      **611.BF3: North Cement Load Out**  
The cement loadout system located on the North side of the silos (rail load outside) is controlled by a baghouse during unloading from the silos for rail shipping.

- II.A.25      **611.BF2, 611.BF4, 611.BF5: South Cement Load Out**  
The cement loadout system located on the South side of the silos (truck load outside) is controlled by a baghouse (611.BF2) during unloading from the silos for truck shipping. Two pulse jet baghouses (611.BF4, 611.BF5) control emissions from the cement conveyor fluidslides and truck loading chutes.
- II.A.26      **41B.BF1: Coal Silo**  
Storage of coal for grinding to powder, which is subsequently fired in the kiln and calciner. The coal storage silo is equipped with a baghouse.
- II.A.27      **41B.BF2: Coal Grinding System**  
Coal is ground in a coal mill. Gases drawn from the preheater for the kiln entrain the coal in the mill and are controlled by a baghouse.
- II.A.28      **316.BF1 thru 5: Raw Mill Recirculation**  
Larger particles are removed from the raw mill, recirculated, and re-introduced into the raw mill feed. This system includes vibrating feeders, a conveyor system, and surge bin. Emissions are controlled by five equivalent baghouses.
- II.A.29      **511.BF1 thru 4: Clinker Tunnel Exitway**  
The clinker reclaim hopper baghouse (511.BF3), east clinker silo discharge baghouse (511.BF1), west clinker silo discharge baghouse (511.BF2), and gypsum silo discharge baghouse (511.BF4) all discharge in the clinker tunnel. Emissions are discharged through the tunnel exitway.
- II.A.30      **MHO: Materials Handling Operation**  
Includes the following emission units: 315.SX1 thru 4; 315.BF2; 316.BF1 thru 5; 316.BF6; 411.BF1 & 2; 412.BF1 & 2; 414.BF1; 419.BF8; 514.BF3; 419.BF9; 419.BF10; 511.BF1 thru 4; 512.SX1; 611.BF1 thru 5; 512.BF2 & 3; 413.BF1.
- II.A.31      **316.BF6: Cross-Belt Analyzer**  
Used for quality control. Emissions are controlled by a baghouse.
- II.A.32      **LBS: Limestone Bypass System**  
Additional limestone is added to the clinker and gypsum by the limestone bypass system (LBS). The LBS consists of a screen and conveyors. Emissions are controlled by water sprays at the screen and material handling drop points.
- II.A.33      **512.BF2 and 3: Limestone Silo & Belt**  
Limestone is stored in the limestone storage silo and transferred to the finish mill by conveyor belt. Emissions from the silo and conveyor are controlled by two baghouses. 512.BF2 discharges in the clinker tunnel. 512.BF3 is located on top of the silo.
- II.A.34      **311.BC1: Belt Conveyor Transfer Baghouse**  
Located prior to raw materials processing, this baghouse controls emissions from the conveyor belt that transfers the stacked material to the raw material silos.
- II.A.35      **GEN: Emergency Generators**  
One diesel-fired emergency generator rated at 762 hp (Kiln) permitted in 2022 and one diesel-fired emergency generator rated at 560 hp (Shipping) installed in 1981.
- II.A.36      **Dust Shuttle System**  
A dust shuttling system is used intermittently to mitigate mercury emissions as required. The system includes the following equipment: elevator from baghouse (317.BE1), pneumatic air slide (317.AS12), alkali silo (413.BN1), pug mill (413.MZ1), pug mill loadout (wetted material), fringe bin (Finish Mill) (514.BN1), 14 inch knife gate (317.GA2), 8 inch knife gate (317.GA4), 8 inch air slides (317.AS21, 317.AS22, 317.AS23), surge bin (317.BN1), pneumatic blower system (413.BL2). Emissions from the

dust shuttle system are controlled by a baghouse on the fringe bin (514.BF3) and a baghouse on the alkali silo (413.BF1).

II.A.37 **Portable Crusher**

Portable crusher used for crushing limestone. The portable crusher is not a stationary source and has no unit specific applicable requirements.

II.B **Requirements and Limitations**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated:

II.B.1 **Conditions on permitted source (Source-wide).**

II.B.1.a **Condition:**

Unless otherwise specified in this permit, at all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any permitted plant equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Origin: DAQE-AN103030030-22]. [40 CFR 60.11(d), R307-401-4, R307-401-8(2)]

II.B.1.a.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.a.2 **Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b **Condition:**

The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Origin: 40 CFR 82 Subpart F]. [40 CFR 82.150(b)]

II.B.1.b.1 **Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.

II.B.1.b.2 **Recordkeeping:**

All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.b.3

**Reporting:**

All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.c

**Condition:**

The permittee shall comply with the applicable requirements for servicing of motor vehicle air conditioners pursuant to 40 CFR 82, Subpart B - Servicing of Motor Vehicle Air Conditioners. [Origin: 40 CFR 82 Subpart B]. [40 CFR 82.30(b)]

II.B.1.c.1

**Monitoring:**

The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart B.

II.B.1.c.2

**Recordkeeping:**

All records required in 40 CFR 82, Subpart B shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.

II.B.1.c.3

**Reporting:**

All reports required in 40 CFR 82, Subpart B shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.

II.B.1.d

**Condition:**

Unless otherwise specified in this permit, and except for blasting, visible emissions shall be no greater than 20 percent opacity. [Origin: R307-201-3(2), R307-205-4, DAQE-AN103030030-22]. [R307-201-3(2), R307-401-8]

II.B.1.d.1

**Monitoring:**

- (a) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
- (b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- (c) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semiannually to annually for that affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- (d) If visible emissions are observed during any Method 22 test, the permittee shall conduct a
  - i. six minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director, for point sources, or
  - ii. one minute test of opacity with five second observation intervals in accordance with 40 CFR 51, Appendix M, Method 203C, or other EPA-approved testing method, as acceptable to the Director, for fugitive emission sources.

The Method 9 or 203C test must begin within one hour of any observation of visible emissions.

II.B.1.d.2

**Recordkeeping:**

Records of visible emission tests performed and data required by 40 CFR 60, Appendix A, Method 22, Method 9, or 40 CFR 51, Appendix M, Method 203C, or other EPA-approved testing method, as acceptable to the Director, shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.d.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.e

**Condition:**

All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a condition to minimize fugitive dust as necessary to meet an opacity limitation of 20 percent from fugitive dust sources. The permittee is not required to apply water to surfaces during freezing conditions. If chemical treatment is to be used, the plan shall be pre-approved by the Director. All disturbed surfaces not involved with operations shall be stabilized to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Director. Fugitive dust at all operational and mining operations shall be minimized as an integral part of site preparation, mining activities, and reclamation operations in accordance with R307-205-7. [Origin: DAQE-AN103030030-22, R307-205-7]. [R307-205-7, R307-401-8]

II.B.1.e.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.e.2

**Recordkeeping:**

Instances of water and/or chemical application to unpaved areas shall be recorded and maintained by the permittee for all periods when the plant is in operation. The ambient temperature shall be recorded any time water should be applied but cannot be due to freezing conditions. Records demonstrating compliance with this condition and records of all methods used to control fugitive dust shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.f

**Condition:**

All paved roads and paved operational areas shall be swept and/or water sprayed to minimize fugitive dust as necessary to maintain an opacity limitation of 20 percent from fugitive dust sources. The sweeping and/or water spray shall be conducted as dry conditions warrant or as determined necessary by the Director. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.1.f.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.f.2

**Recordkeeping:**

Instances of each sweeping event or water application to the paved areas shall be recorded and maintained by the permittee for all periods when the plant is in operation. Records demonstrating compliance with this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.f.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.g

**Condition:**

For all emission units subject to 40 CFR 63 Subpart LLL:

The permittee shall prepare and implement a written operations and maintenance (O&M) plan in accordance with 40 CFR 63.1347(a). The plan shall include the following elements:

- (1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in accordance with 40 CFR 63.1347(a)(1). The O&M plan shall address periods of startup and shutdown.
- (2) Corrective actions to be taken when required by 40 CFR 63.1350(f)(3).
- (3) Procedures to be used during an inspection of the components of the combustion system of the in-line kiln/raw mill at least once per year.

Failure to comply with any provision of the O&M plan is a violation of the standard.

[Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1347(a), 40 CFR 63.1347(b)]

II.B.1.g.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.g.2

**Recordkeeping:**

The permittee shall maintain files of all information (including all reports and notifications) required by this condition in a form suitable and readily available for expeditious inspection and review. Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.1.g.3

**Reporting:**

One summary report shall be submitted semiannually for the hazardous air pollutants monitored at each affected source. All reports shall be submitted in accordance with 40 CFR 63.1354 and as specified in Section I of this permit.

II.B.1.h

**Condition:**

For all emission units subject to 40 CFR 63 Subpart LLL:

At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1348(d)]

II.B.1.h.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.h.2

**Recordkeeping:**

Permittee shall document activities performed to assure proper operation and maintenance. The permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR 63.1355(g)(2)) Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.1.h.3

**Reporting:**

Reports shall be submitted in accordance with 40 CFR 63.1354 and as specified in Section I of this permit.

II.B.1.i

**Condition:**

Visible emissions shall be no greater than 10 percent opacity from the baghouses unless otherwise specified in this permit. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.1.i.1

**Monitoring:**

- (a) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
- (b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- (c) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- (d) If visible emissions are observed during any Method 22 test, the permittee shall conduct a 6-minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director. The Method 9 test must begin within one hour of any observation of visible emissions.

II.B.1.i.2

**Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director, for each determination shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.i.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2

**Conditions on Stationary Crusher (211.BF1).**

**II.B.2.a Condition:**

The permittee shall operate water sprays or chemical dust suppression sprays to control fugitive emissions. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Director. Water sprays shall not be required during periods of freezing temperatures. [Origin: DAQE-AN103030030-22]. [R307-401-8]

**II.B.2.a.1 Monitoring:**

Visual inspections of the water or chemical dust suppression spray system(s) shall be made weekly to ensure proper operating condition.

**II.B.2.a.2 Recordkeeping:**

An operator's log shall be maintained of all monitoring provisions listed above. Records of water or chemical dust suppression spray system inspections shall be kept for all periods of operation and the ambient temperature shall be recorded any time water should be applied but cannot be due to freezing conditions. Records shall be maintained in accordance with Provision I.S.1 of this permit.

**II.B.2.a.3 Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

**II.B.2.b Condition:**

Visible emissions shall be no greater than 10 percent opacity from the baghouse. [Origin: DAQE-AN103030030-22]. [R307-401-8]

**II.B.2.b.1 Monitoring:**

Compliance with the visible emission limitation shall be demonstrated by one of the following options.

**Option A:**

- (I) The permittee shall monitor opacity by conducting daily visual emissions observations in accordance with the procedures of 40 CFR 60, Appendix A, Method 22. The duration of the Method 22 test shall be 6 minutes.
- (II) If visible emissions are observed during any Method 22 visible emissions test, the permittee shall:
  - a) Initiate corrective actions, within one-hour; and
  - b) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack in accordance with 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director. The duration of the Method 9 test shall be 30 minutes.
- (III) Performance Criteria:
  - a) The Method 22 test, and Method 9 test if applicable, shall be conducted while the affected unit is operating at representative performance conditions.
  - b) The visual observer shall be familiar with 40 CFR, Appendix A, Method 22 and follow Method 22 procedures. The opacity determination shall be conducted by a certified visible emissions observer in accordance with 40 CFR 60, Appendix A, Method 9.



- c) The observation shall be documented by the observer and all data required by 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director, shall be maintained if the opacity determination is conducted.

Option B:

- (I) A BLDS shall be installed on the baghouse exhaust stack and generate a signal proportional to PM concentration. An alarm shall sound when the signal exceeds a preset limit.
- (II) The permittee shall maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time shall be counted.
- (III) Performance Criteria:
  - a) For a positive-pressure fabric filter, the bag leak detector shall be installed in the exit vent. For a negative-pressure or induced-air fabric filter, the bag leak detector shall be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.
  - b) The baseline output of the system shall be established as follows:
    - i) Adjust the range and the averaging period of the device; and
    - ii) Establish the alarm set points and the alarm delay time.
  - c) The sensor on the BLDS shall provide output of relative PM emissions.
  - d) The BLDS shall have an alarm that will activate automatically when it detects PM emissions greater than or equal to 50% of scale during normal operating conditions.
  - e) The presence of an alarm condition shall be clearly apparent to facility operating personnel.
  - f) The probe shall be inspected at least monthly for dust buildup.
  - g) Lens cleaning, O-ring replacement, and window value rechecks shall be performed at least annually.
  - h) The BLDS shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. "Certify" shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
  - i) All BLDS shall be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations.
  - j) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time shall not be adjusted except as specified in the BLDS standard operating procedure (SOP). In no event shall the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in R307-415-3 certifies in writing to the Director that the fabric filter has been inspected and found to be in good operating condition.
  - k) The BLDS signal shall be monitored continuously. The instantaneous values from the transmitter output shall be displayed and recorded. All alarms shall be logged electronically.

II.B.2.b.2

**Recordkeeping:**

In addition to the recordkeeping requirements described in Provision I.S.1 of this permit, the following records shall be maintained:

- (a) The permittee shall continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.
- (b) Alarm times as defined in Monitoring shall be recorded.

- (c) Records of visual emission observations and visual opacity tests required by 40 CFR 60, Appendix A, Methods 22 and 9 shall be maintained if a BLDS is not used.

II.B.2.b.3                    **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3                    **Conditions on Raw Material Transfer (211.BF2).**

II.B.3.a                    **Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.3.a.1                    **Monitoring:**

- (a) The permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
- (b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- (c) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of testing from semiannually to annually for that affected source. If visible emissions are observed during any annual test, the permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- (d) If visible emissions are observed during any Method 22 test, the permittee shall conduct a six minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director. The Method 9 test must begin within one hour of any observation of visible emissions.

II.B.3.a.2                    **Recordkeeping:**

Records of visible emission tests performed and data required by 40 CFR 60, Appendix A, Method 22 and 9, or other EPA-approved testing method, as acceptable to the Director, shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.a.3                    **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.b                    **Condition:**

The permittee shall operate water sprays or chemical dust suppression sprays to control fugitive emissions. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Director. Water sprays shall not be required during periods of freezing temperatures. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.3.b.1

**Monitoring:**

Visual inspections of the water or chemical dust suppression spray system(s) shall be made weekly to ensure proper operating condition.

II.B.3.b.2

**Recordkeeping:**

An operator's log shall be maintained of all monitoring provisions listed above. Records of water or chemical dust suppression spray system inspections shall be kept for all periods of operation and the ambient temperature shall be recorded any time water should be applied but cannot be due to freezing conditions. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4

**Conditions on Kiln & Pre-Calcliner and Raw Mill (317.BF3)**

II.B.4.a

**Condition:**

At all times, emissions of NO<sub>x</sub> shall not exceed 2.8 lbs per ton clinker based upon a 30-day rolling average and 1,347.2 tons per rolling 12-month period. [Origin: DAQE-AN103030030-22, SIP Section IX.H.23.a]. [R307-401-8, SIP Section IX.H.23.a]

II.B.4.a.1

**Monitoring:**

The permittee shall install, calibrate, maintain and continuously operate a continuous emissions monitoring system that complies with all applicable sections of R307-170, UAC, 40 CFR 60.13, and 40 CFR 60, Appendix B. While the affected emission unit is operating, hourly NO<sub>x</sub> emission rates expressed in tons per hour shall be determined in accordance with R307-170 using the appropriate conversion factors. The applicable performance specification in R307-170 shall be 40 CFR 60, Appendix B, Performance Specification 6 - "Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources". By the 25th day of each month a new 12-month NO<sub>x</sub> emission total for the common stack shall be calculated as the sum of the monthly NO<sub>x</sub> emission totals for each of the previous 12 months.

For the NO<sub>x</sub> mass emission limits, during any time when the CEMS are inoperable and otherwise not measuring emissions of NO<sub>x</sub> from the kiln, the permittee shall apply the missing data substitution procedures used by the UDAQ or the missing data substitution procedures in 40 CFR Part 75, Subpart D, whichever is deemed appropriate by the UDAQ. In calculating the 30-day rolling average emission rate the total pounds of NO<sub>x</sub> emitted during a specified period shall include all kiln emissions that occur during the specified period including during each startup, shutdown, or malfunction.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring devices and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section UAC R307-170.

The permittee shall determine clinker production according to the requirements in 40 CFR 63.1350(d).

II.B.4.a.2

**Recordkeeping:**

The permittee shall record the output of the system: the quantity of NO<sub>x</sub> emissions at the kiln stack. Additionally, the permittee shall keep the records specified in R307-170-8 and any records required by provision I.S.1 of this permit. Results of monitoring shall be maintained in accordance with Provision I.S.1.

II.B.4.a.3

**Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit.

The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

II.B.4.b

**Condition:**

The permittee shall use only the following fuels in the kiln and pre-calciner:

- A. Coal
- B. Diaper Derived Fuel (DDF)
- C. Tire Derived Fuel (TDF)
- D. Natural Gas
- E. Coke
- F. Fuel Oil
- G. Used Oil Fuel
- H. Synthetic Fuel
- I. Wood
- J. Cherry Pits
- K. Tire Poly Cord Fuel
- L. Plastic Resin Waste Product
- M. Coal Additives consisting of alternative fuels approved by the Director. Prior to burning any proposed coal additive, the permittee shall obtain approval from the Director. To obtain approval, the permittee shall submit Material Safety Data Sheets (MSDS) or the results of suitable tests giving data similar to a Proximate and Ultimate analysis of the proposed coal additive.

Approval by the Director shall consist of a letter approving the use of the proposed coal additive. Approval is not required to change from one previously approved coal additive to another previously approved coal additive.

The average quantity of coal additives burned shall not be greater than 15% of the total daily heat input of the kiln and precalciner. The permittee may increase the average quantity of coal additives up to 25% of the total daily heat input of the kiln and precalciner upon approval by the Director in accordance with the approval process described for new coal additives above.

Additionally, the permittee shall be limited to a maximum TDF consumption not to exceed 15% of the combined energy input to the rotary kiln and pre-calciner.  
[Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.4.b.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.b.2

**Recordkeeping:**

Within the first 25 days of each month, a rolling 12-month total of fuel usage shall be determined using records from the previous 12 months. The fuel usage records shall include the type, quantity, and respective heating value for each material used as fuel. Copies of Director approval of each coal additive shall be maintained. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c

**Condition:**

Consumption of used oil fuel shall be no greater than 85,724 gallons per rolling 12-month period. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.4.c.1

**Monitoring:**

Consumption shall be determined within the first 25 calendar days of each month, for the previous month, using purchase records and inventory information. The total shall then be added to the previous 11 months total for a 12 month rolling total. Consumption shall be calculated through use of the plant data acquisition system.

II.B.4.c.2

**Recordkeeping:**

Records of used oil combusted shall be kept daily for all periods when the plant is in operation. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.c.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.d

**Condition:**

The permittee shall meet the following requirements when used oil or tire derived fuel (TDF) is burned in the rotary kiln:

- i. Combustion gas temperature at the rotary kiln exit shall not drop below 1500 degrees Fahrenheit for more than five minutes in any 60-minute period.
- ii. Oxygen content at the kiln system ID fan shall not drop below 2% for more than five minutes in any 60-minute period.

[Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.4.d.1

**Monitoring:**

The permittee shall continuously monitor the temperature and oxygen content at all times used oil or TDF is burned in the kiln using equipment approved by the Director. Calibration procedure and frequency shall be according to manufacturer's specifications. Use of factory calibrated thermocouples for temperature measurement is approved. All monitoring equipment for both temperature and oxygen shall be located such that an inspector can safely read the output at any time.

Additionally, the permittee shall monitor the quantities and times that used oil or TDF is burned in kiln.

II.B.4.d.2

**Recordkeeping:**

The permittee shall record the temperature and oxygen content at no less than every 5 minutes during operations when used oil or TDF is burned in the kiln. The permittee shall record the quantities and times when used oil or TDF is burned in the kiln. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.d.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.e

**Condition:**

The concentration of contaminants or parameters in any used oil fuel burned in the Kiln shall not exceed the following levels:

- Arsenic 5 ppm by weight,
- Barium 100 ppm by weight,
- Cadmium 2 ppm by weight,
- Chromium 10 ppm by weight,
- Lead 100 ppm by weight,
- Total Halogens 1,000 ppm by weight,
- Sulfur 0.5 percent by weight, and
- Flash Point not less than 100 degrees F.

Used oil exceeding any of the above contaminants shall not be burned until the permittee has submitted and received approval of a modeling analysis of the projected emissions for each contaminant from the Director. The modeling analysis shall show in each case that the resulting concentration of contaminant in the ambient air does not exceed the TLV/100 value at the fence line for the given contaminant. Any used oil fuel that contains more than 1,000 ppm by weight of total halogens shall be considered a hazardous waste and shall not be burned in the kiln. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.4.e.1

**Monitoring:**

The permittee shall maintain test certification data for each load of used oil fuel received. Certification shall be either by permittee testing or test reports provided by the used oil fuel vendor. The used oil fuel shall be tested for halogen content by ASTM Method D-808-81, EPA Method 8240 or Method 8260, or other method acceptable to the Director, before used oil fuel is transferred to a holding tank or burned.

II.B.4.e.2

**Recordkeeping:**

Records of used oil fuel consumption and the test reports shall be kept for all periods when the plant is in operation. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.f

**Condition:**

As part of demonstration of compliance with the dioxin/furans (D/F) emission limitation under 40 CFR 63.1343, the permittee shall operate the kiln such that the temperature of the gas at the inlet to the kiln

particulate matter control device (PMCD), does not exceed the applicable temperature limit (for both raw mill operating and not operating) as determined in accordance with 40 CFR 63.1349(b)(3)(iv) and established during the performance test (for both raw mill operating and not operating), except during periods of startup and shutdown when the temperature limit may be exceeded by no more than 10 percent. The permittee shall conduct an inspection of the components of the combustion system of each kiln or in-line kiln/raw mill at least once per year. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1346(a), 40 CFR 63.1346(b), 40 CFR 63.1347(a)(3)]

#### II.B.4.f.1

##### **Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348.

- A. The permittee shall demonstrate continuous compliance using a CMS that is installed, operated and maintained to record the temperature of specified gas streams in accordance with the following requirements. (40 CFR 63.1348(b)(4))
  - i) The permittee shall install, calibrate, maintain, and continuously operate a CMS to record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln and/or alkali bypass PMCDs.
    - a) The temperature recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1349(b)(3)(iv).
    - b) The calibration reference for the temperature measurement shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
    - c) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.
  - ii) The permittee shall monitor and continuously record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to the kiln and/or alkali bypass PMCD.
  - iii) The required minimum data collection frequency shall be one minute.
  - iv) Every hour, record the calculated rolling three-hour average temperature using the average of 180 successive one-minute average temperatures in accordance with 40 CFR 63.1349(b)(3).
  - v) 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 the three-hour rolling average temperature shall begin anew, without considering previous recordings. (40 CFR 63.1350(g))
- B. The permittee shall install, operate, and maintain each continuous parameter monitoring system (CPMS) according to 40 CFR 63.1350(m)(1)-(4).
- C. The permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1)-(4).
- D. Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR 63.1348(b)(1)(ii))
- E. The permittee shall not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR 63.1348(b)(1)(iii))

- F. For each existing unit that is equipped with a CMS, the permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. Any instance where the permittee fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation. (40 CFR 63.1350(a)).

II.B.4.f.2

**Recordkeeping:**

The permittee shall comply with the recordkeeping requirements specified in Provision I.S.1 of this permit and 40 CFR 63.1355. Additionally, the permittee shall keep a log of the annual inspections of the components of the combustion system of each kiln or in-line kiln/raw mill.

II.B.4.f.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349 and 63.1354 and the notification requirements specified in 40 CFR 63.1353.

II.B.4.g

**Condition:**

At all times, emissions of Dioxins/Furans (D/F) from the kiln shall not exceed 0.2 ng/dscm (TEQ) on a dry basis, corrected to 7 percent oxygen. If the average temperature at the inlet to the first PM control device (fabric filter or electrostatic precipitator) during the D/F performance test is 400 degrees Fahrenheit or less, this limit is changed to 0.40 ng/dscm (TEQ). [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1343(a), 40 CFR 63.1343(b)(1), R307-401-8]

II.B.4.g.1

**Monitoring:**

The permittee shall demonstrate compliance as required in 40 CFR 63.1348.

II.B.4.g.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.4.g.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

II.B.4.h

**Condition:**

Unless otherwise specified in this permit, sulfur content of fuel burned shall be no greater than 1.0 lbs sulfur/MMBtu for any mixture of coal nor 0.85 pounds sulfur per million gross Btu heat input for any oil except used oil or 0.5 percent by weight for any used oil. [Origin: DAQE-AN103030030-22]. [R307-203, R307-401-8]

II.B.4.h.1

**Monitoring:**

Certification of fuels shall be either by permittee's testing or test reports from the fuel marketer. Methods for determining sulfur content of coal and fuel oil shall be those methods of the American Society for Testing and Materials, UAC R307-203-1(4)

- (a) For determining sulfur content in coal, ASTM Methods D3177-75 or D4239-85, or other method acceptable to the Director, is to be used.
- (b) For determining sulfur content in oil, ASTM Methods D2880-71 or D4294-89, or other method acceptable to the Director, is to be used.



- (c) For determining the gross calorific (or Btu) content of coal, ASTM Methods D2015-77 or D3286-85, or other method acceptable to the Director, is to be used.

II.B.4.h.2

**Recordkeeping:**

Compliance with the above limitation shall be demonstrated by maintaining fuel receipt records showing sulfur content of the delivered fuel or maintaining records of all sulfur content testing performed on the delivered fuel. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.h.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.i

**Condition:**

Emissions of CO shall be no greater than 13,045 tons per rolling 12-month period and 6,600 pounds per hour. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.4.i.1

**Monitoring:**

The permittee shall install, calibrate, maintain and continuously operate a continuous emissions monitoring system that complies with all applicable sections of R307-170, UAC; and 40 CFR 60, Appendix B. While the affected emission unit is operating, hourly CO emission rates expressed in tons per hour shall be determined in accordance with R307-170 using the appropriate conversion factors. The applicable performance specification in R307-170 shall be 40 CFR 60, Appendix B, Performance Specification 6 - "Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources". By the 25th day of each month a new 12-month CO emission total for the common stack shall be calculated as the sum of the monthly CO emission totals for each of the previous 12 months.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the permittee shall continuously operate all required continuous monitoring devices and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13 and Section UAC R307-170.

II.B.4.i.2

**Recordkeeping:**

The permittee shall record the output of the system: the quantity of CO emissions at the kiln stack. Additionally, the permittee shall keep the records specified in R307-170-8 and any records required by provision I.S.1 of this permit. These records shall be maintained in accordance with Provision I.S.1.

II.B.4.i.3

**Reporting:**

The permittee shall comply with the reporting provisions in R307-170-9 and any additional reporting provisions contained in Section I of this permit.

The quarterly reports required in R307-170-9 are considered prompt notification of permit deviations required in Provision I.S.2.c of this permit if all information required by Provision I.S.2.c is included in the report.

- II.B.4.j **Condition:**
- Production of clinker shall be no greater than 962,265 tons per 12-month rolling period. [Origin: DAQE-AN103030030-22]. [R307-401-8]
- II.B.4.j.1 **Monitoring:**
- Records required for this permit condition will serve as monitoring.
- II.B.4.j.2 **Recordkeeping:**
- Daily records of clinker production and kiln feed rates shall be kept for all periods of operation. By the 25th day of each month, a new 12-month total shall be calculated for clinker production using data from the previous 12 months. Production shall be calculated through use of the plant data acquisition system. Records shall be maintained in accordance with Provision I.S.1 of this permit.
- II.B.4.j.3 **Reporting:**
- There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.4.k **Condition:**
- No greater than 10 percent of the kiln gases shall be routed to the Coal Grinding System (designated as 41B.BF2). [Origin: Alternative Monitoring EPA Approval 11/6/02]. [40 CFR 63.8(f)]
- II.B.4.k.1 **Monitoring:**
- Records required for this permit condition will serve as monitoring.
- II.B.4.k.2 **Recordkeeping:**
- Records verifying the percent of kiln gases routed to the coal grinding system shall be maintained in accordance with Provision I.S.1 of this permit and made available for review by the Director or his representative.
- II.B.4.k.3 **Reporting:**
- There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.4.l **Condition:**
- At all times, emissions of filterable PM from the kiln shall not exceed 0.07 lb/ton clinker. Combined PM emissions from the kiln and the inline coal mill stack are subject to the PM emissions limit. [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22, SIP Section IX.H.23.a]. [40 CFR 63.1343(b)(1), 40 CFR 63.1343(b)(2), SIP Section IX.H.23.a]
- II.B.4.l.1 **Monitoring:**
- The permittee shall demonstrate compliance as specified in 40 CFR 63.1348.
- A. The permittee shall demonstrate compliance with PM emissions standards by using the test methods and procedures in 40 CFR 63.1349(b)(1). The permittee shall conduct a performance test using Method 5 or Method 5I at 40 CFR 60 appendix A-3. The permittee

shall also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS).

- i) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value or digital equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run.
  - ii) When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the main exhaust and alkali bypass and/or inline coal mill shall be tested simultaneously and the combined emission rate of PM from the kiln and alkali bypass and/or inline coal mill shall be computed for each run using Equation 8 in 40 CFR 63.1349(b)(1)(viii).
  - iii) The permittee of a kiln with an in-line raw mill and subject to limitations on PM emissions shall demonstrate initial compliance by conducting separate performance tests while the raw mill is under normal operating conditions and while the raw mill is not operating, and calculate the time weighted average emissions. The operating limit shall then be determined using 40 CFR 63.1349(b)(1)(i).
- (40 CFR 63.1343(b)(1), 40 CFR 63.1348(a)(1), 40 CFR 63.1349(b)(1))
- B. The permittee shall demonstrate continuous compliance using the following monitoring methods and procedures. (40 CFR 63.1348(b)(2))
- i) The permittee shall use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The permittee shall conduct the performance test using Method 5 or Method 5I at 40 CFR 60 appendix A-3. The permittee shall use the PM CPMS to demonstrate continuous compliance with this operating limit. The permittee shall repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in 40 CFR 63.1349(b)(1)(i) through (vi). The permittee shall also repeat the test if the permittee changes the analytical range of the instrument, or if the permittee replaces the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration.
  - ii) To determine continuous compliance, the permittee shall use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The permittee shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day.
  - iii) For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the permittee shall:
    - 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. The permittee is not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.
  - iv) PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart.
- (40 CFR 63.1350(b))

- C. The permittee shall determine clinker production according to the requirements in 40 CFR 63.1350(d).
- D. The permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1)-(4).
- E. Performance tests shall be completed no more than 13 calendar months after the previous performance test. (40 CFR 63.1349(c)) Performance tests shall be conducted as specified based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available such records as may be necessary to determine the conditions of performance tests. (40 CFR 63.1349(e))
- F. Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR 63.1348(b)(1)(ii))
- G. The permittee shall not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR 63.1348(b)(1)(iii))
- H. For each existing unit that is equipped with a CMS, the permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. Any instance where the permittee fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation. (40 CFR 63.1350(a)).

Additionally, stack testing shall be performed as specified below:

- (i) Tests may also be required at the direction of the Director.
- (ii) Notification. The Director shall be notified at least 60 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director. The source test protocol shall be approved by the Director prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, procedures to be used, the date, time, and place of testing. A pretest conference shall be held, if directed by the Director.
- (iii) Methods.
  - a. Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director, and Occupational Safety and Health Administration (OSHA) and/or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.
  - b. 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate.
  - c. The initial and subsequent PM performance tests shall be performed using Method 5 or 5I and consist of a minimum of three 1-hr tests. Determination of the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train is not required to demonstrate compliance with the PM standards.
- (iv) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

#### II.B.4.1.2

#### **Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.4.l.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

II.B.4.m

**Condition:**

At all times, emissions of mercury (Hg) from the kiln shall not exceed 55 lb/MM tons clinker based on a rolling 30-day average. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown. The permittee shall ensure appropriate corrections for moisture are made when measuring flow rates used to calculate mercury emissions. [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1343(a), 40 CFR 63.1343(b)(1), R307-401-8]

II.B.4.m.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348, 40 CFR 63.1350(k), and R307-170.

II.B.4.m.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit, R307-170, and 40 CFR 63.1355.

II.B.4.m.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354, and R307-170 and the notification requirements specified in 40 CFR 63.1353 and R307-170.

Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

II.B.4.n

**Condition:**

At all times, emissions of total hydrocarbons (THC) from the kiln shall not exceed 24 ppmvd, measured as propane, corrected to 7 percent oxygen, based on a rolling 30-day average. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown. The permittee may elect to meet an alternative limit of 12 ppmvd for total organic HAP. [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1343(a), 40 CFR 63.1343(b)(1), R307-401-8]

II.B.4.n.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348 and R307-170.

- A. i) The permittee shall demonstrate compliance with the THC emissions standards by using the performance test methods and procedures in 40 CFR 63.1349(b)(4)(i). The permittee shall use the average THC concentration obtained during the first 30 kiln operating days after the compliance date to determine initial compliance.
- ii) If the permittee elects to demonstrate compliance with the total organic HAP emissions limit in lieu of the THC emissions limit, the permittee shall demonstrate compliance with the total organic HAP emissions standards by using the performance test methods and procedures in 40 CFR 63.1349(b)(7).

- iii) To demonstrate initial compliance, the permittee shall conduct the separate performance tests as specified in 40 CFR 63.1349(b)(7) while the raw mill of the inline kiln/raw mill is operating and while the raw mill of the inline kiln/raw mill is not operating.
  - iv) The time weighted average total organic HAP concentration measured during the separate initial performance test specified by 40 CFR 63.1349(b)(7) shall be used to determine initial compliance.
  - v) The time weighted average THC concentration measured during the initial performance test specified by 40 CFR 63.1349(b)(4) shall be used to determine the site-specific THC limit. Using the fraction of time the inline kiln/raw mill is on and the fraction of time that the inline kiln/raw mill is off, calculate this limit as a time weighted average of the THC levels measured during raw mill on and raw mill off testing using one of the two approaches in 40 CFR 63.1349(b)(7)(vii) or (viii) depending on the level of organic HAP measured during the compliance test.
- (40 CFR 63.1348(a)(4))
- B.
  - i) The permittee shall operate a CEMS in accordance with the requirements in 40 CFR 63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 to 60 ppmvw and the reference method (RM) is Method 25A of 40 CFR 60 appendix A.
  - ii) Use the THC CEMS to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date.
  - iii) If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, the permittee shall calculate a kiln-specific THC limit using Equation 9 in 40 CFR 63.1349(b)(4)(iii).
  - iv) THC shall be measured either upstream of the coal mill or the coal mill stack.
    - v) Instead of conducting the performance test specified in paragraph B., the permittee may conduct a performance test to determine emissions of total organic HAP by following the procedures in 40 CFR 63.1349(b)(7).
- (40 CFR 63.1349(b)(4))
- C. The permittee shall comply with the monitoring requirements of paragraphs i) and ii) of this section.
  - i) The permittee shall install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8 or Performance Specification 8A of 40 CFR 60 appendix B and comply with all of the requirements for continuous monitoring systems found in the general provisions, 40 CFR 63 subpart A. The permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of 40 CFR 60 appendix F. For THC continuous emission monitoring systems certified under Performance Specification 8A, conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in 40 CFR 60 appendix A as the reference method; the relative accuracy shall meet the criteria of Performance Specification 8, Section 13.2.
  - ii) Performance tests on alkali bypass and coal mill stacks shall be conducted using Method 25A in 40 CFR 60 appendix A and repeated every 30 months.
  - iii) If complying with the total organic HAP emissions limits, the permittee shall continuously monitor THC according to paragraph i) and ii) of this section or in accordance with Performance Specification 8 or Performance Specification 8A of 40 CFR 60 appendix B and comply with all of the requirements for continuous monitoring systems found in the general provisions, 40 CFR 63 subpart A. The permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of 40 CFR 60 appendix F.
- (40 CFR 63.1350(i), (j))
- D. The permittee shall demonstrate continuous compliance using the monitoring methods and procedures in paragraph C. (40 CFR 63.1350(i) and (j)). THC shall be measured either upstream of the coal mill or in the coal mill stack. (40 CFR 63.1348(b)(6))
- E. The permittee shall install, operate, and maintain each continuous parameter monitoring system (CPMS) according to 40 CFR 63.1350(m)(1)-(4).

- F. The permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1)-(4).
- G. Performance tests shall be conducted as specified based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available such records as may be necessary to determine the conditions of performance tests. (40 CFR 63.1349(e))
- H. Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR 63.1348(b)(1)(ii))
- I. The permittee shall not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR 63.1348(b)(1)(iii))
- J. For each existing unit that is equipped with a CMS, the permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. Any instance where the permittee fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation. (40 CFR 63.1350(a)).

II.B.4.n.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit, R307-170, and 40 CFR 63.1355.

II.B.4.n.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354, and R307-170 and the notification requirements specified in 40 CFR 63.1353 and R307-170.

Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

II.B.4.o

**Condition:**

Emissions of hydrochloric acid (HCl) from the kiln shall not exceed 3 ppmvd, corrected to 7 percent oxygen. This condition applies to major sources of HAP as defined in 40 CFR 63.2.

If using a CEMS to determine compliance with the HCl standard, this standard is based on a rolling 30-day average. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown.

[Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1343(a), 40 CFR 63.1343(b)(1), R307-401-8]

II.B.4.o.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348, 40 CFR 63.1350(l), and R307-170.

II.B.4.o.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit, R307-170, and 40 CFR 63.1355.

II.B.4.o.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354, and R307-170 and the notification requirements specified in 40 CFR 63.1353 and R307-170.

Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

II.B.4.p

**Condition:**

For kiln limits originating in 40 CFR 63.1343(b), during periods of startup and shutdown, the permittee shall comply with the following work practices.

- (1) The permittee shall 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 shall be turned on and operating at the time the gas stream at the inlet to the baghouse reaches 300 degrees Fahrenheit (five minute average) during startup. Temperature of the gas stream shall be measured at the inlet of the baghouse every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants shall be operational during startup and shutdown.

[Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1343, 40 CFR 63.1346(g)]

II.B.4.p.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.p.2

**Recordkeeping:**

Records demonstrating compliance with this condition shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355. (40 CFR 63.1346(g)(4)).

II.B.4.p.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1354.

II.B.4.q

**Condition:**

Emissions of SO<sub>2</sub> shall be no greater than 0.4 lbs per ton clinker (3-hr average). [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.4.q.1

**Monitoring:**

Stack testing shall be performed as specified below:

- (i) Frequency. Emissions shall be tested once every two years. Tests may also be required at the direction of the Director.



- (ii) Notification. The Director shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director. The source test protocol shall be approved by the Director prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, procedures to be used, the date, time, and place of testing. A pretest conference shall be held, if directed by the Director.
- (iii) Methods.
  - a. Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director, and Occupational Safety and Health Administration (OSHA) and/or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.
  - b. 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate.
  - c. 40 CFR 60, Appendix A-4, Method 6 or 6C, or other EPA approved method, as acceptable to the Director.
- (iv) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.
- (v) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

The permittee shall determine clinker production according to the requirements in 40 CFR 63.1350(d).

II.B.4.q.2

**Recordkeeping:**

Results of monitoring and stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.4.q.3

**Reporting:**

Results of stack testing shall be submitted to the Director within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5

**Conditions on Clinker Cooler (419.BF1).**

II.B.5.a

**Condition:**

At all times, emissions of filterable PM from the clinker cooler shall not exceed 0.07 lb/ton clinker. [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1343(b)(1), R307-401-8]

II.B.5.a.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348.

- A. The permittee shall demonstrate compliance with PM emissions standards by using the test methods and procedures in 40 CFR 63.1349(b)(1). The permittee shall demonstrate initial compliance by conducting a performance test using Method 5 or Method 5I at 40 CFR 60 appendix A-3. The permittee shall also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS).
  - i) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value or digital equivalent to the instrument zero output, technique by which this zero value was

determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run.

(40 CFR 63.1348(a)(1), 40 CFR 63.1349(b)(1))

- B. The permittee shall demonstrate continuous compliance using the following monitoring methods and procedures. (40 CFR 63.1348(b)(2))
- i) The permittee shall use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The permittee shall conduct the performance test using Method 5 or Method 5I at 40 CFR 60 appendix A-3. The permittee shall use the PM CPMS to demonstrate continuous compliance with this operating limit. The permittee shall repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in 40 CFR 63.1349(b)(1)(i) through (vi). The permittee shall also repeat the test if the permittee changes the analytical range of the instrument, or if the permittee replaces the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration.
  - ii) To determine continuous compliance, the permittee shall use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The permittee shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day.
  - iii) For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the permittee shall:
    - 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. The permittee is not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.
  - iv) PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart.
- (40 CFR 63.1350(b)).
- C. The permittee shall determine clinker production according to the requirements in 40 CFR 63.1350(d).
- D. The permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1)-(4).
- E. Performance tests shall be completed no more than 13 calendar months after the previous performance test. (40 CFR 63.1349(c)) Performance tests shall be conducted as specified based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available such records as may be necessary to determine the conditions of performance tests. (40 CFR 63.1349(e))
- F. Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR 63.1348(b)(1)(ii))
- G. The permittee shall not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used

to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR 63.1348(b)(1)(iii))

- H. For each existing unit that is equipped with a CMS, the permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. Any instance where the permittee fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation. (40 CFR 63.1350(a))

Additionally, stack testing shall be performed as specified below:

- (i) Tests may also be required at the direction of the Director.
- (ii) Notification. The Director shall be notified at least 60 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director. The source test protocol shall be approved by the Director prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, procedures to be used, the date, time, and place of testing. A pretest conference shall be held, if directed by the Director.
- (iii) Methods.
  - a. Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director, and Occupational Safety and Health Administration (OSHA) and/or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.
  - b. 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate.
  - c. The initial and subsequent PM performance tests shall be performed using Method 5 or 5I and consist of three 1-hr tests. Determination of the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train is not required to demonstrate compliance with the PM standards.
- (iv) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

II.B.5.a.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.5.a.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

II.B.5.b

**Condition:**

For clinker cooler limits originating in 40 CFR 63.1343(b), all particulate control and all remaining devices that control hazardous air pollutants shall be operational during periods of startup and shutdown in accordance with 40 CFR 63.1348(b)(9). [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1343, 40 CFR 63.1348(b)(9)]

II.B.5.b.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.5.b.2

**Recordkeeping:**

Records demonstrating compliance with this condition shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.5.b.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1354.

II.B.6

**Conditions on Finish Mill (514.BF2).**

II.B.6.a

**Condition:**

Visible emissions shall be no greater than 10 percent opacity during all modes of operation. [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1343(b)(1), 40 CFR 63.1345, R307-401-8]

II.B.6.a.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348 and, if applicable, R307-170.

- A. The permittee shall demonstrate continuous compliance by using the monitoring methods and procedures in 40 CFR 63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The permittee shall initiate corrective actions within one hour of detecting visible emissions above the applicable limit.
  - i) For a finish mill, the permittee shall monitor opacity by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of 40 CFR 60 appendix A-7. The duration of the Method 22 performance test shall be 6 minutes.
  - ii) Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the permittee shall conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.
  - iii) If visible emissions are observed during the follow-up Method 22 performance test required by paragraph ii) of this section, the permittee shall then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of 40 CFR 60 appendix A-4. The duration of the Method 9 test shall be 30 minutes.
  - iv) If visible emissions are observed during any Method 22 visible emissions test conducted under this section, the permittee shall initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347.
  - v) The requirements under this section to conduct daily Method 22 testing do not apply to any specific finish mill equipped with a COMS or BLDS.
  - vi) If the permittee installs a COMS in lieu of conducting the daily visible emissions testing, the permittee shall demonstrate compliance using a COMS that it is installed, operated, and maintained in accordance with the requirements in paragraph vi)a).
    - a) The COMS shall be installed at the outlet of the PM control device of the finish mill and the COMS shall be installed, maintained, calibrated, and operated as required by the general provisions in 40 CFR 60 subpart A and according to PS-1 of 40 CFR 60 appendix B.
  - vii) If the permittee installs a BLDS on a finish mill in lieu of conducting the daily visible emissions testing, the permittee shall demonstrate compliance using a BLDS that is installed, operated, and maintained in accordance with the requirements of paragraphs B. through D. of this section. (40 CFR 63.1350(m)(1)-(4), (m)(10), and (m)(11)) (40 CFR 63.1348(b)(3), 40 CFR 63.1350(f))

- B. The permittee shall install, operate, and maintain each continuous parameter monitoring system (CPMS) according to 40 CFR 63.1350(m)(1)-(4).
- C. If a fabric filter bag leak detection system is used, the permittee shall install, calibrate, maintain, and continuously operate a BLDS as specified in paragraphs C.i) through viii).
  - i) The permittee shall install and operate a BLDS for each exhaust stack of the fabric filter.
  - ii) Each BLDS shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA-454/R-98-015, September 1997.
  - iii) The BLDS shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 or fewer milligrams per actual cubic meter.
  - iv) The BLDS sensor shall provide output of relative or absolute PM loadings.
  - v) The BLDS shall be equipped with a device to continuously record the output signal from the sensor.
  - vi) The BLDS shall be equipped with an alarm system that will alert an operator automatically when an increase in relative PM emissions over a preset level is detected. The alarm shall be located such that the alert is detected and recognized easily by an operator.
  - vii) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a BLDS shall be installed in each baghouse compartment or cell.
  - viii) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.(40 CFR 63.1350(m)(10))
- D. For each BLDS, the permittee shall initiate procedures to determine the cause of every alarm within 8 hours of the alarm. The permittee shall alleviate the cause of the alarm within 24 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:
  - i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;
  - ii) Sealing off defective bags or filter media;
  - iii) Replacing defective bags or filter media or otherwise repairing the control device;
  - iv) Sealing off a defective fabric filter compartment;
  - v) Cleaning the BLDS probe or otherwise repairing the BLDS; or
  - vi) Shutting down the process producing the PM emissions.(40 CFR 63.1350(m)(11))
- E. The permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1)-(5).
- F. Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR 63.1348(b)(1)(ii))
- G. The permittee shall not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR 63.1348(b)(1)(iii))
- H. For each existing unit that is equipped with a CMS, the permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. Any instance where the permittee fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation. (40 CFR 63.1350(a)).

II.B.6.a.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355. Records shall also be maintained in accordance with R307-170 if a COMS is used.

Additionally, records of visual emission observations and visual opacity tests required by 40 CFR 60, Appendix A, Methods 22 and 9 shall be maintained in accordance with Provision I.S.1 of this permit if a COMS or BLDS is not used.

II.B.6.a.3

**Reporting:**

In addition to the reporting requirements of Provision I.S.2 of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

If a COMS is used:

- i. The permittee shall also comply with the reporting and notification requirements specified in R307-170.
- ii. Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

II.B.7

**Conditions on Finish Mill Separator (514.BF1).**

II.B.7.a

**Condition:**

Visible emissions shall be no greater than 10 percent opacity during all modes of operation. [Origin: 40 CFR 63 Subpart LLL, DAQE-AN103030030-22]. [40 CFR 63.1345, R307-401-8]

II.B.7.a.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348 and, if applicable, R307-170.

- A. The permittee shall demonstrate continuous compliance by using the monitoring methods and procedures in 40 CFR 63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The permittee shall initiate corrective actions within one hour of detecting visible emissions above the applicable limit.
  - i) For a finish mill, the permittee shall monitor opacity by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of 40 CFR 60 appendix A-7. The duration of the Method 22 performance test shall be 6 minutes.
  - ii) Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the permittee shall conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.
  - iii) If visible emissions are observed during the follow-up Method 22 performance test required by paragraph ii) of this section, the permittee shall then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of 40 CFR 60 appendix A-4. The duration of the Method 9 test shall be 30 minutes.
  - iv) If visible emissions are observed during any Method 22 visible emissions test conducted under this section, the permittee shall initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347.
  - v) The requirements under this section to conduct daily Method 22 testing do not apply to any specific finish mill equipped with a COMS or BLDS.

- vi) If the permittee installs a COMS in lieu of conducting the daily visible emissions testing, the permittee shall demonstrate compliance using a COMS that it is installed, operated, and maintained in accordance with the requirements in paragraph vi)a).
  - a) The COMS shall be installed at the outlet of the PM control device of the finish mill and the COMS shall be installed, maintained, calibrated, and operated as required by the general provisions in 40 CFR 60 subpart A and according to PS-1 of 40 CFR 60 appendix B.
- vii) If the permittee installs a BLDS on a finish mill in lieu of conducting the daily visible emissions testing, the permittee shall demonstrate compliance using a BLDS that is installed, operated, and maintained in accordance with the requirements of paragraphs B. through D. of this section. (40 CFR 63.1350(m)(1)-(4), (m)(10), and (m)(11)) (40 CFR 63.1348(b)(3), 40 CFR 63.1350(f))
- B. The permittee shall install, operate, and maintain each continuous parameter monitoring system (CPMS) according to 40 CFR 63.1350(m)(1)-(4).
- C. If a fabric filter bag leak detection system is used, the permittee shall install, calibrate, maintain, and continuously operate a BLDS as specified in paragraphs C.i) through viii).
  - i) The permittee shall install and operate a BLDS for each exhaust stack of the fabric filter.
  - ii) Each BLDS shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA-454/R-98-015, September 1997.
  - iii) The BLDS shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 or fewer milligrams per actual cubic meter.
  - iv) The BLDS sensor shall provide output of relative or absolute PM loadings.
  - v) The BLDS shall be equipped with a device to continuously record the output signal from the sensor.
  - vi) The BLDS shall be equipped with an alarm system that will alert an operator automatically when an increase in relative PM emissions over a preset level is detected. The alarm shall be located such that the alert is detected and recognized easily by an operator.
  - vii) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a BLDS shall be installed in each baghouse compartment or cell.
  - viii) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors. (40 CFR 63.1350(m)(10))
- D. For each BLDS, the permittee shall initiate procedures to determine the cause of every alarm within 8 hours of the alarm. The permittee shall alleviate the cause of the alarm within 24 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:
  - i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;
  - ii) Sealing off defective bags or filter media;
  - iii) Replacing defective bags or filter media or otherwise repairing the control device;
  - iv) Sealing off a defective fabric filter compartment;
  - v) Cleaning the BLDS probe or otherwise repairing the BLDS; or
  - vi) Shutting down the process producing the PM emissions. (40 CFR 63.1350(m)(11))
- E. The permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1)-(5).
- F. Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (40 CFR 63.1348(b)(1)(ii))

- G. The permittee shall not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. (40 CFR 63.1348(b)(1)(iii))
- H. For each existing unit that is equipped with a CMS, the permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. Any instance where the permittee fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation. (40 CFR 63.1350(a)).

II.B.7.a.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355. Records shall also be maintained in accordance with R307-170 if a COMS is used.

Additionally, records of visual emission observations and visual opacity tests required by 40 CFR 60, Appendix A, Methods 22 and 9 shall be maintained in accordance with Provision I.S.1 of this permit if a COMS or BLDS is not used.

II.B.7.a.3

**Reporting:**

In addition to the reporting requirements of Provision I.S.2 of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

If a COMS is used:

- i. The permittee shall also comply with the reporting and notification requirements specified in R307-170.
- ii. Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

II.B.8

**Conditions on Coal Silo (41B.BF1).**

II.B.8.a

**Condition:**

Visible emissions shall be less than 20 percent opacity. [Origin: 40 CFR 60 Subpart Y, DAQE-AN103030030-22]. [40 CFR 60.254(a)]

II.B.8.a.1

**Monitoring:**

A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer. If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified visible emissions observer in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation. For each affected emission unit, if no visible emissions are observed for eight consecutive weeks the observation frequency shall be reduced to a monthly basis. If visible emissions are observed during any monthly observation the frequency shall revert back to a weekly basis.



- II.B.8.a.2      **Recordkeeping:**
- Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.
- II.B.8.a.3      **Reporting:**
- There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.9      **Conditions on Coal Grinding System (41B.BF2).**
- II.B.9.a      **Condition:**
- Visible emissions shall be less than 20 percent opacity. [Origin: 40 CFR 60 Subpart Y]. [40 CFR 60.254(a)]
- II.B.9.a.1      **Monitoring:**
- A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer. If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified visible emissions observer in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation. For each affected emission unit, if no visible emissions are observed for eight consecutive weeks the observation frequency shall be reduced to a monthly basis. If visible emissions are observed during any monthly observation the frequency shall revert back to a weekly basis.
- II.B.9.a.2      **Recordkeeping:**
- Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.
- II.B.9.a.3      **Reporting:**
- There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.9.b      **Condition:**
- During all periods of operation, the permittee shall record the operating temperature of the Coal Grinding System baghouse. [Origin: Alternative Monitoring EPA Approval 11/6/02]. [40 CFR 63.8(f)]
- II.B.9.b.1      **Monitoring:**
- The permittee shall install and operate a temperature alarm on the baghouse inlet in accordance with the manufacturer's specifications.
- II.B.9.b.2      **Recordkeeping:**
- Records required by this permit condition and copies of the manufacturer's alarm specifications shall be maintained in accordance with Provision I.S.1 of this permit and made available for review by the Director or his representative.

II.B.9.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9.c

**Condition:**

During normal operation, emissions of PM from the kiln shall be no greater than 0.07 lb/ton clinker. Combined PM emissions from the kiln and/or the inline coal mill stack are subject to the PM emissions limit. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1343(b)(1), 40 CFR 63.1343(b)(2)]

II.B.9.c.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348 and condition II.B.4.1.1 of this permit.

For purposes of determining exhaust gas flow rate to the atmosphere from a coal mill stack, the permittee shall either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in 40 CFR 63.1350(n)(1) through (10) or use the maximum design exhaust gas flow rate. For purposes of determining the combined emissions from kilns that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS on the coal mill stack, the permittee may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. (40 CFR 63.1349(a)).

II.B.9.c.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

II.B.9.c.3

**Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

II.B.9.d

**Condition:**

During normal operation, emissions of mercury (Hg) from the kiln shall be no greater than 55 lb/MM tons clinker based on a rolling 30-day average. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown. The permittee shall ensure appropriate corrections for moisture are made when measuring flow rates used to calculate mercury emissions. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1343(b)(1)]

II.B.9.d.1

**Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348, condition II.B.4.m.1 of this permit, and R307-170, as applicable.

For purposes of determining exhaust gas flow rate to the atmosphere from a coal mill stack, the permittee shall either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in 40 CFR 63.1350(n)(1) through (10) or use the maximum design exhaust gas flow rate. For purposes of determining the combined emissions from kilns that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS on the coal mill stack, the

permittee may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. (40 CFR 63.1349(a)).

**II.B.9.d.2 Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit, R307-170, as applicable, and 40 CFR 63.1355.

**II.B.9.d.3 Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354, and R307-170, as applicable, and the notification requirements specified in 40 CFR 63.1353 and R307-170, as applicable.

Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program, as applicable. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

**II.B.9.e Condition:**

During normal operation, emissions of total hydrocarbons (THC) from the kiln shall be no greater than 24 ppmvd, measured as propane, corrected to 7 percent oxygen, based on a rolling 30-day average. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown. The permittee may elect to meet an alternative limit of 12 ppmvd for total organic HAP. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1343(b)(1)]

**II.B.9.e.1 Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348, condition II.B.4.n.1 of this permit, and R307-170, as applicable.

For purposes of determining exhaust gas flow rate to the atmosphere from a coal mill stack, the permittee shall either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in 40 CFR 63.1350(n)(1) through (10) or use the maximum design exhaust gas flow rate. For purposes of determining the combined emissions from kilns that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS on the coal mill stack, the permittee may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. (40 CFR 63.1349(a)).

**II.B.9.e.2 Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit, R307-170, as applicable, and 40 CFR 63.1355.

**II.B.9.e.3 Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354, and R307-170, as applicable, and the notification requirements specified in 40 CFR 63.1353 and R307-170, as applicable.

Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program, as applicable. The reports are considered prompt notification of permit deviation

required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

**II.B.9.f Condition:**

During normal operation, emissions of hydrochloric acid (HCl) from the kiln shall be no greater than 3 ppmvd, corrected to 7 percent oxygen. This condition applies to major sources of HAP as defined in 40 CFR 63.2.

If using a CEMS to determine compliance with the HCl standard, this standard is based on a rolling 30-day average. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1343(b)(1)]

**II.B.9.f.1 Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348, condition II.B.4.o.1 of this permit, and R307-170, as applicable.

For purposes of determining exhaust gas flow rate to the atmosphere from a coal mill stack, the permittee shall either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in 40 CFR 63.1350(n)(1) through (10) or use the maximum design exhaust gas flow rate. For purposes of determining the combined emissions from kilns that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS on the coal mill stack, the permittee may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. (40 CFR 63.1349(a)).

**II.B.9.f.2 Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit, R307-170, as applicable, and 40 CFR 63.1355.

**II.B.9.f.3 Reporting:**

In addition to the reporting requirements of Section I of this permit, the permittee shall comply with the reporting requirements specified in 40 CFR 63.1349, 40 CFR 63.1354, and R307-170, as applicable, and the notification requirements specified in 40 CFR 63.1353 and R307-170, as applicable.

Reports shall be submitted quarterly, as required by R307-170, Continuous Emission Monitoring Program, as applicable. The reports are considered prompt notification of permit deviation required in Provision I.S.2.c of this permit, if all information required by Provision I.S.2.c is included in the report.

**II.B.10 Conditions on Materials Handling Operation (MHO).**

**II.B.10.a Condition:**

Visible emissions shall be no greater than 10 percent opacity from each affected unit. [Origin: 40 CFR 63 Subpart LLL]. [40 CFR 63.1345]

**II.B.10.a.1 Monitoring:**

The permittee shall demonstrate compliance as specified in 40 CFR 63.1348.

- a) The permittee shall demonstrate initial compliance by using the following performance test methods and procedures. The permittee shall use the maximum 6-minute average opacity

exhibited during the performance test period to determine whether the affected source is in compliance with the standard. (40 CFR 63.1348(a)(2))

- i) The permittee shall conduct opacity tests in accordance with Method 9 of 40 CFR 60, appendix A-4. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (a) and (b) apply. For batch processes that are not run for 3-hour periods or longer, the permittee shall compile observations totaling 3 hours when the unit is operating.
  - (a) There are no individual readings greater than 10 percent opacity;
  - (b) There are no more than three readings of 10 percent for the first 1-hour period.(40 CFR 63.1349(b)(2)).
- b) The permittee shall demonstrate continuous compliance by using the monitoring methods and procedures in 40 CFR 63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The permittee shall initiate corrective actions within one hour of detecting visible emissions above the applicable limit.
  - i) The permittee shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of 40 CFR 60 appendix A-7. The performance test shall be conducted while the affected source is in operation.
  - ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the permittee may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
  - iii) If no visible emissions are observed during the semi-annual test for any affected source, the permittee may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
  - iv) If visible emissions are observed during any Method 22 performance test, of 40 CFR 60 appendix A-7, the permittee shall conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of 40 CFR 60 appendix A-4. The Method 9 performance test, of 40 CFR 60 appendix A-4, shall begin within 1 hour of any observation of visible emissions.
  - v) Any totally enclosed conveying system transfer point, regardless of the location of the transfer point is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
  - vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the permittee shall conduct a Method 22 performance test, of 40 CFR 60 appendix A-7, according to the requirements of paragraphs i) through iv) of this section for each such conveying system transfer point located within the building, or for the building itself, according to paragraph vii) of this section.
  - vii) If visible emissions from a building are monitored, the requirements of paragraphs i) through iv) of this section apply to the monitoring of the building, and the permittee shall also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.
  - viii) If visible emissions are observed during any Method 22 visible emissions test, the permittee shall initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347.  
(40 CFR 63.1348(b)(3), 40 CFR 63.1350(f)).

II.B.10.a.2

**Recordkeeping:**

Records shall be maintained in accordance with Provision I.S.1 of this permit and 40 CFR 63.1355.

Results from opacity observations and all data required by 40 CFR 60, Appendix A, Method 22 and 9 shall be recorded and maintained in accordance with Provision I.S.1 of this permit.

II.B.10.a.3

**Reporting:**

The permittee shall comply with the reporting requirements specified in Section I of this permit, 40 CFR 63.1349, 40 CFR 63.1354 and the notification requirements specified in 40 CFR 63.1353.

II.B.11

**Conditions on Limestone Bypass System (LBS).**

II.B.11.a

**Condition:**

Visible emissions shall be no greater than 10 percent opacity. [Origin: DAQE-AN103030030-22, 40 CFR 60 Subpart OOO]. [40 CFR 60.672(b)]

II.B.11.a.1

**Monitoring:**

A visual observation of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visible emissions observer. If any visible emissions are observed, an opacity determination of that emission unit shall be performed by a certified visible emissions observer in accordance with 40 CFR 60, Appendix A, Method 9 within 24 hours of the initial observation. For each affected emission unit, if no visible emissions are observed for eight consecutive weeks the observation frequency shall be reduced to a monthly basis. If visible emissions are observed during any monthly observation the frequency shall revert back to a weekly basis.

II.B.11.a.2

**Recordkeeping:**

Records of visual observations performed and data required by 40 CFR 60, Appendix A, Method 9 for each determination shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.a.3

**Reporting:**

Reports shall be submitted in accordance with 40 CFR 60.676(f) and as specified in Section I of this permit.

II.B.11.b

**Condition:**

Limestone bypass material processed shall be no greater than 150,000 tons per 12-month rolling period. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.11.b.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.11.b.2

**Recordkeeping:**

Daily records of limestone bypass material processed shall be kept for all periods of operation. By the 25th day of each month, a new 12-month total shall be calculated using data from the

previous 12 months. Production shall be calculated through use of the plant data acquisition system. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11.c

**Condition:**

Permittee shall operate water sprays or chemical dust suppression sprays to control fugitive emissions. The sprays shall operate whenever dry conditions warrant or as determined necessary by the Director. Water sprays shall not be required during periods of freezing temperatures. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.11.c.1

**Monitoring:**

Visual inspections of the water or chemical dust suppression spray system(s) shall be made weekly to ensure proper operating condition.

II.B.11.c.2

**Recordkeeping:**

An operator's log shall be maintained of all monitoring provisions listed above. Records of water or chemical dust suppression spray system inspections shall be kept for all periods of operation and the ambient temperature shall be recorded any time water should be applied but cannot be due to freezing conditions. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.11.c.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12

**Conditions on GEN: Emergency Generators.**

II.B.12.a

**Condition:**

Visible emissions shall be no greater than 20 percent opacity, except for stationary operation not exceeding three minutes in any hour. [Origin: R307-201-3(5), DAQE-AN103030030-22]. [R307-201-3(5), R307-401-8]

II.B.12.a.1

**Monitoring:**

During any period that the emergency generator(s) is(are) operated for longer than 12 hours consecutively, visual observation(s) of each generator exhaust shall be made by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visual emissions observer. If any visible emissions are observed, then a 6-minute opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director, by a certified visual emissions observer. If the generator(s) continue to operate on consecutive days following the initial observation, an opacity determination shall be performed on a daily basis.

II.B.12.a.2

**Recordkeeping:**

The permittee shall record the date of each visual opacity survey and keep a list of the emission points checked during the visual opacity survey. The permittee shall also keep a log of the

following information for each observed visual emission: date and time visual emissions observed, emission point location and description, time and date of opacity test, and percent opacity. The records required by this provision and all data required by 40 CFR 60, Appendix A, Method 9, or other EPA-approved testing method, as acceptable to the Director, shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.12.a.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.b

**Condition:**

For the 762 hp (kiln) engine:

2007 model year and later emergency affected emission units with a displacement of less than 30 liters per cylinder that are not fire pump engines shall comply with the emission standards for new nonroad CI ICE in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. Modified or reconstructed affected emission units shall meet the emission standards for new nonroad CI ICE in 40 CFR 60.4202 applicable to the model year, maximum engine power, and displacement of the modified or reconstructed engine. If the permittee conducts performance tests in-use on emergency stationary CI ICE with a displacement of less than 30 liters per cylinder they shall meet the not-to-exceed (NTE) standards as indicated in 40 CFR 60.4212. [Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4205(b), 40 CFR 60.4205(e), 40 CFR 60.4205(f)]

II.B.12.b.1

**Monitoring:**

The permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted below. (Origin: 40 CFR 60.4211(c))

If the permittee does not install, configure, operate, and maintain affected emission units and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows:

- (a) For affected emission units greater than 500 HP:
  - i. Keep a maintenance plan and records of conducted maintenance; and
  - ii. To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
  - iii. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(Origin: 40 CFR 60.4211(g))

For modified or reconstructed affected emission units that must comply with the emission standards specified in 40 CFR 60.4205(f), the permittee shall demonstrate compliance by purchasing, or otherwise owning or operating, an engine certified to the emission standards in 40 CFR 60.4205(f) or by conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in 40 CFR 60.4212. The test shall be



conducted within 60 days after the engine commences operation after the modification or reconstruction. [40 CFR 60.4211(e)]

II.B.12.b.2

**Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.12.b.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.c

**Condition:**

For the 762 hp (kiln) engine:

For all affected emission units, except those that are modified, reconstructed, or removed from one existing location and reinstalled at a new location, the permittee shall comply with paragraphs (a) through (b).

- (a) After December 31, 2008, the permittee shall not install affected emission units (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
- (b) In addition to the requirements specified in 40 CFR 60.4202 and 40 CFR 60.4205, the permittee shall not import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in 40 CFR 60.4208 after the dates specified in 40 CFR 60.4208.

[Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4208]

II.B.12.c.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.12.c.2

**Recordkeeping:**

The permittee shall keep records of the install date of each affected emission unit and the applicable requirements under 40 CFR 60 Subpart IIII for the respective model year engine. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.12.c.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.d

**Condition:**

For the 762 hp (kiln) engine:

The permittee shall operate and maintain affected emission units that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. The permittee shall do all of the following, except as permitted in II.B.12.d.1(b):

- (1) Operate and maintain the stationary CI ICE and control device according to the manufacturer's emission-related written instructions;
- (2) Change only those emission-related settings that are permitted by the manufacturer; and
- (3) Meet the requirements of 40 CFR part 1068, as applicable.

[Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4206, 40 CFR 60.4211(a)]

II.B.12.d.1

**Monitoring:**

- (a) The permittee shall document activities performed to assure proper operation and maintenance.
- (b) If the permittee does not install, configure, operate, and maintain affected emission units and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows:
  - (1) For affected emission units greater than 500 HP:
    - a. Keep a maintenance plan and records of conducted maintenance; and
    - b. To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
    - c. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(Origin: 40 CFR 60.4211(g)).

II.B.12.d.2

**Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.12.d.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.e

**Condition:**

For the 762 hp (kiln) engine:

The permittee of affected emission units with a displacement of less than 30 liters per cylinder that use diesel fuel shall use diesel fuel that meets the following ULSD per-gallon standards of 40 CFR 1090.305 for nonroad diesel fuel.

- 1. Maximum sulfur content of 15 ppm and
- 2. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[Origin: 40 CFR 60 Subpart III]. [40 CFR 60.4207(b)]

II.B.12.e.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.12.e.2

**Recordkeeping:**

The permittee shall maintain documentation that all diesel fuel meets the specifications of 40 CFR 1090.305. Certification of diesel fuel shall be either by the permittee's own testing using ASTM Method D2880-71, D4294-89, or other method approved by the Director, or by fuel receipt records from the vendor documenting test results. The diesel fuel purchase invoices and/or certifications shall indicate the diesel fuel meets the requirements in 40 CFR 1090.305. Records demonstrating compliance with this condition shall be maintained in accordance with Provision I.S.1. of this permit.

II.B.12.e.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.f

**Condition:**

For the 762 hp (kiln) engine:

The permittee shall operate the emergency affected emission units according to the requirements in paragraphs (1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (1) through (3), is prohibited. If the engine is not operated in accordance with paragraphs (1) through (3), it will not be considered an emergency engine and shall meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) Emergency stationary ICE may be operated for the purpose specified in paragraph (a) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) counts as part of the 100 hours per calendar year allowed by this paragraph (2).
  - (a) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. A petition for approval of additional hours to be used for maintenance checks and readiness testing is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
- (3) Emergency engines may operate up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for the permittee to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[Origin: 40 CFR 40 CFR 60 Subpart IIII]. [40 CFR 60.4211(f), 40 CFR 63 Subpart ZZZZ]

II.B.12.f.1

**Monitoring:**

If an emergency affected emission unit does not meet the standards applicable to non-emergency engines, the permittee shall install a non-resettable hour meter prior to startup of the engine.

[Origin: 40 CFR 60.4209(a)] Records required for this permit condition will also serve as monitoring.

II.B.12.f.2

**Recordkeeping:**

Records of each affected emission unit shall be kept on a monthly basis in an operation and maintenance log. Records shall distinguish between maintenance-related hours and emergency use-related hours. If additional hours are to be used for maintenance checks and readiness testing, the permittee shall maintain records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

Starting with the model years in Table 5 of 40 CFR 60 Subpart IIII, if an affected emission unit does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. (Origin: 40 CFR 60.4214(b))

Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.12.f.3

**Reporting:**

For each affected emergency emission unit with a maximum engine power more than 100 HP that operates for the purpose specified in 40 CFR 60.4211(f)(3)(i), the permittee shall submit an annual report according to the requirements in 40 CFR 60.4214(d).

There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.g

**Condition:**

For the 762 hp (kiln) engine:

The permittee shall submit an Initial Notification as required in 40 CFR 63.6645(f) for each new or reconstructed emergency stationary RICE. [Origin: 40 CFR 63 Subpart ZZZZ]. [40 CFR 63.6590(b)(1)]

II.B.12.g.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.12.g.2

**Recordkeeping:**

The permittee shall keep a copy of each notification in accordance with 40 CFR 63.6660 and Provision I.S.1 of this permit.

II.B.12.g.3

**Reporting:**

For each affected emission unit, the permittee shall submit an Initial Notification containing the information in 40 CFR 63.9(b)(2)(i) through (v), and a statement that the stationary RICE has no additional requirements and that explains the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions). There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.12.h

**Condition:**

By October 20, 2023, the permittee shall submit documentation of the status of installation of the 762 hp emergency generator to the Director. The referenced approval order (AO) may become invalid if construction is not commenced by October 20, 2023 or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [Origin: R307-401-18, DAQE-AN103030030-22]. [R307-401-18]

II.B.12.h.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.12.h.2

**Recordkeeping:**

As applicable, the permittee shall maintain a copy of each notification required by this permit condition in accordance with Provision I.S.1 of this permit.

II.B.12.h.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.13

**Conditions on Dust Shuttle System**

II.B.13.a

**Condition:**

The fringe bin baghouse (514.BF3) and the alkali silo baghouse (413.BF1) shall be operating at all times when the dust shuttle system is operating to assist in the capture of mercury emissions. [Origin: DAQE-AN103030030-22]. [R307-401-8]

II.B.13.a.1

**Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.13.a.2

**Recordkeeping:**

Records demonstrating compliance with this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.13.a.3

**Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C

**Emissions Trading**  
(R307-415-6a(10))

Not applicable to this source.

II.D

**Alternative Operating Scenarios**  
(R307-415-6a(9))

Not applicable to this source.

## **SECTION III: PERMIT SHIELD**

The following requirements have been determined to be not applicable to this source in accordance with Provision I.M, Permit Shield:

III.A. 40 CFR 63 Subpart CCCCCC (NESHAP for Source Category: Gasoline Dispensing Facilities)

This regulation is not applicable to the Permitted Source for the following reason(s): it applies to area sources of HAPs and the permitted source is a major HAP source. [Last updated June 29, 2022]

III.B. 40 CFR 60 Subpart OOO (NSPS / Standards of Performance for Nonmetallic Mineral Processing Plants)

This regulation is not applicable to the 211.BF1: Stationary Crusher for the following reason(s): it was constructed in 1981, prior to the Subpart OOO applicability date of August 31, 1983 [Last updated June 29, 2022]

III.C. 40 CFR 60 Subpart OOO (NSPS / Standards of Performance for Nonmetallic Mineral Processing Plants)

This regulation is not applicable to the 211.BF2: Raw Material Transfer for the following reason(s): it was constructed in 1981, prior to the Subpart OOO applicability date of August 31, 1983. [Last updated June 29, 2022]

III.D. 40 CFR 63.1349(b)(3), 63.1350(g) (NESHAP for the Portland Cement Manufacturing Industry)

This regulation is not applicable to the 41B.BF2: Coal Grinding System for the following reason(s): EPA granted a waiver in a letter dated November 6, 2002 from Martin Hestmark, EPA, to Robert Vantuyl, Ash Grove. The waiver is contingent on Ash Grove's compliance with Conditions II.B.4.f, II.B.4.g, II.B.4.k, and II.B.9.b of this permit. [Last updated June 29, 2022]

## **SECTION IV: ACID RAIN PROVISIONS**

**This source is not subject to Title IV. This section is not applicable.**

## **REVIEWER COMMENTS**

This operating permit incorporates all applicable requirements contained in the following documents:

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Incorporates	DAQE-AN103030030-22 dated April 20, 2022
Incorporates	[State-only Requirements] SIP Section IX.H.23.a dated July 7, 2022

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1. Comment on an item originating in this permit regarding Permitted Source  
CAM plan removed: The CAM requirements originating in 40 CFR 64 for the stationary crusher (211.BF1) were removed in the 2018 renewal permit because the crusher is only subject to an opacity limit, not a PM limit. [12/01/2006] [Last updated June 29, 2022]
2. Comment on an item originating in 40 CFR 60 Subpart Y regarding 41B.BF2: Coal Grinding System  
Thermal dryer/coal mill clarification: The coal mill meets the Subpart Y definition for thermal dryer in 40 CFR 60.251(r)(1) because gases are drawn from the preheater for the kiln to entrain the coal in the mill. However, the preamble to the 2009 final rule states, "a thermal dryer that is part of an in-line coal mill at a Portland cement manufacturing plant where all of the thermal input is supplied by cement kiln exhaust or clinker cooler exhaust, is not subject to the requirements in subpart Y, but, rather, must meet the applicable requirements in the appropriate Portland Cement kiln regulations (40 CFR 60 subpart F and 40 CFR 63 subpart LLL)." (See 74 Fed. Reg. 51952 dated 10/8/2009) The PM limit applicable to the kiln/inline coal mill originating in 40 CFR 63 Subpart LLL is included in the permit under the coal grinding system conditions. The PM limit applicable to thermal dryers originating in 40 CFR 60 Subpart Y was removed in the 2018 renewal permit. [3/5/2018] [Last updated June 29, 2022]
3. Comment on an item originating in 40 CFR 63 Subpart ZZZZ and 40 CFR 60 Subpart IIII regarding GEN: Emergency Generators  
40 CFR 63 Subpart ZZZZ applicability:  
The 560 hp (shipping) diesel engine is rated greater than 500 hp, was installed prior to December 19, 2002, and is an existing emergency stationary RICE as defined in the subpart. Per 40 CFR 63.6590(b)(3)(iii), it does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and of 40 CFR 63 Subpart A, including initial notification requirements.  
  
The 762 hp (kiln) diesel engine is rated greater than 500 hp, is installed after December 19, 2002, and is a new emergency stationary RICE as defined in the subpart. Per 40 CFR 63.6590(b)(1)(i), it does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and of 40 CFR 63 Subpart A except for the initial notification requirements of 40 CFR 63.6645(f).  
  
40 CFR 60 Subpart IIII applicability:  
Per 40 CFR 60.4200(a)(2), stationary compression ignition (CI) internal combustion engines (ICE) that are ordered after July 11, 2005 and manufactured after April 1, 2006, and are not fire pump engines, are subject to Subpart IIII. The 560 hp (shipping) diesel engine was installed in 1981 and does not meet the date criteria for applicability under Subpart IIII. The 762 hp (kiln) diesel engine was permitted in 2022 and is subject to the requirements in Subpart IIII. [1/17/2022] [Last updated August 22, 2022]
4. Comment on an item originating in 40 CFR 63 Subpart LLL regarding Permitted Source

Rather than exempting affected emission units subject to 40 CFR 63 Subpart LLL provisions from otherwise applicable standards contained in 40 CFR 60 Subpart F, Y, or OOO, 40 CFR 63.1356 and 40 CFR 60.62(d), as revised in the Federal Register 9/9/2010, require affected facilities to comply with the most stringent emission limit or requirement and exempts them from the less stringent requirement for the same pollutant under another 40 CFR regulation. All Subpart F affected facilities are covered by Subpart LLL, so no requirement from Subpart F is included in this permit. Future modifications to affected emission units may trigger more stringent requirements from Subpart F. Requirements from Subpart OOO are included for those emission points that precede raw material storage. Subpart Y and Subpart LLL requirements are included for the coal grinding system. [11/7/2011] [Last updated June 29, 2022]

5. Comment on an item originating in 40 CFR 63 Subpart LLL regarding 41B.BF2: Coal Grinding System

Because gases drawn from the preheater for the kiln entrain the coal in the mill, the coal mill meets the definition in 40 CFR 63 Subpart LLL for in-line coal mill. As noted in the definition for kiln in Subpart LLL, the term kiln also applies to the exhaust of the inline coal mill. The coal mill exhaust has been included in the monitoring conditions for the kiln emission limits that are required by Subpart LLL to use combined kiln and coal mill exhaust to demonstrate compliance. [4/11/2016] [Last updated June 29, 2022]

6. Comment on an item originating in 40 CFR 63 Subpart LLL regarding 317.BF3: Kiln & Pre-Calculiner and Raw Mill

Mercury (Hg) monitoring: EPA posted an approved alternative to the 'above span' calibration requirements of 40 CFR 63.1350(k)(2) including notification requirements and a temporary extension of compliance. The letter, dated 6/28/2016, is labeled ALT-120 and can be viewed on EPA's website at <http://www3.epa.gov/ttn/emc/approalt.html>.

Hydrochloric acid (HCl) monitoring: EPA published a direct final rule in the Federal Register on 7/25/2016 at <https://www.gpo.gov/fdsys/pkg/FR-2016-07-25/pdf/2016-17293.pdf> that temporarily revises the testing and monitoring requirements for HCl.

The monitoring contained in this permit for Hg and HCl references 40 CFR 63 Subpart LLL to prevent any discrepancies between permit and subpart language. [7/18/2016] [Last updated June 29, 2022]

7. Comment on an item originating in 40 CFR 63 Subpart LLL regarding Permitted Source Continuous parametric monitoring: References to R307-170 have been removed from permit conditions that require continuous monitoring systems (CMS) or continuous parametric monitoring systems (CPMS) to comply with requirements originating in 40 CFR 63 Subpart LLL. The definition for CMS in 40 CFR 63 differs from the definition in R307-170. It has been determined that R307-170 does not apply to parametric monitoring. R307-170 only applies to continuous emission monitoring systems (CEMS) and continuous opacity monitors (COM) as defined in the State rule. [02/16/2018] [Last updated June 29, 2022]

8. Comment on an item originating in DAQE-AN103030030-22 regarding 317.BF3: Kiln & Pre-Calculiner and Raw Mill

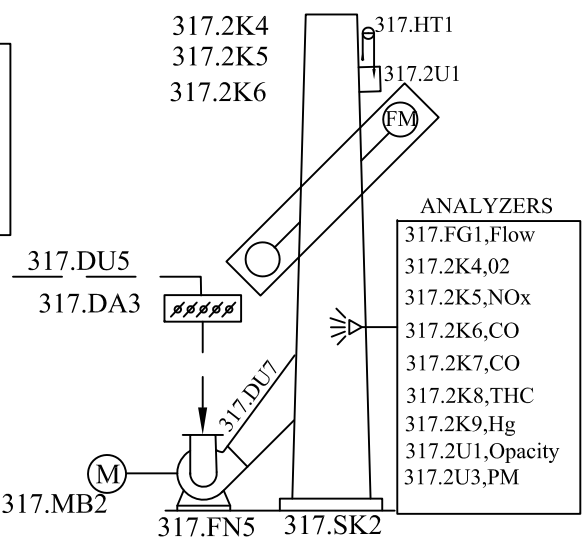
NO<sub>x</sub> monitoring clarification: The referenced approval order contains the following language. "In calculating the 30-day rolling average emission rate the total pounds of NO<sub>x</sub> emitted during a specified period shall include all kiln emissions that occur during the specified period including during each startup, shutdown, or malfunction." That language has been carried forward in the operating permit. To clarify, "specified period" (operating day) means any period when any raw materials are fed into the kiln and any combustion is occurring. Only the startup, shutdown, or malfunction emissions that occur during the




"specified period" are included in the calculation for NO<sub>x</sub> compliance demonstration.  
[5/25/2018] [Last updated June 29, 2022]

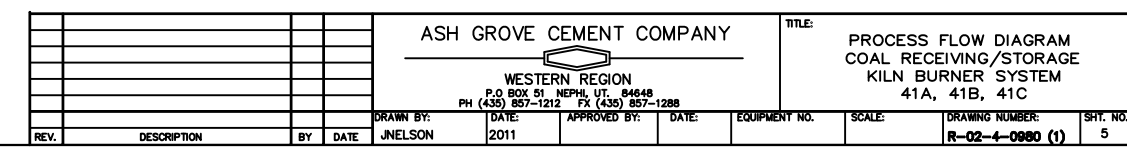
9. Comment on an item originating in historical approval order regarding Permitted Source  
Source-wide clinker production is determined as specified in 40 CFR 63.1350(d) because the permittee is already subject to the requirements of 40 CFR 63 Subpart LLL. The approval order, DAQE-AN103030028-18, was revised to clarify determination of clinker production resulting in a corresponding language update for the kiln NO<sub>x</sub> and SO<sub>2</sub> limits in the Title V permit. [10/26/2018] [Last updated June 29, 2022]
10. Comment on an item originating in 40 CFR 63 Subpart LLL and DAQE-AN103030030-22 regarding Permitted Source  
40 CFR 63 Subpart LLL contains an HCl limit that applies to kilns at major HAP sources. That limit has been included in condition II.B.1.c of the referenced approval order with qualifying language that unless the permittee operates as an area HAP source, the HCl limit applies. The intent of that language has been incorporated into the operating permit by adding a sentence to the condition that states, "This condition applies to major sources of HAP as defined in 40 CFR 63.2." To clarify, major source means the stationary source emits or has the potential to emit considering controls, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. If the source demonstrates they no longer meet the criteria for a major source of HAP, the HCl limit would no longer apply. [9/18/2019] [Last updated June 29, 2022]
11. Comment on an item originating in DAQE-AN103030030-22 regarding Permitted Source  
Condition II.B.2.b in the referenced approval order requires the surface material of unpaved roads and operational areas be kept in a damp/moist condition unless it is below freezing. At the permittee's request, that language has not been included in the operating permit because chemical treatment is also a permitted option, which would allow the source to conserve water while still minimizing fugitive dust and meeting the 20 percent opacity requirement. [6/3/2022] [Last updated June 29, 2022]

## EXHIBIT B



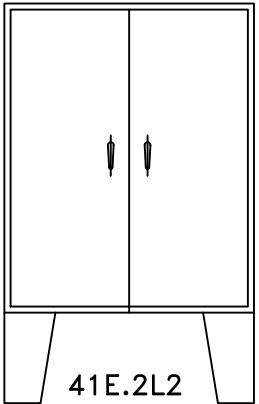
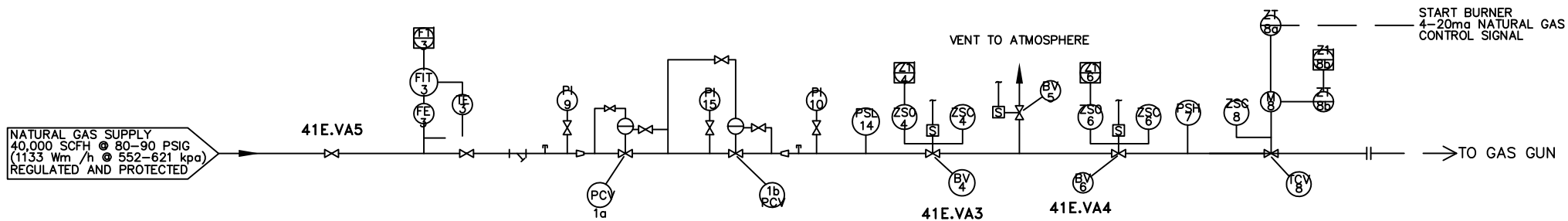
				<p style="text-align: center;"><b>ASH GROVE CEMENT COMPANY</b></p>  <p style="text-align: center;"><b>WESTERN REGION</b>  P.O BOX 51 NEPHI, UT. 84648  PH (435) 857-1212 FX (435) 857-1288</p>				<p><b>TITLE:</b></p> <p style="text-align: center;"><b>PROCESS FLOW DIAGRAM  RAW MATERIAL ADDITIVE/  RAW MILL SYSTEM</b></p> <p style="text-align: center;"><b>317</b></p>			
				<b>DRAWN BY:</b>	<b>DATE:</b>	<b>APPROVED BY:</b>	<b>DATE:</b>	<b>EQUIPMENT NO.</b>	<b>SCALE:</b>	<b>DRAWING NUMBER:</b>	<b>SHT. NO.</b>
<b>REV.</b>	<b>DESCRIPTION</b>	<b>BY</b>	<b>DATE</b>	J.Nelson	2011					C-02-4-0978 r3	3





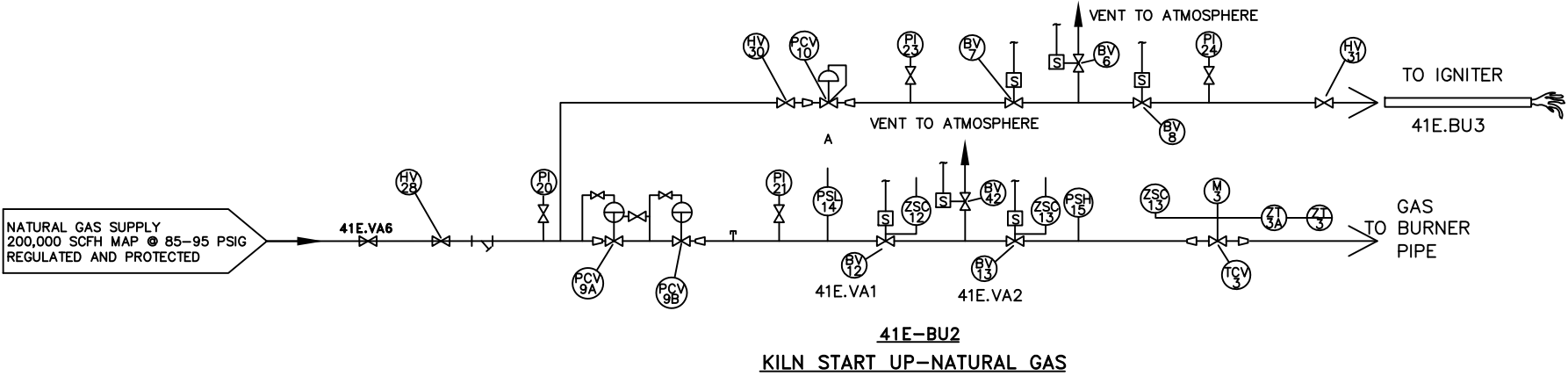
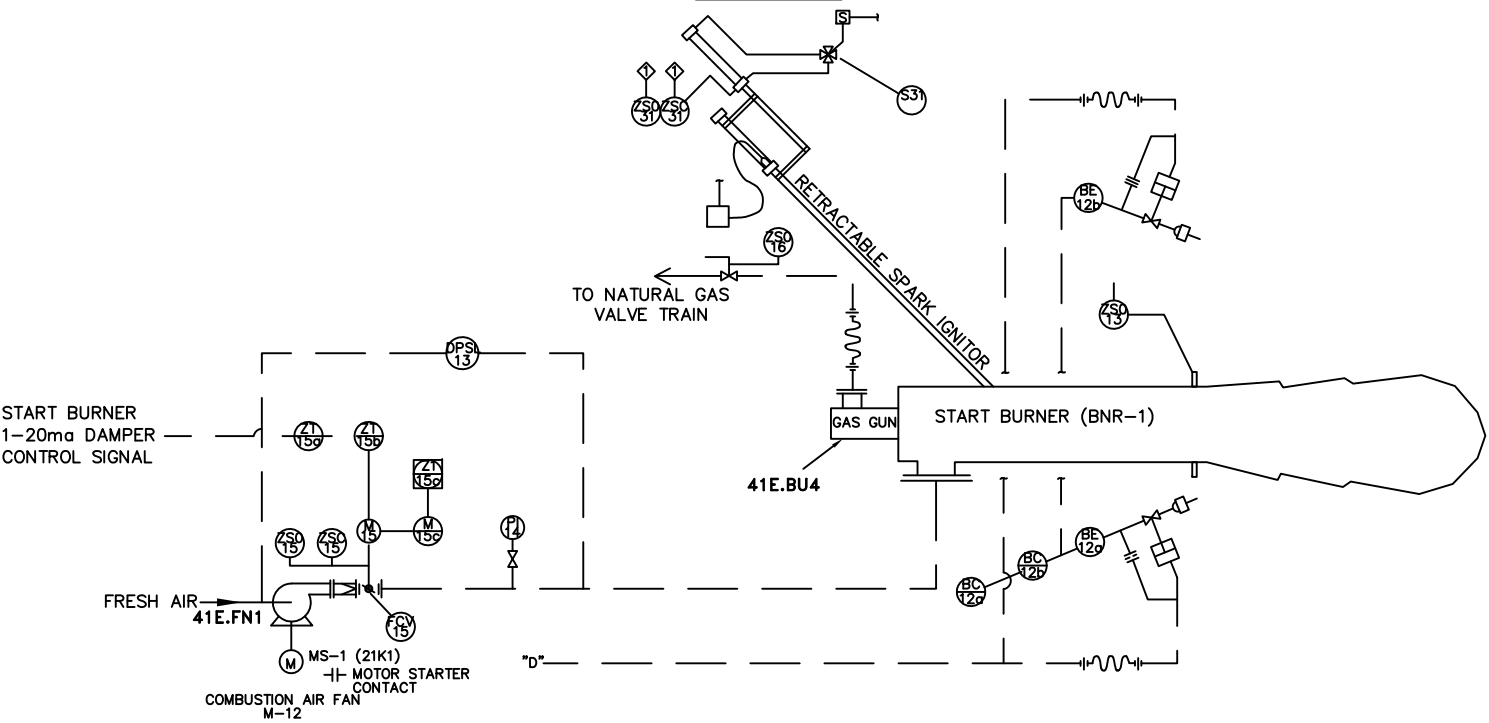
CALCINER START UP – NATURAL GAS

41E.BU3



41E.2L2  
Calciner startup Burner  
Control Cabinet

41E.BU5



				ASH GROVE CEMENT COMPANY				TITLE: PROCESS FLOW DIAGRAM CALCINER BURNER			
				WESTERN REGION				41D, 41E			
				P.O BOX 51 NEPHI, UT. 84648 PH (435) 857-1212 FX (435) 857-1288							
REV.	DESCRIPTION	BY	DATE	DRAWN BY:	DATE:	APPROVED BY:	DATE:	EQUIPMENT NO.	SCALE:	DRAWING NUMBER:	SHT. NO.
				JNELSON	2011					R-02-4-0980 (2)	6



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